85

2773

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4—679

Book "H"

Subdivisions

FIELD NOTES

OF THE SURVEY OF THE

PART OF THE

SUBDIVISION LINES OF

FRACTIONAL TOWNSHIP 4 SOUTH RANGE 28 EAST

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 April 4, *1913 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,* April 14, *1913, pursuant to authority contained in the Act of Congress dated* June 23, *1913*

Survey commenced December 10, *1913*

Survey completed January 8, *1914*

6—151

86

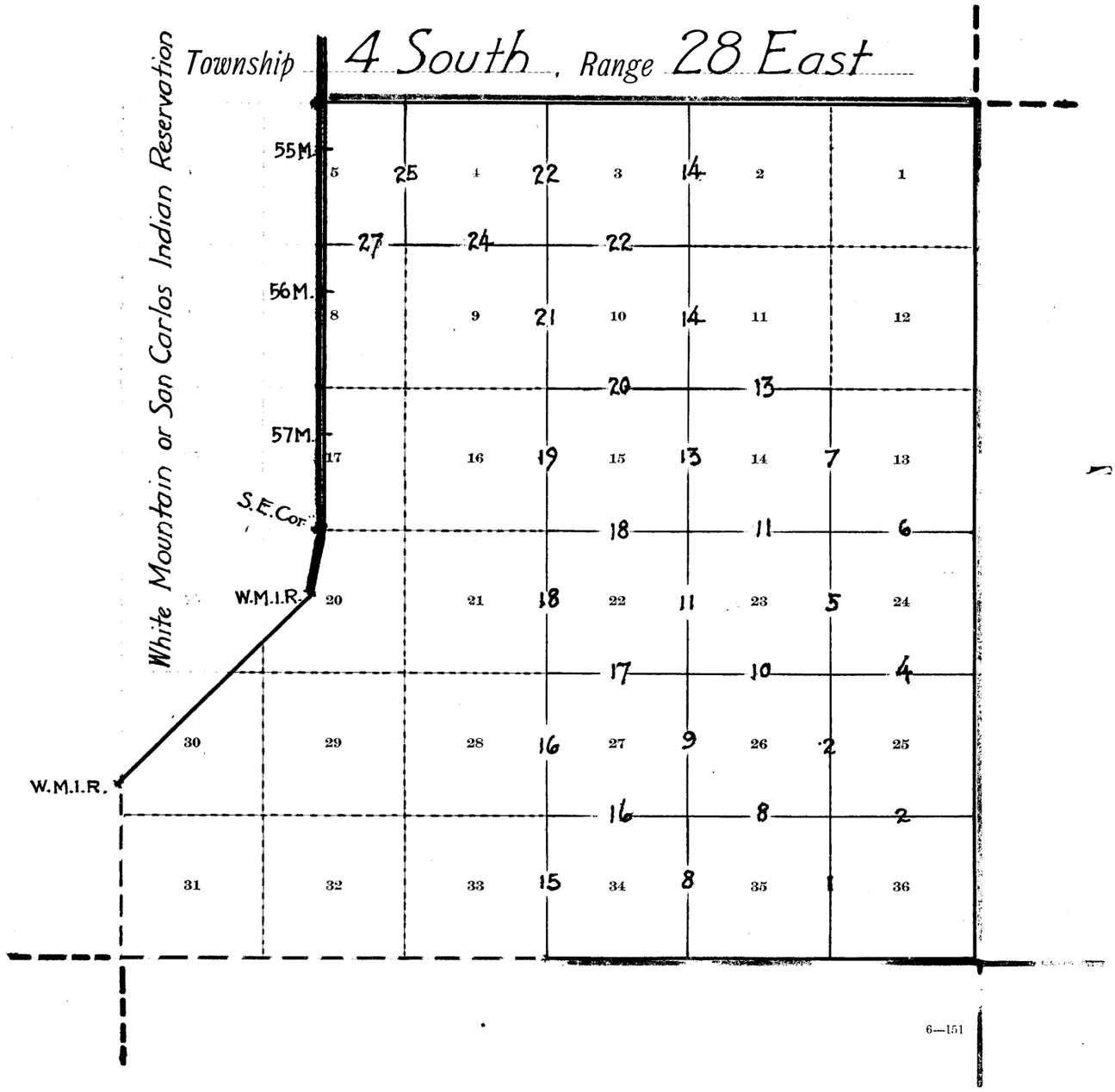
(2)

Book "H"

BOOK 2773

BOOK 2773

INDEX DIAGRAM.



Notes in Book "A", this Group

" " " "C" " "

Surveyed

Unsurveyed

Partial Subdivision of frac. Township 4 South, Range 28 East.

Chains,

Survey commenced Dec. 10, 1913, and executed with Young and Son's light mountain transit, No. 8541, with Smith solar attachment. For description of instrument and certificate of approval, see Book "A."

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 subdivision of fractional T. 4 S., R. 28 E.

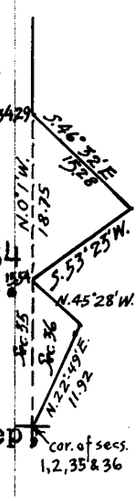
At 8h. 2m. a.m., l.m.t., I set off 33°2' N. on the lat. arc; 22°51' S. on the decl. arc; and determine a meridian with the solar at the corner of secs. 1, 2, 35 and 36, on the south bdy. of the Tp., established by me, as described in Book "A."

Thence I run,

N. 0°1' W., bet. secs. 35 and 36.

Ascend SE. slope, 175 ft.; impracticable to chain over; therefore, obtain measurement on sec. line by triangulation, as follows: Set a flag on sec. line, on top of rocky point; then from cor. of secs. 1, 2, 35 and 36, I lay off a base line, N. 22° 49' E., 11.92 chs. from the NE. end of which the flag brs. N. 45° 28' W.; therefore, the dist. from cor. of secs. 1, 2, 35 and 36 to flag = $\frac{\text{sin } 67° 44' \times 11.92}{\text{sin. } 89°26'} = 15.54$ chs.

From the NE. end of base line, Espinosa's house brs. N. 54° E.



15.54 Flag on rocky point. Impossible to chain measurement on sec. line; therefore, I triangulate as follows: Set a flag on sec. line on the north bank of box canyon, and from it measure a base line S. 46°32' E., 15.28 chs. from the SE. end of which the flag on sec. line at 15.54 chain point, brs. S. 53°23' W.; therefore, the dist. on sec. line bet. flags = $\frac{\text{sin. } 80° 05' \times 15.28}{\text{sin. } 53° 24'} = 18.75$ chs., which added to 15.54 chs. = 34.29 chs., flag point.

34.29 Flag on north bank of box canyon, 5 chs. wide, 150 ft. deep; course E.

Espinosa's house brs. S. 63° E. from this point.

Ascend SW. slope, 30 ft. to

35.75 Spur ridge, brs. SE. Thence along broken east 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 W., and
S 36 in E half;

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

As this cor. is on south edge of head of deep box canyon, over which I cannot chain, I set rod ahead on sec. line, and measure by stadia: Rod reading, 1.444 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Level.

The distantce to rod is therefore, 1.444 x 2 plus .016 = 2.90 chs., which added to 40.00 chs. = 42.90 chs. rod point.

42.90 Rod point on spur ridge, brs. SE.; descend.

47.40 Descend steep NE slope to Eagle Creek.

50.45 Foot of cliffs, brs. NW and SE.

South edge of Eagle Creek, 60 lks. wide, 5 ins. deep, course SE.

51.60 Small irrigation ditch, course SE.

51.92 A vacant adobe house, brs. N. 45° W., about 14 chs. dist.

Trail, brs. NW and SE.

55.35 Foot of cliffs on north side of Eagle Creek, brs. NW and SE. Ascend S. slope, 150 ft. to

62.00 Spur ridge, brs. E and W. Descend NW slope, 150 ft. to

69.00 Eagle Creek, 60 lks. wide, 5 ins. deep, course SW.

70.01 Mexican cabin brs. S. 84° E., about 4 chs. dist.

71.50 Trail, brs. NE and SW.

72.10 3-strand wire fence, brs. NE and SW.

73.00 Small irrigaion ditch, course SW.

2. Partial Subdivisoon of frac.Township 4 S., R.28 E.

Chains.	
73.56	Wire fence brs.NE° and SW. Ascend S. slope, of sandstone hill, 175 ft.to
80.00	Set an iron post, 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs. 25,26, 35 and 36, marked on brass cap, 1913 on S rim, T 4 S R 28 E in N.half; S 26 in NW°, S 25 in NE°, S 36 in SE., and S 35 in SW quadrant; and raise a mound of stone, 2 ft.base, 1½ ft. high,west of conner. Pits impracticable.
	Land, hilly and mountainous.
	Soil,2nd and 4th rate.
	Timber, cottonwood and willow along creek.
	Undergrowth, dense mesquite, catclaw and cacti.
	Mountainous land, 75 chs.
	Note: The sky was overcast at noon, making an observation for latitude impossible.
	Dec.10,1913.

	Dec.11,1913:
	East, on a random line, bet. secs.25 and 36.
40.00	Set temp.¼ sec.cor.
79.98	Intersect east bdy.of Tp., 21 lks.north of the cor.of secs. 25,30, 31 and 36, established by me, as described in Book "A."
	Thence I run,
	N.89°51'W., on a true line, bet. secs.25 and 36.
	Over broken, rocky north slope, through scattering timber and undergrowth.
39.99	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 N., and S 36 in S.half; and raise a mound of stone 2 ft. base, 1½ ft. high, north of corner. Pits impracticable.
	Continue along broken north slope.
60.00	Top of cliffs, bears NW° and SE. Descend SW. slope,225 ft.to
70.80	Foot of cliffs, brs. NW° and SE. Enter cultivated land.
71.90	Leave cultivated land, brs.N.and S.
73.55	Wire fence brs.N and S.
73.91	Trail, brs.N.and S.
74.84	Eagle Creek, 45 lks.wide, 6 ins. deep, course S.
75.50	Small irrigation ditch, course S.
75.80	Foot of cliffs, ascend east slope to
79.98	The cor.of secs.25,26, 35 and 36.
	Land, rolling and hilly.
	Soil, 2nd and 4th rate.
	Timber, cottonwood and willow on creek.
	Undergrowth, scattering scrub oak, catclaw and mesquite.
	Dec.11, 1913.

Dec.12,1913: At 8h. 10m. a.m., l.m.t., I set off 33°2½'N. on the lat.arc; 23°1'S. on the decl.arc; and determine a meridian with the solar at the cor.of secs.25, 26,35 and 36, hereinbefore described.

Thence I run,

N.0°1'W., bet. secs.25 and 26.

Chains.	
	Descend precipitous NE. slope, 500 ft. to
.23	Foot of precipice, 150 ft. high; ascend.
3.00	Spur ridge, brs. SE. Descend NE. slope.
6.82	Cliffs, brs. NW. and SE. Continue descent.
12.30	Foot of bluff, brs. NW. and SE.
12.55	Small irrigation ditch, brs. SE.
12.73	Trail brs. NW. and SE.
14.10	Eagle Creek, 60 lks. wide, 12 ins. deep, course SE.
17.10	Foot of bluffs, brs. NW. and SE. Impossible to chain or triangulate on line beyond here. Therefore, I return on sec. line, to
15.39	Thence I offset from sec. line, N. 57° 5' W., 14.00 chs. Thence N. 24° 22' E., 17.21 chs. Thence N. 1.32 chs. Thence E. 4.65 chs., returning to sec. line at
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 26 in W., and S 25 in E. half; from which, A cottonwood, 8 ins. in diam., brs. S. 89° W., 155 lks. dist., marked ¼ S 26 B T.
	No other trees within limits. Raise a mound of stone 2 ft. base, 1½ ft. high, west of cor. Pits impracticable. This corner is set at the foot of bluffs, 180 lks. east of Eagle Creek.
41.00	Foot of cliffs brs. NW. and SE., to avoid which I return on sec. line to
40.00	Thence I offset from sec. line, West, 6.97 chs. Thence N. 0° 1' W., 13.94 chs. to a point on cliffs, 200 ft. above Eagle Creek. Thence east, 6.97 chs., returning to sec. line at
53.94	Thence I return on sec. line, chaining dist. S. 0° 1' E., to get topography, as far as practicable.
53.80	Wagon road, brs. E. & W. Pump house on Eagle Creek, brs. N. 71° 36' W. Water pipe lines bear WNW. to pump house, & E. to Morenci.
52.61	Telephone line, brs. WNW. to pump house, and east to Morenci; discontinue chaining, and return to a point on sec. line at
53.87	From this point, I take stadia measurement across head of rocky, broken, box canyon, course NW. Rod reading 6.938 ft. Ratio 1 ft. = 2 chs. Focal constant, 1.025 ft. Angle of depression - 6°; therefore dist. to rod = .9891 x 2 x 6.938 plus .016 = 13.74 chs., which added to 53.87 chs. = 67.61 chs. rod point.
67.61	Rod point on spur ridge, brs. SW. This point being on south side of box canyon, 400 ft. deep, course SW., over which chaining is impracticable, I measure by stadia, Rod reading, 6.204 ft. Ratio 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle, plus 3°. The dist. to rod point on north side of canyon is therefore 6.204 x 2 x .9973 plus .016 = 12.39 chs., which added to 67.61 chs. = 80.00 chs., rod point and point for sec. cor.
80.00	Set an iron post 3 ft. long, 2 ins. in diam., on bed rock, supported by a mound of stone for cor. of secs. 23, 24, 25 and 26, marked on brass cap, 1913 on S. rim, T 4 S R 28 E in N. half; S 23 in NW., S 24 in NE., S 25 in SE., and S 26 in SW quadrant; and raise a mound of stone, 2 ft. base, 1½ ft. high, west of cor. Pits impracticable.
	Land, mountainous. Soil, very rocky, 4th rate. No timber, except willow and cottonwood along creek. Undergrowth, dense catclaw, mesquite and cacti.

4. Partial Subdivision of Township 4 South, Range 28 East.

Chains.	
	Note; The sky was overcast at noon, making an observation for latitude impossible. Dec. 12, 1913.
	Dec.20, 1913: At 7h. 59m., a.m.,,l.m.t., I set off 33° 3½'N. on the lat.arc; 23°23'S. on the decl.arc; and determine a meridian with the solar at the cor.of secs. 23,24,25 and26, hereinbefore described. As this cor. is near the west edge of Eagle Creek Canyon, over which I cannot chain, I obtain the measurement of the west end of random line, bet. secs.24 and 25 by stadia measurement from said cor. S.89°51'E. to rod on east side of canyon. Rod reading 7.715 ft. Ratio 1 ft.= 2 chs. Focal constant 1.025 ft. Vertical angle plus 12°10'. The dist. to rod is therefore 7.715 x 2 x .9556 plus .016 = 14.76 chs. rod point.
14.76	Rod point, thence continue random line, S.89°51'E.
40.00	Set temp.¼ sec.cor.
79.98	Intersect the east bdy.of Tp., 21 lksnorth of the cor. of secs.19,24, 25 and 30, established byme as described in Book "A."
	Thence I run, N.89°42'W., on a true line, bet. secs. 24 and 25.
	Through scattering timber and dense undergrowth. Descend slightSW. slope, to
.23	Gulch, curse NW. Ascend slight NE. slope to
2.00	Spur ridge, brs.NW. Descend SW? slope, 75 ft.to
7.50	Canyon, 1 ch. wide, course WNW. AscendNE. slope.
8.36	Pipe line,(pipe 3 ins. in diam.) brs.NW. and SE.
10.00	Spur ridge, brs.N. Descend NW. slope, to
12.60	Canyon, curse NE. Ascend SE. slope, to
18.00	Spur ridge, brs.SW. and NE. Descend SW. slope.
20.75	Wagon road, brs.NW. and SE.
22.25	Gulch, course SW. Thence along broken south slope.
30.00	Spur ridge, brs.SW.; descend.
30.50	Gulch, course SW. AscendSE. slope to
36.48	Spur ridge brs. S. A stake 2 x 4 ins., 3 ft. above ground, set in a mound of stone, marked SW cor. 14 M S on E., NE. Addid MS on S., SE.cor. Strettawa on W., SW. cor. Grand Finale MS on N.face.
	Descend SW. slope, to
39.99	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 N., and S 25 in S.half; and raise a mound of stone, 2 ft. base, 1½ ft. high,N. of cor. Pits impracticable.
	Descend SW. slope, 100 ft.to
41.80	Enter canyon, course west.
44.00	Leave canyon; ascend SE. slope, 80 ft.to
48.20	Rocky spur cliff, brs.N.and S. Thence across broken S. slope, at intersection of two canyons from NE.and SE., impossible to chain; therefore, measure dist. by stadia Rod reading, 6.548 ft. Ratio 1 ft.= 2 chs. Focal constant 1.025 ft. Vertical angle, plus 3° 24'. The distance to rod is therefore, 6.548 x 2 x .9965 plus .016 = 13.07 chs., which added to 48.20 chs. = 61.27 chs. rod point.
61.27	Rod point. Ascend SE. slope, 65 ft.to
65.22	Rocky spur ridge, brs.N.and S. Descend NW. slope, 500 ft. into Eagle Creek Canyon.
75.00	(Approx.) Eagle Creek, 60 lks. wide, 6 ins. deep, course SW.; ascend SE. slope, 450 ft.
79.98	The cor.of secs.23,24, 25 and 26.

Chains.

Note: At this corner, Dec.20, 1913, I set off 23°25'S. on the decl.arc; and at apparent noon, I observe the sun on the meridian; the resulting latis 33° 3½'N.
Land, hilly and mountainous.
Soil, rocky, 4th rate.
Timber scattering cedar.
Undergrowth, dense mesquite, catclaw, scrub oak and cacti.

To avoid extremely difficult ascent on south end of sec. line, bet. secs. 23 and 24, I offset as follows:
From the cor.of secs. 23,24, 25 and 26, I run,
East 0.62 chs., thence N.0°1'W., in sec.24 on offset to line bet. secs.23 and 24.
Ascending steep south slope, through dense undergrowth.

1.89 Rocky ridge, brs. E. and W. Thence by stadia measurement across Eagle Creek Canyon, 450 ft. deep, course E. Rod reading 6.032 ft. Ratio 1 ft.= 2 chs. Focal constant, 1.025 ft. Vertical angle, plus 4°40'. The dist.to rod point is therefore, 6.032 x 2 x .9934 plus .016 = 12.00 chs., which added to 1.89 chs.= 13.89 chs. rod point.

13.89 Rod point on rocky spur brs.W. Continue on offset line N.0°1'W. to a point whence I run, W.0.62 chs.,returning to sec.line at

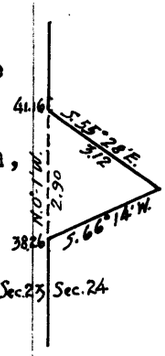
14.90 Thence I run, N.0°1'W. on true line, bet. secs.23 and 24, continuing measurement. Descend N. slope, 140 ft.

16.55 Trail,brs.E.and W.

20.00 Canyon, course W. Ascend S. slope, 25 ft.to

23.28 A point on SE. side of Eagle Creek Canyon, course SW., across which I take stadia measurement from this point, rod reading, 7.670 ft.;ratio 1 ft.= 2 chs. Focal constsnt, 1.025 ft. Angle of depression, - 9°. Therefore, the dist.to rod is, 7.670 x 2 x .9755 plus .016 = 14.98 chs., which added to 23.28 chs.= 38.26 chs. rod point.

38.26 Rod point on rocky spur ridge, brs.E. on W.side of Eagle Creek Canyon in curve of same, from SE. to SW.
Set a flag at this station, and triangulate as follows:
From a point on sec.line in bottom of Eagle Creek Canyon, I lay off a base line, S.55° 28' E., 3.12 chs. to a point from which the flag brs. S.66° 14'W. The dist. on sec.line from flag to point in bottom of canyon is therefore, $\frac{\sin.58°\ 18' \times 3.12}{\sin.66°14'}$ = 2.90 chs.,which added to 38.26 chs. = 41.16 chs.



41.16 Point for triangulation. Thence I return, S.0°1'E. on sec.line, chaining dist. as far as practicable, for topography, and for location of witness cor.to ¼ sec. cor.

40.00 South edge of water in Eagle Creek, 1 ch.wide, 4 ins.deep, course SE.125 ft. below 38.26 ch. station. Point for ¼ sec.cor. impracticable to setpost.

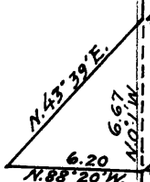
39.76 Foot of bluff, 30 ft.high. Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in the ground for witness cor. to ¼ sec.cor., marked on brass cap,
1913 on S.rim,
W C ¼ in N.half;
S 24 in SE., and
S 23 in SW.quadrant; from which,
A cottonwood, 12 ins. in diam., brs.N.43¾°E., 251 lks.dist., marked W C ¼ S 24 B T.
A cottonwood, 10 ins. in diam., brs.N.27°W., 30 lks.dist., marked W C ¼ S 23 B T.
Impossible to chain measurement any further S.0° 1'E.; therefore, I return to point for triangulation, on sec.line at 41.16 ch. point on N.edge of Eagle Creek and lay off another base line for triangulation, N.88° 20'W., 6.20chs. to a point from which a flag on sec.

Chains.

line on north side of canyon, brs.N.43° 39' E.;therefore, the dist. on sec.line is,

$$\frac{\text{sin. } 48° 01' \times 6.20}{\text{sin. } 43° 40'} = 6.67 \text{ chs.}$$ which

added to 41.16 chs.= 47.83 chs. flag point.



47.83 Flag point on cliff, brs. NW. and SE. 300 ft. above Eagle Creek. As this point is also near the SE. edge of a deep box canyon, course SW., over which I cannot chain, I set rod ahead on sec.line on top of spur, and measure dist. across this canyon by stadia. Rod reading 8.120 ft. Ratio 1 ft.= 2 chs. Focal constant, 1.025 ft. Vertical angle plus 7°. The dist. to rod is therefore, 8.120 x 2 x .9851 plus .016 = 16.01 chs., which added to 47.83 chs.= 63.84 chs., rod point.

63.84 Rod point on top of a rocky spur sloping SE. Line from this point passes over a very rough and broken rocky east slope, impossible to chain dist.; therefore, set rod ahead on sec.line, on top of spur ridge, and measure dist. by stadia. Rod reading 4.7105 ft. Ratio 1 ft.= 2 chs. Focal constant, 1.025 ft. Vertical angle plus 19°. The dist. to rod is therefore, 4.7105 x 2 x .8940 plus .016 = 8.44 chs., which added to 63.84 chs. = 72.28 chs. rod point.

72.28 Rod point on top of rocky spur ridge, sloping SE. Line from this point passes over head of deep rocky canyon, course SE.; impossible to chain across; therefore, set rod ahead on sec.line, and measure dist. by stadia. Rod reading, 5.129 ft. Ratio, 1 ft.= 2 chs. Focal constant, 1.025 ft. Vertical angle plus 11°40'. The dist. to rod is therefore, 5.129 x 2 x .9591 plus .016 =9.85 chs., which added to 72.28 chs. = 82.13 chs. rod point.

82.13 Rod point, from which I return on sec.line, S.0° 1'E., 2.13 chs. to

80.00 Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs.13,14,23 and 24, marked on brass cap,

1913 on S rim,
T 4 S R 28 E in N.half;
S 14 in NW.,
S 13 in NE.,
S 24 in SE., and
S 23 in SW. quadrant; and raise a mound of stone, 2 ft. base, 1½ ft. high, west of cor. Pits impracticable.

Land, mountainous.
Soil, very rocky, 4th rate.
No timber.
Undergrowth, dense scrub oak, mesquite, catclaw and cacti.
Mountainous land, 80 chs.

Dec. 20, 1913.

Dec. 22, 1913: At 8h. 7m. a.m., lm.t., I set off 33°4½' N. on the lat.arc; 23°23½'S. on the decl.arc; and determine a meridian with the solar at the cor. of secs. 13,14,23 and 24, hereinbefore described.

Thence I run,
S.89°42'E., on a random line, bet. secs.13 and 24.

40.00 Set temp. ¼ sec.cor.

79.92 Intersect eastbdy. of Tp., 19 lks.S. of the cor. of secs.13, 18,19 and 24, established by me, as described in Book "A."

Thence I run,
N.89°50'W., on a true line, bet. secs.13 and 24.
Descend slight NW. slope, through dense undergrowth.

.95 Canyon, course SW. Ascend SE. slope, 120 ft. to

5.15 Spur ridge, brs.S. Descend SW. slope, 45 ft. to

10.00 Gulch, course S. Ascend SE. slope, 35 ft. to

14.50 Spur ridge brs.SW. Descend NW. slope, 60 ft. to

Chains.

16.80 Canyon, course SW. Ascend SE. slope, 50 ft.to
20.60 Ridge,brs. NE. and SW. Descend W. slope, 275 ft.to
23.50 Head of gulch, course west. Descend NW. slope, to
35.00 Canyon, course SW. Wagon road in canyon, and 2in.pipe line, brs.NE and SW. Ascend SE. slope,350 ft.to
36.60 Spur ridge, brs.SE.; descend.
37.75 Gulch, course SE.; ascend.
39.96 Spur ridge, brs.SE. Set an iron post 3 ft.long, 1 in. diam., 26 ins. in the ground, for ¼ sec.cor.,marked on brass cap,
1913 on S.rim,
¼ S 13 in N., and
S 24 in S.half;
and raise a mound of stone, 2 ft. base, 1½ ft. high,N. of cor. Pits impracticable.
51.80 Ridge, brs.N.and S. Descend SW. slope, 85 ft.to
59.00 Gulch, course S. Thence along south slope.
70.00 Gulch, course S. Ascend SE. slope, 40 ftto
73.00 Spur ridge, brs.S. Descend SW. slope, 60 ftto
79.92 The cor.of secs. 13,14, 23 and 24.
Note: At this cor., Dec.22, 1913, I set off 23°25½'S.on the decl.arc; and at apparent noon, I observe the sun on the meridian; the resulting lat.is 33°4½'N.
Land, hilly and mountainous.
Soil, very rocky, 4th rate.
Timber, none.
Undergrowth, dense mesquite, catclaw, scrub oak and catclaw.
Mountainous land, 60 chs.

Dec.22,1913

Dec.29, 1913: At 8h. 15m. a.m.,l.m.t., I set off 33°4½'N. on the lat.arc; 23°11½'S. on the decl.arc; and determine a meridian with the solar at the cor.of secs.13, 14,23 and 24, hereinbefore described.
Thence I run,
N.0°1'W., bet. secs.13 and 14.
Through scattering timber and undergrowth. Ascend S. slope, 60 ft.to
3.00 Ridge, brs.E.and W. Descend NW. slope, 165 ft.to
14.00 Canyon, course W. Ascend broken S. slope, 565 ft.to
29.50 Ridge, brs.E. and W. Descend NW. slope, 200 ft.to
36.00 Canyon, course west. Ascend SW. slope, 500 f t.
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 14 in W., and
S 13 in E.half;
and raise a mound of stone 2 ft.base, 1½ ft. high,W. of cor. Pits impracticable.
Continue to ascend steep SW. slope to
48.50 Rock ledge, brs.NW. and SE.; ascend.
70.00 Ridge, brs. NW. and SE. Descend NE. slope, 75 ft.to
78.00 Gulch, course NW. Ascend SW. slope, 25 ft.to
80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs.11,12, 13 and 14, marked on brass cap,
1913 on S.rim,
T 4 S R 28 E in N.half;
S 11 in NW.,
S 12 in NE.,
S 13 in SE., and
S 14 in SW. quadrant; and raise a mound of stone, 2 ft.base, 1½ ft. high west of cor. Pits impracicable.
Note: At this cor., Dec.29, 1913, I set off 23°13'S.on the decl.arc; and at apparent noon, I observe the sun on the meridian; the resulting lat.is 33°5'N.
Land, mountainous and hilly.

8. Partial Subdivision of frac.Township 4 S.,R.28 E.

Chains.	
	Soil, rocky, 4th rate.
	Timber, scattering cedar and pine.
	Undergrowth, scattering mesquite, catclaw, scrub oak and cacti.
	Mountainous land, 70 chs.
	Dec. 29 1913.

	Dec. 11, 1913: At 8h. 55m., a.m., l.m.t., I set off 33° 2'N. on the lat.arc; 22°57' S.on the decl.arc; and determine a meridian with the solar at the cor.of secs. 2,3,34 and 35, on the south bdy.of the Tp., established by me, as described in Book "A."
	Thence I run,
	N.0°1'W., bet. secs.34 and 35.
	Through scattering timber and dense undergrowth. Ascend south slope, 450 ft.to
12.00	Ridge, brs.E.and W. Along slight E. slope to
26.00	Descend N. slope, 700 ft.
36.00	Descend NE. 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 34 in W., and S 35 in E.half; and raise a mound of stone 2 ft. base, 1½ ft. high west of cor. Pits impracticable.
48.00	Gulch, course NW. Ascend SW. slope, to
56.00	Spur ridge, brs.NW. Descend N. slope, to
59.50	End of descent; canyon, 150 lks. wide, course E.
	Ascend SE. slope, 90 ft.to
65.40	Wire fence on top of ridge, brs.E.and W.
	Ralph Casron's cabin brs.N.60°W., about 18 chs. dist.
	Alonzo Chaves' cabin brs.N.85°E., 7 chs.dist.
	Descend NE. slope, 100 ft.to
68.70	Small irrigation ditch, course E.
71.10	Small stream of water, course E.; ascend.
72.00	Spur ridge, brs.SE.; descend.
73.00	Gulch, course SE. Ascend SW. slope, 125 ft.
77.50	Wire fence brs.NW. and SE.
80.00	Set an iron post 3 ft.long, 2 ins.in diam., 24 ins. in the ground, for cor.of secs.26,27,34 and 35, marked on brass cap, 1913 on S.rim, T 4 S R 28 E in N.half; S 27 in NW., S 26 in NE., S 35 in SE., and S 34 in SW quadrant; and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Pits impracticable.
	Land, mountainous and hilly.
	Soil, very rocky, 4th rate.
	Timber, scattering cedar, cottonwood and ash.
	Undergrowth, dense catclaw, mesquite and cacti.
	Mountainous land, 52 chs.

	East, on a random line, bet. secs.26 and 35.
40.00	Set temp. ¼ sec.cor.
79.74	Intersect N.and S. line, 2 lks.north of the cor.of secs. 25,26,35 and 36, hereinbefore described.
	Thence I run,
	N.89°59'W., on a true line, bet. secs. 26 and 35.
	Along broken south slope at foot of cliffs, bearing E.and W.; through dense undergrowth.

Chains.	
5.00	Descend brokwn SW· slope, 120 ft. to
13.00	Gulch, course S. Ascend SE. slope, 110 ft. to
28.00	Spur ridge, brs. S. Descend SW· slope, 75 ft.
31.50	Canyon, course SE. Hot Springs brs. NW., 3 chs. dist. Ascend NE· slope, 400 ft.
39.87	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 26 in N., and S 35 in S. half; and raise a mound of stone 2 ft. base, 1½ ft. high, N. of cor. Pits impracticable.
52.55	Ascend SE· slope, to
62.10	Top of ascent; spur ridge, brs. SE. Descend SW· slope, 200 ft. to
72.00	Gulch, course SE. Ascend SE· slope, 110 ft to
77.50	Spur ridge, brs. S. Descend SW· slope, 45 ft. to
79.74	The cor. of secs. 26, 27, 34 and 35. Note: At this cor. Dec. 11, 1913, I set off 22°59'S. on the decl. arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 33° 2½'N. Land, mountainous and hilly. Soil, rocky, 4th rate. No timber. Undergrowth, dense mesquite, catclaw, greasewood and cacti. Mountainous land, 64 chs. Dec. 11, 1913.

Dec. 18. 1913; At 8h. 58m. a.m., l.m.t., I set off 33°2½'N. on the lat. arc; 23°21½'S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 26, 27, 34 and 35, hereinbefore described.
Thence I run,
N. 0°1'W., bet. secs. 26 and 27.
Through dense undergrowth. Ascend S· slope, 140 ft. to

5.00	Ridge, brs. NW. and SE. Descend NE· slope, 40 ft. to
6.20	Rocky spur ridge, brs. E.; descend.
12.60	Gulch, course SE. Ascend broken rocky south slope, 425 ft. to
23.20	Ridge, brs. NW. and SE. Descend NE· slope, 325 ft. to
33.00	Gulch, course NE.; ascend.
35.50	Spur ridge, brs. E. Continue to descend NE. slope, to
38.25	Gulch, course SE.
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 27 in W., and S 26 in E. half; and raise a mound of stone 2 ft. base, 1½ ft. high, west of cor. Pits impracticable.
40.50	Gulch, course SE. Ascend rocky broken SE. slope, 110 ft. to
49.35	Ridge, brs. E· and W. Descend NW· slope, 425 ft. to
53.40	Gulch, course NE. Descend NE· slope, 2 to
72.00	Gulch, course N. Thence along east bank of gulch.
75.00	Leave gulch, course NE. Thence along east slope.
80.00	Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 22, 23, 26 and 27, marked on brass cap, 1913 on S. rim, T 4 S R 28 E in N. half; S 22 in NW·, S 23 in NE., S· 26 in SE., and S 27 in SW. quadrant; and raise a mound of stone 2 ft. base, 1½ ft. high, west of cor. Pits impracticable.
Note:	At this cor. Dec. 18, 1913, I set off 23° 22½' S. on the decl. arc; and at apparent noon, I observe the sun on

10. Partial Subdivision of frac. Township 4 South, Range 28 E.

Chains.

[illegible] the meridian; the resulting lat. is 33° 3½' N.
Land, hilly and mountainous.
Soil, very rocky, 4th rate.
No timber.
Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
Mountainous land, 62 chs.

Dec. 18, 1913.

Dec. 19, 1913: At 8h. 3m. a.m., l.m.t., I set off 23°22' S. on the decl. arc; 33°3½'N. on the lat. arc; and determine a meridian with the solar at the cor. of secs. 22, 23, 26 and 27, hereinbefore described.
Thence I run,
S. 89°59'E., on a random line, bet. secs. 23 and 26.
40.00 Set temp. ¼ sec. cor.
79.76 Intersect N. and S line, 23 lks. south of the cor. of secs. 23, 24, 25 and 26, hereinbefore described.
Thence I run,
S. 89°51'W., on a true line, bet. secs. 23 and 26.
Descend SW. slope, through dense undergrowth.
4.56 Impassible pracipices, bearing east and west render chaining beyond this point impossible; therefore, I take stadia measurement. Rod reading, 4.654 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Angle of depression - 8° 54'. The dist. on sec. line to rod is therefore 4.654 x 2 x .9761 plus .016 = 9.10 chs., which added to 4.56 chs. =
13.66 Rod point. Thence along broken south slope.
18.57 Pump house brs. S. 24°W. on west side of Eagle Creek.
Row of houses brs. S. 9°W. about 18 chs. dist. on east side of Eagle Creek.
Thence take stadia measurement across rocky broken box canyon, across which I cannot chain. Rod reading, 2.493 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Level. The distance on sec. line to rod is therefore 2.493 x 2 plus .016 = 5.00 chs., which added to 18.57 chs. =
23.57 Stadia rod point. Descend west slope, 45 ft. to
25.00 Gulch, course S. Thence along south slope.
26.00 Gulch, course SE. Ascend E. slope, to
28.75 Spur ridge, brs. SE. Thence along south slope.
33.25 End of ascent; descend slight SW. slope, to
34.75 Gulch, course SE. Ascend east slope, 110 ft. to
38.75 Ridge, brs. N. and S. Descend W. slope, 125 ft.
39.88 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 23 in N., and
S 26 in S half;
and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Pits impracticable.
45.45 Gulch, course N. Ascend broken NE. slope, 110 ft. to
45.75 Spur ridge, brs. N. Pump station trail, brs. NW. and SE. Descend.
47.75 Gulch, course NE.; ascend.
51.25 Ridge, brs. NW.; descend.
53.75 Gulch, course NE.; ascend.
56.25 Ridge, brs. NE.; descend.
58.30 Gulch, course NE.; ascend.
60.30 Ridge, brs. NE. Descend NW. slope, 40 ft.
68.00 Bonita Creek trail, brs. NW. and SE.
69.00 Bonita Creek trail, brs. NE. and SW.
71.55 Gulch, course NE. Ascend NE. slope, 40 ft.
71.90 Bonita Creek Trail, brs. NW. and SE.
76.00 Spur ridge, brs. N. Descend NW. slope, 60 ft. to
79.25 Gulch, course NE.; ascend.
79.76 The cor. of secs. 22, 23, 26 and 27.
Land, mountainous, rolling & hilly. Soil, very rocky, 4th rate.
No timber. Undergrowth, dense mesquite, catclaw, scrub oak & cacti.
Mountainous land 70 chs.
Note: The sky was overcast at noon; making an observation for lat. impossible.

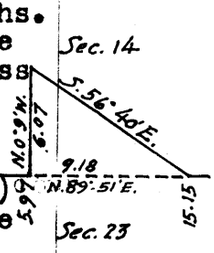
Dec. 19, 1913.

Chains.

Dec.18,1913:
N.0°1'W., bet. secs.22 and 23.
Through scattering timber and undergrowth. Ascend south slope, 15 ft.to
1.00 Spur ridge, brs.E. Descend N. slope, 100 ft.
2.95 Bonita Creek Trail, brs.E. and W.
8.00 Canyon, 50 lks.wide, course SE. Ascend broken SW. slope, 150 ft.
16.00 Head of draw, course SW. Ascend S. slope to
18.00 Ridge, brs. E.and W. Descend N. slope, along draw,150 ft.to
27.50 Gulch, course NE. Ascend SE. slope, to
30.00 Spur ridge, brs.NE. Descend NW. slope, to
33.00 Gulch, course E. Ascend SE. slope, 50 ft.to
35.20 Ridge, brs.E. and W. Descend N. slope, 100 ft.
40.00 Set an iron post, 3 ft.long, 1 in. in diam., on bedrock, supported by a mound of stone, for ¼ sec.cor., marked on brass cap,
1913 on S.rim
¼ S 22 in W., and
S 23 in E.half;
and raise a mound of stone 2 ft. base, 1½ ft. high,west of cor. Pits impracticable.
40.30 Foot of bluff, brs.NW. and SE.
40.35 South bank of Eagle Creek, 25 lks.wide, 2 ft. deep, course SE.
43.40 Trail in Creek bottom, brs.NW. and SE.
45.15 Foot of cliffs, brs.NW. and SE. Ascend SW. slope, 350 ft.to
49.10 Top of cliffs bears NW. and SE. Ascend slight south slope.
56.00 Ascend SE. slope.
71.00 Draw, course SE. Ascend SE. slope, to
76.00 Ridge, brs.NE. and SW. Thence along west slope.
80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs. 14,15,22 and 23, marked on brass cap,
1913 on S.rim,
T 4 S R 28 E in N.half;
S 15 in NW.,
S 14 in NE.,
S 23 in SE., and
S 22 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.
Timber, scattering cedar.
Undergrowth, scattering mesquite, catclaw and cacti.
Mountainous land, 50 chs.

Dec.18,1913.

Dec. 27, 1913. At 8h. 8m. a.m.,l.m.t., I set off 33° 4½' N.on the lat.arc; 23°17½' S. on the decl.arc; and determine a meridian with the solar at the cor. of secs. 14, 15, 22 and 23, hereinbefore described.
Thence I run.
N.89°51'E. on a random line, bet. secs.14 and 23.
5.97 Point for triangulation on west side of deep V-shaped canyon, course E., impossible to chain across. From this point, I set off a base line, N.0°9'W., 6.07 chs. from the N. end of which a flag on line on east side of canyon, brs.S.56°40'E. Therefore, the dist.across canyon, on random line = tan. 56°31' x 6.07 = 9.18 chs., which added to 5.97 chs.= 15.15 chs.



15.15 Flag point on east side of canyon.
27.00 Instrument point (on west side of deep V-shaped canyon,) course SE. for stadia measurement. Set rod on line

12. Partial Subdivision of frac.Township 4 South,Range 28 E.

Chains.	
	on ridge, on eastside of canyon. Rod reading, 4.541 ft. Ratio, 1 ft.=2 chs. Focal constant, 1.025 ft. Angle of depression - 5°20'. The dist. to rod is therefore, 4.541 x 2 x .9914 plus .016 = 9.02 chs. which added to 27 chs. = 36.02 chs. rod point.
36.02	Rod point on top of spur ridge, brs.S. The line east of this point passes over fork of box canyons 200 ft.deep, from NW. and SE., course S., over which chaining is impossible. I run N. 89°51'E. from this point, a dist. of 0.63 chs., and at
36.65	(The nearest accessible point to point for temp.¼ sec.cor.) Set temp.witness cor. to ¼ sec.cor. I set rod on line on east side of canyon, and from 36.02 chs. station, take stadia measurement across canyon. Rod reading, 4.681 ft. Ratio, 1 ft.= 2 chs. Focal constant, 1.025 ft. Angle of depression - 2°. The dist. on random line to rod is therefore 4.681 x 2 x .9988 plus .016 = 9.37 chs., which added to 36.02 chs.= 45.39 chs. rod point.
45.39	Rod point on east side of canyon.
80.10	Intersect N. and S. line, 9 lks.north of the cor. of secs. 13, 14, 23 and24, hereinbefore described.
	Thence I run,
	S. 89°55'W., on a true line, bet. secs.14 and 23.
	Through scattering timber and dense undergrowth. Ascend slight SE. slope, to
2.60	Ridge, brs.N.and S. Descend SW. slope, 50 ft.to
6.00	Head of gulch, course SW. Thence along south slope.
10.00	Ridge, brs.NE. and SW. Descend NW. slope, 225 ft.
21.00	Descend W. slope.
26.00	Canyon, course SW. Ascend SE. slope, 115 ft.
34.71	East, bank of deep canyon, course S.
40.05	Point for ¼ sec.cor. falls in canyon at inaccessible position.
43.45	West bank of junction of two canyons, 200 ft. deep, from NW. and NE., course S. As this is the nearest practical point for witness cor., I 7
	Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in the ground atthis point, for witness cor. to ¼ sec.cor., marked on brass cap,
	1913 on S.rim,
	W C ¼ in E.half;
	S 14 in NW., and
	S 23 in SW. quadrant;
	and raise a mound of stone, 2 ft. base , 1½ ft. high, north of corner. Pits impracticable.
44.08	Top of spur ridge, brs.SE. Thence across deep V-shaped canyon, course SE.
53.10	West edge of canyon. Ascend eastslope, 120 ft.to
56.00	Spur ridge, brs.SE. Continue ascent.
62.60	Head of gulch, course SE.; ascend.
64.95	Spur ridge, brs.S. Thence across deep rocky V-shaped canyon, course S.
74.13	West bank of canyon. Ascend east slope, 285 ft.
75.30	Trail, brs.NE. and SW.
77.35	Trail, brs.NW. and SE.
80.10	The cor.of secs.14,15, 22 and 23.
	Note: At this corner Dec.27, 1913, I set off 23°19'S. on the decl.arc; and at apparent noon, I observe the sun on the meridian; the resulting lat.is 33°4½'N.
	Land, mountainous and hilly.
	Soil, rocky, 4th rate.
	Timber, very scattering cedar and pine.
	Undergrowth, rocky, 4th rate.
	Mountainous land, 60.00 chs.

Chains.	
	N.0°1'W., bet. secs.14 and 15.
	Through scattering timber and undergrowth. Ascend SE. slope, 85 ft.
.57	Trail,brs. NE and SW.
5.50	Ridge, brs.NE. and SW. Descend NW. slope,50 ft.to
12.75	Gulch, course W. Ascend south slope, 30 ft.
15.80	Thence along west slope.
20.00	Descend NW. slope, 75 ft.to
26.00	Gulch, course SW. Ascend S. slope, 120 ft.to
34.00	Ridge, brs.NE. and SW. Descend NW. slope, 65 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 15 in W., and S 14 in E.half; from which, A cedar, 5 ins. in dia m., brs.S.78½°E.,146 lks.dist., marked ¼ S 14 B T. A pine, 14 ins. in diam., brs.S.54½°W.,274 lks.dist, marked ¼ S 15 B T.
41.00	Top of bluff, brs.NE and SW. From this point, line passes over Horseshoe Gulch, 250 ft.deep, course SW. It being impossible to chain across, I obtain measurement by stadia. Rod reading, 6.565 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Level. Dist.to rod is therefore, 6.565 x 2 plus .016 = 13.15 chs., which added to 41.00 chs. = 54.15 chs. rod point.
54.15	Rod point on north bank of gulch. Ascend SE. slope,300 ft. to
56.00	Spur ridge, brs.SE. Thence along east slope.
62.00	Head of gulch, course SE. Ascend S. slope.
64.40	Trail, brs. E.and W.
76.25	Ridge, brs.NE. and SW. Descend NW. slope, 100 ft.to
80.00	Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs.10,11,14 and 15, marked on brass cap, 1913 on S.rim, T 4 S R 28 E in N.half; S 10 in NW., S 11 in NE., S 14 in SE., and S 15 in SW. quadrant; and 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 pinon and cedar.
	Undergrowth, scattering mesquite, catclaw and scrub oak.
	Mountainous land, 50 chs.

	N.89°55'E., on a random line, bet. secs.11 and 14.
40.00	Set temp.¼ sec.cor.
79.88	Intersect N.and S. line, 16 lks.north of the cor.of secs. 11,12,13 and 14, hereinbefore described.
	Thence I run,
	N.89°58'W., on a true line, bet secs.11 and 14.
	Through scattering timber and dense undergrowth.
	Descend SW. slope, 145 ft.to
8.00	Draw, course SW. Ascend SE. slope, 60 ft,
13.40	Spur ridge, brs. SW. Descend NE. slope, 550 ft.to
32.25	Horseshoe Gulch, 2 chs.wide, course SW. Ascend SE.slope, 100 ftto
39.94	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 11 in N., and S 14 in S.half; and raise a mound of stone, 2 ft.base, 1½ ft. high, N. of cor. Pits impracticable.

Chains.

Augustine Topez' house brs.S.39°E., about 7 chs.dist.
Descend SW. slope, 35 ft. to
41.30 Gulch, course S. Ascend SE. slope, 15 ft.to
43.90 Spur ridge, brs.S. Descend SW. slope, 100 ft.to
50.15 Gulch, course S. Ascend SE. slope, 125 ft.to
55.90 Spur ridge, brs. SW. Descend SW. slope, 100 ft.to
60.60 Gulch, course SW. Ascend broken SE. slope, 200 ft.to
72.90 Ridge, brs.NE. and SW. Descend NW. slope, 105 ft.to
79.88 The cor.of secs.10,11,14 and 15.
Land, mountainous and hilly.
Soil, rocky, 4th rate.
Timber, scattering cedar and oak.
Undergrowth, dense mesquite, scrub oak,catclaw and cacti.
Mountainous land,70 chs.

N.0°1'W., bet. secs.10 and 11.
Through scattering timber and dense undergrowth. Descend NW. slope, 130 ft.to
5.50 Gulch, course W. Ascend SW. slope, 70 ft.to
10.00 Spur ridge, brs. W. Descend NW. slope, 115 ft.to
15.25 Gulch, course W. Ascend SW. slope, 200 ft.to
22.50 Ridge, brs.NE. and SW. Descend NW. slope, 300 ft.to
35.00 Gulch, course SW. Ascend S. slope, 125 ft.to
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 10 in W., and
S 11 in E.half;
and raise a mound of stone 2 ft.base, 1½ ft. high,W.of corner. Pits impracticable.
Ascend SE. slope, 245 ft.to
54.50 Ridge, brs.E.and W. Descend NW. slope, 170 ft.
59.75 Trail, brs. E. and W.
63.00 Gulch, course NW. Ascend SW. slope, 30 ft.to
68.00 Spur ridge, brs.W. Descend NW. slope, 95 ft.to
72.00 Gulch, course SW. Ascend SE. slope, 160 ft.to
80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs. 2, 3, 10 and 11, marked on brass cap,
1913 on S.rim,
T 4 S R 28 E in N.half;
S 3 in NW.,
S 2 in NE.,
S 11 in SE., and
S 10 in SW. quadrant;
and raise a mound of stone 2 ft.base, 1½ ft. high, west of corner. Pits impracticable.
Land, mountainous.
Soil, very rocky, 4th rate.
Timber, scattering cedar.
Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
Mountainous land, 80 chs.

Dec.27, 1913.

Jan.5, 1914: At 8h. 3m. a.m., l.m.t., I set off 33°6' N. on the lat.arc; 22°36½'S. on the decl.arc; and determine a meridian with the solar at the cor.of secs. 2,3,10 and 11, hereinbefore described.
Thence I run,
N.0°1'W., on a random line, bet. secs. 2 and 3.
40.00 Set temp.¼ sec.cor.
79.93 Intersect N.bdy.of Tp., 23 lks.east of the cor.of secs. 2,3,34 and 35, established by me, as described in Book "A."

Chains.

Thence I run,
S.0°11'E., on a true line, bet. secs.2 and 3.
Through scattering timber and dense undergrowth. Descend SE. slope, 215 ft.to
15.00 Gulch, course SW. Ascend NW. slope, 60 ft.
19.55 Trail, brs. E. and W.
19.95 Ridge, brs.E.and W. Descend SE. slope, 90 ft.to
23.95 Gulch, course SW. Ascend NW. slope, 135 ft.to
32.45 Ridge, brs. NE. and SW. Descend S. slope, 155 ft.to
37.95 Canyon, course W. Ascend N. slope, 50 ft.
39.93 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 3 in W., and
S 2 in E.half;
and raise a mound of stone, 2 ft. base, 1½ ft. high, west of corner. Pits impracticable.
49.70 Spur ridge, brs.SW. Descend S. slope, 320 ft.to
61.45 Canyon, course NW. Ascend NE. slope, 260 ft.to
76.95 Ridge, brs.NE. and SW. Descend SE. slope, 30 ft.to
79.93 The cor.of secs.2,3,10 and 11.
Land, mountainous and hilly.
Soil, very rocky, 4th rate.
Timber, scattering cedar.
Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
Mountainous land, 80 chs.

Jan. 5, 1914.

Dec. 13, 1913. At the cor.of secs.3,4,33 and 34,on the south bdy.of he Tp. established by me, as described in Book "A," I set off 23°8'S. on the decl.arc; and at apparent noon, I observe the sun on the meridian; the resulting lat.is 33° 2'N.
Thence I run,
N.0°2'W., bet. secs. 33 and 34.
Through scattering timber and dense undergrowth. Ascend SE. slope, 20 ft.to
3.00 Ridge, brs.NW. and SE. Descend NE. slope, 350 ft.to
16.00 Canyon, course NE.; ascend.
16.50 Spur ridge, brs.SE.; descend.
17.00 Gulch, course SE. Ascend SE. slope, 300 ft.to
29.10 Ridge, brs.E.and W. Descend N. slope, 300 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 33 in W., and
S 34 in E.half;
and raise a mound of stone, 2 ft. base, 1½ ft. high, west of cor. Pits impracticable.
41.00 Canyon, course east. Ascend S. slope, 240 ft.to
49.50 Ridge and trail, bear east and west.
Descend N. slope, 230 ft.to
55.75 Canyon, course NE. Ascend broken SE. slope, 525 ft.to
72.00 Ridge,brs. E. and W. Descend N. slope, 200 ft.to
80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs. 27,28,33 and 34, marked on brass cap,
1913 on S.rim,
T 4 S R 28 E in N.half;
S 28 in NW.,
S 27 in NE.,
S 34 in SE., and
S 33 in SW. quadrant;
and raise a mound of stone, 2 ft. base, 1½ ft. high, west of cor. Pits impracticable.

16. Partial Subdivision of frac. Township 4 South, Range 28 E.

Chains.

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

East, on a random line, bet. secs.27 and 34.
40.00 Set temp.¼ sec.cor.
80.21 Intersect the N.and S. line, 7 lks.S.of the cor.of secs. 26.27, 34 and 35, hereinbefore described.
Thence I run,
S.89° 57'W., on a true line, bet. secs. 27 and 34.
Through scattering timber and dense undergrowth. Descend SW. slope, 10 ft.to
0.55 Gulch, course SE. Ascend E. slope, 60 ft.to
2.95 Spur ridge, brs.SE. Descend SW. slope, 40 ft.to
4.70 Gulch, course SE. Ascend E. slope, 110 ft.to
10.65 Spur ridge, brs.S. Descend SW. slope, 50 ft.to
14.60 Ditch, course SE.
14.70 Wire fence, brs. NW. and SE.
18.20 Gulch, course SE. Ascend SE. slope, 35 ft.to
20.30 Spur ridge, brs.SE. Descend SW. slope, 50 ft.to
20.56 Wire fence brs.NE. and SW.
20.48 Small irrigation ditch, course SW.
21.80 Small irrigaton ddditch, course SE.
35.20 Small stream of water, course SE. Ascend E. slope, 925 ft.
40.105 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 in S.rim,
¼ S 27 in N., and
S 34 in S.half; from which,
A cedar, 6 ins. in diam., brs.N.34°W., 29 lks. dist., marked ¼ S 27 B T.
A cedar, 6 ins. in diam., brs.S.6¾°E.,22 lks. dist., marked ¼ S 34 B T.
42.20 Ascend NE. slope.
52.50 Trail, brs.NW and SE.
58.20 Rocky ledge, brs.NW and SE.
Thence along north slope.
68.70 Descend NW. slope, 125 ft.to
80.21 THe cor.of secs.27,28, 33 and 34.
Land, mountainous.
Soil, very rocky, 4th rate.
Timber, scattering cedar, cottonwood and willow.
Undergrowth, dense mesquite, catclaw and cacti.
Mountainous land, 68 chs.

Dec. 13, 1913.

Dec.30, 1913: At 8h. 58m. a.m.,l.m.t., I set off 23°9' S.on the decl.arc; 33°2½'N. on the lat.arc; and determine a meridian with the solar at the cor.of secs. 27,28, 33 and 34.
Thence I run,
N.0°2'W., bet. secs.27 and 28.
Through scattering timber and dense undergrowth. Descend NE. slope, 180 ft.to
6.00 Gulch, course NE. Ascend SE. slope, 260 ft.to
21.00 Spur ridge, brs.E. Descend NE. slope,650 ft.to
28.50 Ridge, brs.NE. and SW. Continue to descend NW. 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 28 in W., and
S 27 in E.half;
and raise a mound of stone 2 ft.base, 1½ ft. high,W. of cor. Pits impracticable.

Chains.	
	Continue to descend NW. slope to
45.00	Canyon, course NE. Ascend rocky broken SE. slope, 500 ft.
53.50	Foot of ledge, brs. E. and W., 30 ft. to top
56.00	Rocky spur ridge, brs. SE.; descend.
58.00	Canyon, course SE? Ascend SW. slope.
64.00	Narrow rocky spur ridge, brs. E. Descend NE. slope, 450 ft to
76.00	Canyon, course NE.
	Bonita Creek Trail, brs. NE. and SW.
	Ascend S. slope, 60 ft. to
80.00	Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 21, 22, 27 and 28, marked on brass cap,
	1913 on S. rim,
	T 4 S R 28 E in N. half;
	S 21 in NW.,
	S 22 in NE.,
	S 27 in SE., and
	S 28 in SW. quadrant;
	and raise a mound of stone 2 ft. base, 1½ ft. high, W. of corner. Pits impracticable.
	This corner is at the foot of a cliff, 50 ft high, brs. E. and W.
	Land, mountainous and hilly.
	Soil, very rocky, 4th rate.
	Timber, scattering cedar, oak and cottonwood.
	Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
	Mountainous land, 66 chs.
	Note: The sky was overcast at noon, making an observation for latitude impossible.

	N. 89°57' E., on a random line, bet. secs. 22 and 27.
40.00	Set temp. ¼ sec. cor.
80.32	Intersect N. and S. line, 40 lks. south of the cor. of secs. 22, 23, 26 and 27, hereinbefore described.
	Thence I run,
	S. 89°40' W., on a true line, bet. secs. 22 and 27.
	Ascend east slope of ridge, through scattering timber and dense undergrowth.
2.50	Spur ridge, brs. NE. Descend NW. slope, 30 ft. to
7.50	Gulch, course NE. Ascend E. slope, 75 ft.
11.00	Bonita Creek trail, brs. NE and SW.
15.25	Ridge, brs. NE. and SW. Descend NW. slope, 30 ft. to
18.00	Gulch, course NE. Ascend E. slope, 150 ft. to
28.00	Ridge, brs. NE. and SW. Descend NW. slope, 200 ft. to
37.00	Enter canyon, course NE.
40.16	Point for ¼ sec. cor., falls in canyon. Impossible to set post. Ascend SE. slope, 330 ft. for wit. cor.
43.97	This being the nearest practical point, set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground at this point for witness cor. to ¼ sec. cor., marked on brass cap,
	1913 on S. rim,
	W C ¼ in E. half;
	S 22 in NW., and
	S 27 in SW. quadrant;
	and raise a mound of stone 2 ft. base, 1½ ft. high, north of cor. Pits impracticable.
67.30	Ridge, brs. NW. and SE. Descend SW. slope, 250 ft. to
80.32	The cor. of secs. 21, 22, 27 and 28.
	Land, mountainous and hilly.
	Soil, rocky, 4th rate.
	Timber, scattering cedar.
	Undergrowth, dense mesquite, catclaw, scrub oak and cacti.
	Mountainous land, 58 chs.
	Dec. 30, 1913.
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18. Partial Subdivision of frac.Township 4 South,Range 28 E.

Chains.	
	Dec. 31, 1913: At 8h. 55m. a.m.,l.m.t., I set off 33° 3½'N. on the lat.arc; 23° 5'S. on the decl.arc; and determine a meridian with the solar, at the cor.of secs. 21,22, 27 and 28, hereinbefore described.
	Thence I run,
	N.0°2'W., bet. secs. 21 and 22.
	Through scattering timber and dense undergrowth. Ascend rocky south slope, 220 ft.to
2.65	Narrow rocky ridge, brs.E.and W. Descend steep NE. slope, 125 ft.to
8.00	Gulch, 2 chs.wide, course E. Ascend S. slope, of Turtle Mountain, 950 ft.
26.00	Ascend SW. slope, of Turtle Mountain.
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 21 in W., and S 22 in E.half; from which, A pinon, 6 ins. in diam., brs.S.40½°W., 79 lks.dist., marked ¼ S 21 B T.
	No other trees within limits. Raise a mound of stone 2 ft.base, 1½ ft.high, west of cor. Pits impracticable.
41.00	Ridge, brs.NW. and SE. Descend NE. slope, 1150 ft.
53.00	Gulch, course E.
56.00	Ridge, brs.E. Continue to descend broken NE. slope.
80.00	Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs. 15,16,21 and 22, marked on brass cap, 1913 on S.rim, T 4 S R 28 E in N.half; S 16 in NW., S 15 in NE., S 22 in SE., and S 21 in SW.quadrant; and raise a mound of stone, 2 ft.base, 1½ ft. high,W. of corner. Pits impracticable.
	Note: At this cor., Dec.31, 1913, I set off 23°5'S.on the decl.arc, and at apparent noon, observe the sun on the meridian; the resulting lat.is 33° 4½'N.
	Land, mountainous.
	Soil, very rocky, 4th rate.
	Timber, scattering cedar and pine.
	Undergrowth, dense scrub oak, mesquite, catclaw and cacti.
	Mountainous land, 80 chs.

	N.89°40'E., on a random line, bet. secs.15 and 22.
40.00	Set temp.¼ sec.cor.
80.18	Intersect N and S. line, 16 lks.N.of the cor. of secs.14,15, 22 and 23, hereinbefore described.
	Thence I run,
	S.89°47' W., on a true line, bet secs.15 and 22.
	Descend west slope, on ridge, through scattering timber and dense undergrowth.
.53	Trail, brs.N.and S.
4.24	Descend west slope, 225 ft., into Eagle Creek.
12.30	Small irrigation ditch, at foot of bluffs, course S.
	Enter cultivated land belonging to Frank Gomez.
15.35	Wire fence brs.N.and S. Leave cultivated land.
16.75	Eagle Creek, 60 lks.wide, 5 ins. deep, course SE.
18.20	Leave Eagle Creek bottom; ascend east slope,315 ft.
	Frank Gomez' cabin brs.N. about 3 chs.dist.
32.20	Ridge, brs.NE and SW. Descend NW. slope, 25 ft.to
36.00	Gulch, course NE. Ascend E. slope, 90 ft.
40.09	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 15 in N., and S 22 in S.half;

Chains.

and raise a mound of stone, 2 ft.base, 1½ ft. high, N. of corner. Pits impracticable.

46.20 Spur ridge, brs.NE. to creek. Thence along foot of cliffs, brs. E. and W.

Vacant Mexican cabin, brs.N.44°W., about 18 chs.dist.

49.70 Thence along broken north slope.

56.90 Descend NW. slope, 75 ft.to

60.20 Gulch, course N. Ascend NE. slope, 325 ft.to

68.20 Gulch, course NE.; ascend.

70.00 Spur ridge, brs.NE.; descend.

80.18 The cor.of secs.15,16,21 and 22.

Land, mountainous and hilly.

Soil, 2d rate on creek; rocky, 4th rate rest of way.

Timber, scattering cedar and pine.

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

Mountainous land, 68 chs.

Dec. 31, 1913.

Jan. 1, 1914: At 9h. 3m., a.m.,l.m.t., I set off 33°4½'N. on the lat.arc; 23°½'S. on the decl.arc; and determine a meridian with the solar at the cor.of secs. 15,16,21 and 22, hereinbefore described.

Thence I run,

N.0°2'W., bet. secs.15 and 16.

Through scattering timber and dense undergrowth. Descend broken N. slope, 200 ft.to

6.00 Gulch, course NE.; ascend slighly to

8.20 Spur ridge, brs.E.; descend to

10.00 Gulch, course E. Ascend slightly to

13.00 Spur ridge, brs.E.; descend to

14.00 Gulch, course E. Foot of descent; ascend S. slope,90 ft.to

22.72 Spur ridge brs.E. on south side ofdeep box canyon, course NE., over which I cannot chain; therefore, I measure by stadia, rod reading (mean of three), 4.738 ft. Ratio, 1 ft.= 2 chs. Focal constant, 1.025 ft. Vertical angle, plus 6° 20'. The dist. to instrument point is therefore, 4.738 x 2 x .9878 plus .016 = 9.38 chs., which added to 22.72 chs.= 32.10 chs.,instrument point.

32.10 Instrument point on N. bank of canyon. Ascend SW. slope, 235 ft.

37.40 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 16 inW., and
S 15 in E.half;

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

41.40 Spur ridge, brs.E. Descend NE. slope, 130 ft.to

47.50 Gulch, course E. Ascend S. slope, 40 ft.to

52.70 Spur ridge, brs.E. Descend NW. slope, 230 ft.to

61.00 Gulch, course E. Ascend S. slope, 370 ft.to

76.00 Ridge, brs.E.and W. Descend NE. slope, 75 ft.to

80.00 Set an iron post, 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs. 9,10,15 and 16, marked on brass cap,

1913 on S.rim,
T 4 S R 28 E in N.half;
S 9 in NW.,
S 10 in NE.,
S 15 in SE., and
S 16 in SW. quadrant; from which,

A cedar limb, 6 ins. in diam., brs.S.44¾°W., 100 lks.dist., marked T 4 S R 28 E S 16 BT.

A cedar, 8 ins. in diam., brs.N.33°W., 130 lks.dist., marked T 4 S R 28 E S 9 B T.

20. Partial Subdivision of frac. Township 4 South, Range 28 E.

Chains.

No other trees within limits; raise a mund of stone 2 ft. base, 1½ ft. high, west of corner. Pits impracticable.
Note: At this cor., Jan.1, 1914, I set off 23°½'S. on the decl.arc; and at apparent noon, I observe the sun on the meridian; the resulting latitude is 33°5½'N.
Land, mountainous and hilly.
Soil, rocky, 4th rate.
Timber, scattering pine and cedar.
Undergrowth, mesquite, catclaw, hackberry and cacti.
Mountainous land. 72 chs.

N.89°47'E., on a random line, bet. secs.10 and 15.

37.25 Top of bluff, 100 ft. high, brs. N. and S. being the west bank of Eagle Creek. I obtain distance across Eagle Creek by stadia measurement from this point to rod set in Creek bottom, near foot of bluff, on east side of creek. Rod reading, 2.436 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Angle of depression -19°58'. The dist. to rod is therefore, 2.436 x 2 x .8834 plus .016 = 4.32 chs. which added to 37.25 chs. = 41.57 chs. rod point. As the point for ¼ sec. cor. will evidently be subject to overflow from Eagle Creek, I return on random line, S.89°47'W., 4.12 chs. to

37.45 A point on west side of creek, at foot of bluff, and as this is the nearest point to point for ¼ sec.cor. at which it is practicable to set witness cor. in order to escape overflow, I set temp witness cor. to ¼ sec.cor. at this point.

56.20 West bank of deep rocky box canyon, course SW., across which I cannot chain; therefore, obtain the dist. across by stadia measurement. Rod reading 4.740 ft. Ratio, 1 ft. = 2 chs. Focal constant, 1.025 ft. Vertical angle plus 5° 24'. The dist. on random line to rod is therefore, 4.740 x 2 x .9911 plus .016 = 9.41 chs., which added to 56.20 chs. = 65.61 chs. rod point

65.61 Rod point on east side of canyon.

80.12 Intersect N. and S. line, 26 lks. north of the cor. of secs. 10,11,14 and 15, hereinbefore described.

Thence I run,
S.89°58'W., on a true line, bet. secs.10 and 15.
Through scattering timber and dense undergrowth. Descend NW. slope, 140 ft.

12.05 Trail, brs.NE. and SW.
15.30 East bank of deep box canyon, course SW.
23.70 West bank of canyon.
27.00 Descend west slope, 200 ft., into Eagle Creek.
38.10 Foot of bluff, brs.NNE. and SSW.
39.20 Eagle Creek, 80 lks. wide, 5 ins. deep, course S.
40.06 Point for ¼ sec.cor. is subject to overflow of Eagle Creek; therefore it is impracticable to set ppst.
41.00 Trail, brs. N. and S.
42.67 Foot of bluff, 100 ft. high, brs. N. and S. As this is the nearest practical point for witness cor., I Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground at this point, for witness cor. to ¼ sec.cor. marked on brass cap,

1913 on S rim,
W C ¼ in E.half;
S 10 in NW., and
S 15 in SW. quadrant; from which,

A sycamore, 14 ins. in diam., brs. N.43¼°E., 112 lks. dist., marked W C ¼ S 10 B T
A sycamore, 10 ins. in diam., brs. S.85½°E., 150 lks. dist., marked W C ¼ S 15 B T.

43.00 Top of bluff; ascend east slope, 250 ft. to
52.10 Spur ridge, brs.SE. Descend SW. slope, 25 ft. to
56.00 Gulch, course SE. Ascend NE. slope, 235 ft. to
70.00 Spur ridge, brs.N. Descend SW. slope, 15 ft. to

Chains.

72.30 Gulch, course NE. Ascend SE. slope, 165 f t.to
80.12 The cor.of secs.9,10,15 and 16.
Land, mountainous and hilly.
Soil, rocky, 4th rate; 2nd rate in Creek bottom.
-Timber,--scattering pine, cedar and sycamore.
Undergrowth, dense scrub oak, mesquite, catclaw, hackberry and cact.
Mountainous land, 72 chs.

Jan. 1, 1914.

Jan. 4, 1914. At 7h. 53m. a.m.,l.m.t., I set off 33°5' N. on the lat.arc; 22°43'S. on the decl.arc; and determine a meridian with the solar at the cor.of secs. 9,10,15 and 16, hereinbefore described.
Thence I run,
N.0°2'W., bet. secs.9 and 10.
Descend NE. slope, 275 ft., through scattering imber and dense undergrowth.

11.35 Impossible to chain across a deep bpx canyon, course E.; therefore, leave rod at this point, and with instrumenton ridge on opposite side, take stadia measurement. Rod reading (mean of hree) 4.281 ft.Ratio,1 ft. = 2 chs. Focal constant, 1.025 ft. Level. The distance to instrument point is therefore, 4.281 x 2 plus .016 = 8.58 chs., which added to 11.35 chs.=

19.93 Instrument point on rocky spur ridge, brs.E. Set rod ahead on line, and take stadia measuremeh across a deep V-shaped canyon, course E. Rod reading,(mean of three), 3.476 ft. Ratio, 1 ft.= 2 chs. Focal constant, 1.025 ft.Vertical angle plus 3°30'. The dist. on sec.line to rod point is therfore, 3.476 x 2 x .9963 plus .016 = 6.94 chs., which added to 19.93 chs.=

26.87 Rod point onspur ridge, brs.E. Set rod ahead on line, and take stadia measurement across another deep V-shaped canyon, course E. Rod reading (mean of three), 5.457 ft. Ratio, 1 ft.= 2 chs. Focal constant, 1.025 ft. Vertical angle plus 4° 20'. The dist.on secline to rod is therefore, 5.457 x 2 x .9943 plus .016 = 10.87 chs., which added to 26.87chs. =

37.74 Rod point nnrocky spur ridge, brs.SE. Impossible to chain or stadia from here. Set a flag ahead on line; leave a flag at this point, and from the flag ahead, measure a base line S.27°31'E., 17.89 chs. from the SE. end of whichthe flag bears S.83° 45' W.
The dist. on sec.line is computed as follows:

$$\frac{\sin.\ 68°\ 44' \times 17.89}{\sin.\ 83°\ 47'} = 16.77 \text{ chs.}$$

which added to 37.74 chs.=

54.51 From this point, I return on sec.line S.0°2'E. measuring dist. by stadia across a V-shaped box canyon, 200 ft. deep, course E. Rod reading (mean of three) 4.001 ft. Ratio, 1 ft.= 2 chs. Focal constant, 1.025 ft. Angle of depression, - 2°30'. The dist.on sec.line to rod point is therefore, 4.001 x 2 x .9981 plus .016 = 8.00 chs., which subtracted from 54.51 chs. =

46.51 Rod point on south side of canyon. As point for ¼ sec. cor.(40.00) falls in an inaccessible place, and as this point is as near to cor. point as it is practicable to measure distance, I therefore,
Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, at this point, for witness cor. to ¼ sec. cor., marked on brass cap ,
1913 on S.rim,
W C ¼ in N.half;
S 10 in SE., and
S 9 in SW. quadrant;
and raise a mound of stone, 2 ft. base.1½ ft.high, W. of cor. Pits impracticable.

22. Partial Subdivision of frac. Township 4 South, Range 28 E.

Chains

Thence I return to 54.51 chs. point, and continue measurement, N.0°2'W.

55.50 Gulch, course E. Ascend SE. slope, 180 ft, to
62.60 Spur ridge, brs.E. Descend NE. slope, 65 ft. to
66.25 Gulch, course E. Ascend SE. slope, 170 ft to
73.00 Spur ridge, brs.E. Descend NE. slope, 20 ft. to
77.50 Gulch, course E. Ascend SE. slope, 65 ft. to
80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 3,4,9 and 10, marked on brass cap,

1913 on S.rim,
T 4 S R 28 E in N.half;
S 4 in NW.,
S 3 in NE.,
S 10 in SE., and
S 9 in SW. quadrant;

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

Note: At this cor. Jan. 4, 1914, I set off 22° 44' S. on the decl. arc., and at apparent noon, I observe the sun on the meridian; the resulting lat. is 33° 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 and dense undergrowth, 80 chs.

N.89°58'E., on a random line, bet. secs.3 and 10.

40.00 Set temp. ¼ sec. cor.
79.93 Intersect north and south line, 37 lks. north of the cor. of secs. 2,3,10 and 11, hereinbefore described.

Thence I run,
N.89°46'W., on a true line, bet. secs.3 and 10.
Through scattering timber and dense undergrowth. Descend SW. slope, 435 ft to
24.50 Gulch, course NW. Ascend NE. slope, 50 ft. to
28.00 Low spur ridge, brs.N. Descend NW. slope, 120 ft. to
39.70 Gulch, course N. Ascend slight NE. slope.
39.965 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 3 in N., and
S 10 in S.half;

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

42.00 Descend slight SW. slope.
60.00 Gulch, course NW.
61.00 East edge of Eagle Creek Canyon. Descend W. slope, 150 ft.
61.50 Foot of bluff, brs.N. and S.
61.60 Trail, brs.N. and S.
62.80 Eagle Creek, 100 lks. wide, 6 ins. deep, course SW.
63.30 Foot of cliffs, brs. NE. and SW. Ascend SE. slope, 450 ft.
64.40 Top of cliffs; continue to ascend SE. slope, on ridge.
79.93 The cor. of secs.3,4,9 and 10.

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

Jan.4, 1914.

Jan.6, 1914: At 7h. 54m. a.m., l.m.t., I set off 33°6' N. on the lat. arc; 22°30'S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 3,4,9 and 10, hereinbefore described.

Thence I run,
N.0°2'W., on a random line, bet. secs.3 and 4.

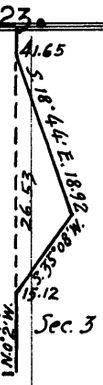
Partial Subdivision of frac.Township 4 South,Range 28 East.23.

Chains,

15.12 Impossible to chain from here. Set a flag on line here, and one at a point on line ahead, and from the north flag measure a base line S.18°44'E., 18.92 chs. From the SE. end of this base line, the south flag brs.S. 35°08'W. The dist. on sec.line bet. flags is therefore

$$\frac{\sin. 126°08' \times 18.92}{\sin. 35°10'} = 26.53 \text{ chs.}$$

which added to 15.12 chs. =



41.65 Flag point. Especial care was taken with this triangulation, as it was impossible to measure a longer base or secure larger angles.

Thence I chain in a return measurement,

S.0° 2'E., 4.56 chs. to

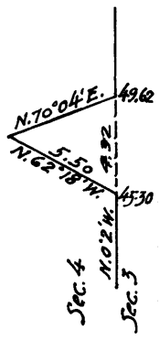
37.09 As this point is as close to true point for ¼ sec.cor., as is practicable for witness cor., I set temp. witness cor. to ¼ sec.cor. here. I return to 41.65 chs. point, and continue random line N.0°2'W.

45.30 Foot of cliffs; impossible to chain from here. Triangulate as follows:

From this point, measure a base line, N.62°18'W., 5.50 chs., from the NW. end of which a flag set on random line on the cliffs ahead, brs.N.70° 04'E. The distance on random line to this flag is found from the following:

$$\frac{\sin. 47° 38' \times 5.50}{\sin. 70°06'} = 4.32 \text{ chs.}$$

which added to 45.30 chs. =



49.62 Flag point.

57.96 Top of rocky spur ridge, brs.W. From this point line passes over a deep box canyon, course W., over which I cannot chain; therefore, obtain dist. across by stadia measurement to rod on N.side of canyon. Rod reading (mean of three) 4.785 ft. Ratio, 1 ft.= 2 chs. Focal constant, 1.025 ft. Vertical angle, plus 4°. The distance on random line to rod point is therefore, 4.785 x 2 x .9951 plus .016= 9.54 chs. which added to 57.96 chs. =

67.50 Rod point.

79.54 Intersect N.bdy.of Tp., 28 lks.east of the cor.of secs. 3,4,33 and 34, established by me, as described in Book "A."

Thence I run,

S.0°14'E., on a true line, bet. secs. 3 and 4.

Through scattering timber and dense undergrowth. Descend SE. slope, 75 ft. to

5.70 Gulch, course SW. Ascend NW. slope, 75 ft.to

12.00 Spur ridge, brs. W. North side, of deep box canyon, course W.

21.70 Spur ridge, brs.W. South side of deep box canyon. Descend slight SW. slope.

29.90 Bluff, brs. NW. and SE. Descend SW. slope,1155 ft.to

31.80 Foot of bluff, 60 ft. high, brs. NW and SE.

33.05 Eagle Creek, 25 lks.wide, 2 ft. deep, course SE.

Thence along west bank of Eagle Creek.

37.90 Trail, brs.NW. and SE.

39.54 Point for ¼ sec.cor. is subject to overflow from Eagle Creek. Impracticable to set post.

42.20 Cross bend of Eagle Creek, 25 lks.wide, 2 ft. deep,from NE., course SE.

42.45 Foot of cliff, 100 ft.high, brs.NW. and SE. As this is the nearest point to pt. for ¼ sec.cor. at which it is practicable to set witness cor.; therefore, I

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

1913 on S.rim,
W C ¼ in N.half;
S 3 in SE., and
S 4 in SW. quadrant; from which,

24. Partial Subdivision of frac.Township 4 South,Range 28 E.

Chains.

A cottonwood, 8 ins. in diam., brs.S.42°E.,55 lks.dist., marked W C ¼ S 3 B T.
A cottonwood, 9 ins. in diam., brs.N.30°W.,86 lks.dist. marked W C ¼ S 4 B T.

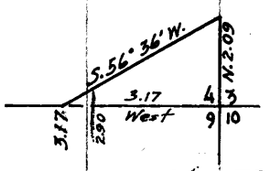
Ascend NE. slope, 385 ft.to
67.50 Top of bluff, brs.E.and W. Descend SE. slope, 150 ft.to
72.55 Gulch course E. Ascend NE. slope, 110 ft. to
77.45 Ridge, brs.E.and W. Descend SE. slope, 30 ft.to
79.54 The cor.of secs.3,4, 9 and 10.

Note: At this cor., Jan.6, 1914, I set off 22°30½ S.on the decl.arc; and at apparent noon, I observe the sun on the meridian; the resulting lat. is 33° 6'N.

Land, mountainous and hilly.
Soil, rocky, 4th rate.
Timber, scattering cedar, pine, and cottonwood.
Undergrowth, dense mesquite, catclaw, scrub oak, hackberry and cacti.
Mountainous land, 69 chs.

From the cor.of secs.3,4,9 and 10, I run,
West, on a true line, bet. secs4 and 9.
Through scattering timber and dense undergrowth.

2.90 Foot of cliff, 100 ft.high, brs.N.and S. As I cannot chain over this cliff, I set a flag on line ontop of the cliff, and returning to cor.of secs. 3,4,9 and 10, I measure a base line from the sec.cor., north 2.09 chs. (it being impossible to secure a longer base line here) from the north end of which,the flag brs. S.56° 36' W. The dist.from cor.of secs.3,4, 9 and 10 to flag on top of cliff is therefore obtained as follows:



tang. 56° 36' x 2.09 = 3.17 chs.

3.17 Flag point on top of cliff. Ascend east slope, 185 ft.to
11.00 Ridge, brs.N. and S. Descend W. slope, 170 ft.to
19.90 Top of high bluff, brs.NE. and SW. Descend NW. slope,600 ft.to
28.00 Gulch, course NE.; 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 4 in N., and
S 9 in S.half;
and raise a mound of stone 2 ft.base, 1½ ft. high,N.of cor. Pits impracticable.
Ascend slight SE. slope, to
51.00 Ridge, brs.NE and SW. Descend NW. slope, 165 ft.to
57.50 Gulch, course N. Ascend NE. slope, 85 ft.to
65.00 Spur ridge, brs.NW. Descend W. slope, 190 ft.to
70.80 Gulch, course NW. Ascend NE. slope, 45 ft.to
76.00 Spur ridge, brs.N. Thence along N. slope to
80.00 Set an iron post 3 ft.long, 2 ins. in diam., 24 ins. in the ground, for cor.of secs. 4,5, 8 and 9, marked on brass cap,
1913 on S.rim,
T 4 S R 28 E in N.half;
S 5 in NW.,
S 4 in NE.,
S 9 in SE., and
S 8 in SW.quadrant; from which,
A pine, 8 ins. in diam., brs. N.48½°E., 79 lks.dist., marked T 4 S R 28 E S 4 B T.
A cedar, 8 ins. in diam., brs.S.71°E., 15 lks. dist., marked T 4 S R 28 E S 9 B T.
A pine 7 ins. in diam., brs.S.65°W., 49 lks. dist., marked T 4 S R 28 E S 8 B T.
A pine, 10 ins. in diam., brs.N.39¼°W., 74 lks.dist., marked T 4 S R 28 E S 5 B T.

Land, mountainous and hilly.

Chains.	
	Soil, rocky 4th rate. Timber, scattering pine and cedar. Undergrowth, dense mesquite, catclaw, scrub oak and cacti. Mountainous land, 70 chs. Jan.6, 1914.
	Jan. 7, 1914: N.0°2'W., on a random line, bet. secs.4 and frac.sec.5.
40.00	Set temp. ¼ sec.cor.
79.48	Intersect N.bdy.of Tp., 53 lks. east of the witness cor. to cor.of secs.4,5, 32 and 33, established by me,0.30 chs.west of cor.point, as described in Book "A." From the true point for cor., I run, S.0°12' E., on a true line, bet. secs.4 and frac.sec.5. Through scattering timber and dense undergrowth. Descend in gulch, 20 ft.to
3.75	Leave gulch; ascend NW. slope, 120ft.to
14.00	Spur ridge, brs.SW. Descend S. slope, 115 ft.to
19.00	Gulch, course west. Ascend slight north slope.
21.00	Ridge, brs.E.and W. Descend SE. slope, 300 ft.
24.90	Ledge brs.NE. and SW., 40 ft.to bottom.
31.00	Descend in draw, course S.
36.00	Top of bluff, brs.E.and W; descend abruptly.
38.00	Foot of bluff. Eagle Creek, 60 lks.wide, 2 ft. deep,course east.
39.48	True point for ¼ sec.cor. subject to overflow; therefore it is impracticable to set post here.
41.21	Trail, brs.E.and W.
41.39	Small dry irrigation ditch, course E.
41.77	As this is the nearest practical point for witness cor.I Set an iron post, 3 ft.long, 1 in. in diam., 26 ins. in the ground atthis point, for witness cor.to ¼ sec.cor. marked on brass cap, 1913 on S.rim, W C ¼ in N.half; S 4 in SE., and S 5 in SW. quadrant; from which, A sycamore, 10 ins. in diam., brs.N.64¼°E.,77 lks.dist., marked W C ¼ S 4 B T. A sycamore, 36 ins. in diam., brs.N.78½°W., 146 lks.dist., marked W C ¼ S 5 B T. This cor.is at the foot of a bluff 40 ft.high, brs.NW. and SE.
41.90	Top of bluff, brs.NW. and SE. Ascend NE. slope, 20 ft.
42.50	Spur ridge, brs.E. Descend SE. slope, 100 ft.
47.20	Wire fence brs. NE. and SW.
48.00	Trail brs. NE. and SW.
49.00	House brs.west, about 4 chs. dist.
50.70	Small dry irrigation ditch, course SW. Enter cultivated land.
56.46	Wire fence, brs.NE. and SW. Leave field.

Chains.	
57.50	Eagle Creek, 100 lks. wide, 6 ins. deep, course SW.
59.32	Trail, brs. N. and S. at foot of bluff, 20 ft. high.
60.00	Spur ridge, brs. W. Descend.
61.00	Enter Eagle Creek Bottom.
65.14	Eagle Creek, 20 lks. wide, 2 ft. deep, course E.
65.34	Foot of bluffs, 100 ft. high, br. E. and W. Asc. abrupt
69.00	Asc. NW. slope, 250 ft. to [illegible]. Desc. SE. slope, 100 ft.
70.00	Ridge, brs. NE. and SW. Desc. SE. slope, 50 ft. to
77.00	Gulch, course NE. Asc. NW. slope, 30 ft. to
79.48	The cor. of secs. 4, 5, 8 and 9.
	Land, mountainous and hilly.
	Soil, 1st and 2nd rate on Creek; remainder rocky 4th rate.
	Timber, scattering cedar and pinion, sycamore and cottonwood.
	Undergrowth, dense mesquite, cat claw, scrub oak and cacti.
	Mountainous land, 65 chs.

Jan. 7, 1914.

Jan. 8, 1914: At 9 hrs. 58 m., a.m., l.m.t., I set off 33° 6' N. on the lat. arc; 22° 15' S. on the decl. arc; and determine a meridian with the solar at the cor. of secs. 4, 5, 8 and 9.

Thence I run

West, on a true line, bet. frac. secs. 5 & 8

Through scattering timber and dense undergrowth.

.35	Gulch, course NE. Asc. E. slope, 185 ft. to
8.00	Spur ridge, brs. N. Desc. NW. slope, 80 ft. to
11.00	Gulch, course NE. Asc. E. slope, 470 ft. to
21.50	Spur ridge, brs. NE. Continue to asc. E. slope.
31.00	Gulch, course NE. Asc. NE. slope. to
38.50	Ridge, brs. NW. and SE. Desc. SW. slope, 65 ft.
40.00	Set an iron post, 3 ft. long, 1 in. dia., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap 1913 on S. rim ¼S5 in N. and S8 in S. half; from which A pine, 10 ins. dia., brs. S. 82½° E., 283 lks. dist., marked ¼S8 BT.
	No other trees within limits. Raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Pits impracticable.
44.94	Intersect the E. bdy. of the White Mountain Indian Reservation, 13.88 chs. S. of the 55½ mile cor., which was reestablished by me as described in book "C".
	At the point of intersection, I
	Set an iron post, 3 ft. long, 2 ins. dia., 24 ins. in the ground, for closing cor. of frac. secs. 5 & 8, marked on brass cap; 1913 on S. rim CC W. of center; WMIR in W. half; S5 in NE., and T4S R28E S8 in SE. quadrant; and raise a mound of stone, 2 ft. base, 1⅝ ft. high, E. of cor. Pits impracticable.
	Land, mountainous and hilly.
	Soil, rocky 4th rate.
	Timber, scattering pine and cedar.
	Undergrowth, dense scrub oak, mesquite, cat claw and cacti.
	Mountainous land, 36 chs.

Jan. 8, 1914.

General Description.

This township is very mountainous, rocky, 4th rate, with the exception of small narrow strips along Eagle Creek creek and in the gulches, which are rich sandy loam, 1st rate.

Scattering Cottonwood, Sycamore, Ash, Walnut and willows along Eaglewcreek and in the gulches.

There are several mineral claims in the NortheEastern part of this township.

There is water in Eagle creek all the year. The pump station in sec, 26 raises water to Morenci, about 7 miles distant and 1500 ft. above Eagle creek.

There are several settlers in this township, which is fairly well watered with numarous small springs and Eagle creek.

This township is covered with a short, rich, nutritious grass, fairly good grazing.

There are no settlers or agricultural land in the unsurveyed sections.

William B. Kimmel,

U. S. Surveyor.

Boundaries of Frac.T.4 S.,R.28 E., (Surveyed portion)
Latitudes, departures and Closing errors.

Line designated	True course	Dist.	Latitudes		Departures	
			N.	S.	E.	W.
South bdy.of Tp.	West	240.00				240.00
Subdivisional Boundary	N.0°2'W.	400.00	400.00			.23
	West	124.94				124.94
West bdy.of Tp. (E.bdy.of W.M.IR)	North	79.44	79.44			
North bdy.of Tp.	East	364.54			364.54	
East bdy.of Tp.	South	480.00		480.00		
Convergency.					.25	
	Totals		479.44	480.00	364.79	365.17
				479.44		364.79
	Error in latitude			0.56		
				Error in departure		0.38

William B. Kimmel.

U.S.Surveyor.

118

3

BOOK 2713

FOR FINAL OATH OF UNITED STATES SURVEYOR.

See Book "D".

I, ..., U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for .....
bearing date of the ..... day of ....., 191 , 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 .....
.....
.....
.....
.....
..... of the .....
..... Meridian, in the State of ....., 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 ..... and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

.....
U. S. Surveyor.

Subscribed by said ....., and sworn to before me this ..... day of ....., 191

SEAL

.....

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix Arizona June 19, 1915

The foregoing field notes of the survey of part of the
Subdivision Lines of
Fractional Township 4 South Range 28 East
of the Gila and Salt River Base & Meridian
in the State of Arizona

executed by William B, Kimmel U.S.Surveyor
under his special instructions dated April 4, 1913 for Group 26 ....., ~~191~~ , having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank D Ingalls
~~U.S.~~ *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.~~

.....
~~*U. S. Surveyor General.*~~

6—2764