

1906

BOOK 1906

FIELD NOTES

OF THE SURVEY OF THE

East and West Boundaries of
Townships N^o 16 and 17 N,
Range N^o 7 West

and the

South Boundary of Township N^o 16 North
Range N^o 7 West

1906

1906

Of the Gila and Salt River Baseline Meridian,
Territory of Arizona

AS SURVEYED BY

Arthur B. Mader, United States Deputy Surveyor,

Under his Contract No. 132, dated May, 26th, 1905, ~~189~~

Survey commenced August, 21st, 1905, ~~189~~

Survey completed August, 31st, 1905, ~~189~~

NAMES AND DUTIES OF ASSISTANTS.

B. F. Ainsworth

Chairman

C. P. Boland

Chairman

Shirley Wetmore

Moundman

Shirley Wetmore

Axman

H. W. Walker

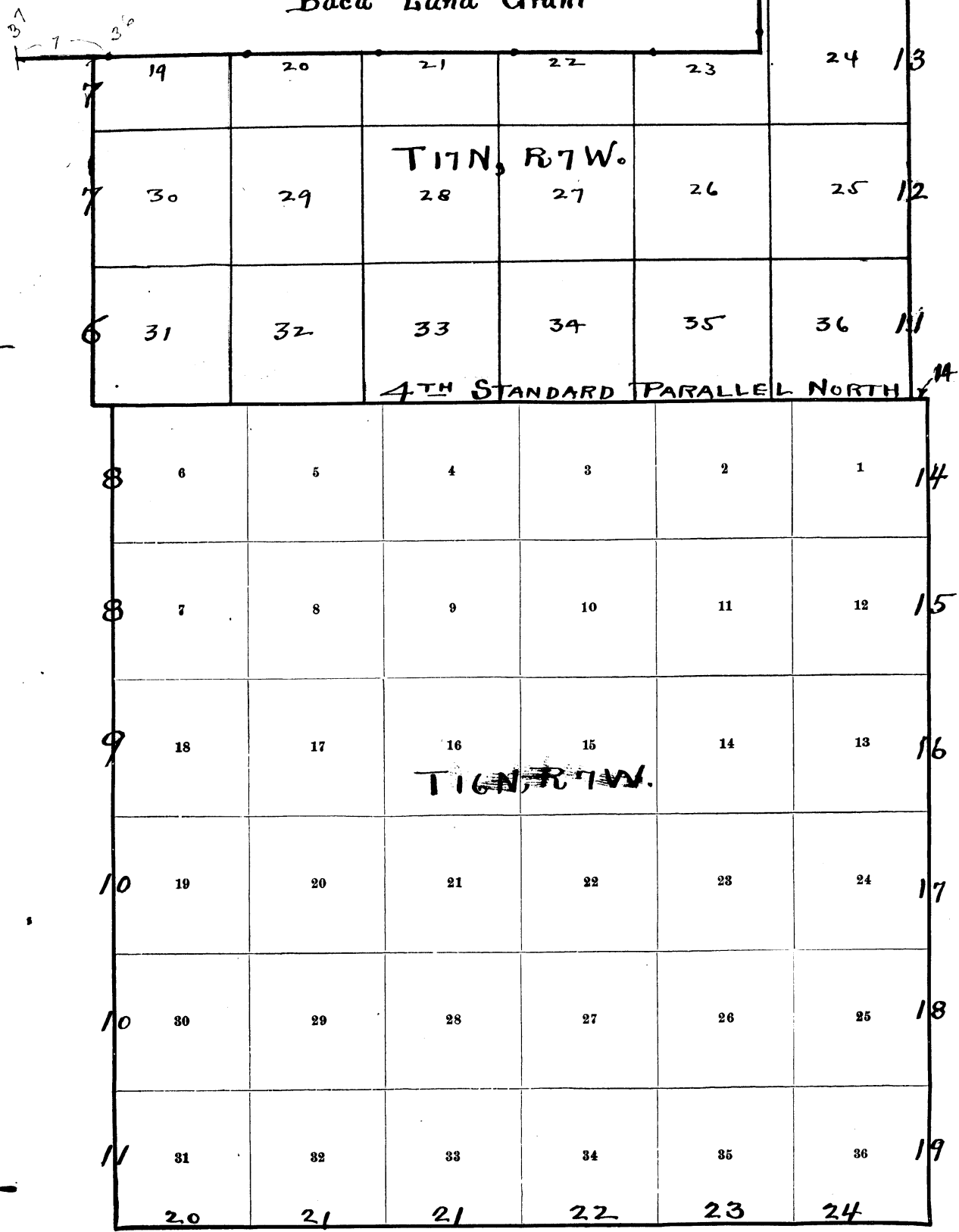
Flagman

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Baca Land Grant



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PRELIMINARY OATHS OF ASSISTANTS.

WE, B. F. Ainsworth and C. P. Boland

do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain over even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of

Township Boundaries and Range lines of Tps. 16 and 17 N, Rg. 7 W.

B. F. Ainsworth, Chainman.

C. P. Boland, Chainman.

Subscribed and sworn to before me this 21st day of August 1905.



My Commission Expires June 30, 1909

Arthur B. Mader
Notary Public

I, Shirley Wetmore

do solemnly swear that I will well and truly perform the duties of moundman in the establishment of corners, according to the instructions given me, to the best of my skill and ability, in the survey of

Township Boundaries and Range Lines of Tps. 16 and 17 N, Rg. 7 W.

Shirley Wetmore, Moundman.

Moundman.

Subscribed and sworn to before me this 21st day of August, 1905.



My Commission Expires June 30, 1909.

Arthur B. Mader
Notary Public

I, Shirley Wetmore

do solemnly swear that I will well and truly perform the duties of axman in the establishment of corners and other duties, according to instructions given me, to the best of my skill and ability, in the survey of

Township Boundaries and Range lines of Tps. 16 and 17 N, Rg. 7 W.

Shirley Wetmore, Axman.

Axman.

Subscribed and sworn to before me this 21st day of August, 1905.



My Commission Expires June 30, 1909.

Arthur B. Mader
Notary Public

I, N. W. Walker

do solemnly swear that I will well and truly perform the duties of flagman according to instructions given me, to the best of my skill and ability, in the survey of

Township Boundaries and Range lines of Tps. 16 and 17 N, Rg. 7 W.

N. W. Walker, Flagman.

Subscribed and sworn to before me this 21st day of August, 1905.



My Commission Expires June 30, 1909.

Arthur B. Mader
Notary Public

chains

August, 21, 1905.

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Note: On Aug. 20th, 1905, I discharge Walter Atkeson chairman, and H. A. Atkeson mound builder and axeman to whom I administer the proper final oaths. I employ B. F. Ainsworth to perform the duties of chairman and administer to him the required preliminary oath. I also administer the final oath to Shirley Wetmore chairman and the preliminary oath to the same person as mound builder and axeman. Likewise I administer the final oath to H. W. Walker, chairman, and the required preliminary oath to the same person as rophman. No person authorized to administer oaths, other than myself is available without great delay and expense.

Survey commenced Aug. 21, 1905 and executed with a W. and L. E. Gurley High Mt. Transit with solar attachment, being the same instrument described and used on the survey of the 4th Stan. Par. N. through Rgs. N^o 6 and 7 W on ^{this} Contract N^o 132. I examine the adjustments of the Transit and find them free from errors. Then to test the solar apparatus by comparing its indications resulting from solar observations made during A. M. and P. M. hours, with a true meridian determined by observations on Polaris. I proceed as follows:

At the Stan. Cor. of T 17 N Rgs. 7 and 8 W, ^{which} previously established on Aug. 19th, 1905, Lat. $34^{\circ}49'00''$ N and Long. $113^{\circ}01'33''$ W, at 8^h.00^m a. m. by my watch which is 30" fast of mean local time, I set off $17^{\circ}14'33''$ on the decl. arc and $34^{\circ}49'$ on lat. arc. and determine with the solar as true meridian and mark the line thus determined by a groove cut on a rock previously used by me on the solar and polaris observations from this station on Aug. 19, 1905. which mark is 0.3 in. W. of the true meridian determined by the Polaris observation. The solar apparatus by p. m. (on Aug. 19th 1905 at 4 p. m. l. m. t.) and a. m. observations defines positions for true meridians, respectively about 0'-13" E and 0'-16" W of the true meridian established by the Polaris observation; therefore I conclude that the adjustments of the instrument are satisfactory. I begin at the Stan. Cor. of T 17 N, Rgs. 7 & 8 W which I established Aug. 19th 1905

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West Boundary of T17N, Range 7 West.

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| chains | |
|--------|--|
| | Thence I run, N between Secs 31 and 36 |
| 18.00 | ascend gradually over malpais boulders top of rounding hill, ascends W descends E, descend gradually |
| 40.00 | Set a malpais stone 16x9x4 ins, 11 ins. in the ground for 1/4 sec. cor. marked 1/4 on W face and raised a mon. of stones 2 ft. base 1 1/2 ft. high W of cor. Pits impracticable. |
| 45.00 | bottom, ^{head of} swale bears N.W ascend over low ridge |
| 59.00 | top and descend over broken land |
| 80.00 | Set a malpais stone 17x10x4 ins., 12 ins. in the ground for cor. of sec's. 25, 30, 31 and 36 marked with 5 notches on N and 1 notch on S edges, and raised a mound of stone 2 ft. base 1 1/2 ft. high W of cor. A juniper, 25 ins. diam. brs. N 57° 56' E, 13.47 chus. dist. marked T17N R7W S 30 BT. No other trees available. Pits impracticable. Land mountainous. Soil stony, 4 th rate. Timber juniper, Mountainous land, 80 chus. |
| | North, bet. Secs 25 and 30. |
| 3.50 | descend over malpais boulders cross gulch, 10 lbs. wide course W brs. E. ascend |
| 22.00 | top of ridge brs N 36° W and S 36° E. descend |
| 40.00 | Set a malpais stone, 14x8x7 ins. 10 ins. in the ground for 1/4 sec. cor. marked 1/4 on W face and raised a mon. of stone 2 ft. base 1 1/2 ft. high W of cor. A juniper, 8 ins. diam. brs. S 43° 28' W, 83 lbs. dist. marked 1/4 S 25 BT. no other trees available. Pits impracticable. |
| 45.00 | bottom and ascend |
| 52.00 | top of ridge and descend |
| 64.72 | malpais edge, brs. S 36°-40' E and N 80° W. descend steep rocky slope |
| 69.54 | cross Pine Creek, 1.25 chus. wide, course N 80° W, 400' ft. then W, then S W. then N W and bears S E ascend rough slope |
| 75.00 | malpais edge, brs. N 77° W, and S 54° E. ascend |
| 80.00 | Set a malpais stone, 16x9x7 ins, 11 ins. in the ground for cor. of sec's. 19-24-25 and 30 Marked with 2 grooves on S and 4 grooves on N edges Set |

West Boundary of Tp. 17 N. Rg. 7 West.

chains

raised a mound of stone 2 ft. base $1\frac{1}{2}$ ft. high W of cor.
 A juniper, 36" diam. bears $N 44^{\circ} 42' W$, 1.31 chus. dist. ms
 marked T17 N R8 W S 24 BT.
 No other trees available. Pits impracticable.
 Sand mountainous.
 Soil stony, 4th rate.
 Timber, scattered juniper and pine.
 Mountainous land, 80 chains.

August, 21, 1905, at sec. cor. 19-24-25 and 30, I set off
 $12^{\circ} 10' N$ on the decl. arc and at $\frac{11}{3}$ m. $\frac{58}{3}$ m. \wedge E. m. δ , observe the
 sun on the meridian, the resulting lat. is $34^{\circ} 51'$ which
 is about 2' less than the proper lat.
 North bet. sec's 19 and 24

35.50

up hill, over rough malpais rocks
 From this point I run due E ^{on a connecting line} and search for
 a mile cor. on the South Bdy. of the Baca Grant.
 After diligent search, at 6.77 chus. E and 3.14
 chus. N. of my point, I find a cor. stone,
 chiseled 36 M. lying loosely on top of a small
 pile of stones. I chisel the cor. stone B.L. W. and
 reset the stone firmly in the mow. and rebuild
 the mow. to 2 ft. base x $1\frac{1}{2}$ ft. high around the stone.

38.00

From this point I run due W on a connecting
 line, and search for the 37 M. cor. of the Grant
 At 74.00 chus. W and 1.47 chus. N of my starting
 point I find the 37 M. cor. which is a stone
 firmly set and marked and witnessed as
 called for by the Surveyor General. I rebuild
 the mow. which had entirely disappeared.
 From this cor. the 36 M. cor. bears $S 89^{\circ} 24' E$, 80.77 chus.
 On this line at

38.71

I set a malpais stone, $26 \times 18 \times 11$ ins., 12 ins. in the
 ground to bedrock and surround the same
 by stones and soil until bedded 20 ins. deep,
 for the C.C. of fractional sec's 19 and 24 with the
 S. Bdy. of the Baca Sand Grant, Float No 5, marked
 C.C. on S, B.L. V on N and cut 6 grooves on the E
 and W faces and raised a mow. of stones 2 ft. base
 by 3 ft. high S. of cor.
 A juniper tree, 10 ins. diam., bears $S 11^{\circ} 25' W$, 78 lbs. dist.
 marked CCT 17 N R 8 W S 24 BT.
 A juniper, 30 ins. diam. bears $S 19^{\circ} 50' E$, 1.11 chus. dist.
 marked CCT 17 N R 7 W S 19 BT.

41.15

to wire fence of Baca Grant, brs. $S 86^{\circ} 5' E$ and $N 86^{\circ} 30' W$
 690 ft. $\frac{1}{2}$ then N.W. ms
 Land mountainous.
 Soil stony, 4th rate
 Timber juniper.
 Mountainous land, 38.71 chus.

August, 21st, 1905.

West Boundary of Tp. 16 N. Range 7 West.

| | | |
|--|--|--|
| <p>chains</p> <p>40.00</p> <p>45.00</p> <p>67.00</p> <p>72.00</p> <p>80.00</p> | <p>August, 22nd, 1905, at 7^h. 59^m. a.m. l.m. T. I set off to 11°-54' N on the decl. arc and 34°-49' on the lat. arc, and determine a true meridian by the solar, at the closing corner of Tp. 16 N Rgs 7 and 8 W, established by rule on August, 19th 1905. Thence I run, South, between secs 1 and 6 descend gradually over rocky malpais slope of rolling mountain through scattering juniper trees</p> <p>Set a malpais stone, 24 x 12 x 6 ins., 18 ins. in the ground for 1/4 sec. cor. marked 1/4 on W face. A juniper, 9 ins. diam. bears S 88°-18' E, 1.46 chus. dist. marked 1/4 S 6 B T.</p> <p>A juniper, 14 ins. diam. bears S 79°-19' W, 1.49 chus. dist. marked 1/4 S 1 B T.</p> <p>descend, through occasional patches of heavy oak brush descend more rapidly</p> <p>cross gulch, 20 lbs. wide, course S 39° W, brs. N 35° E. ascend abruptly, broken ground</p> <p>over rolling mountain surface descend</p> <p>Set a malpais stone, 26 x 12 x 3 ins., 20 ins. in the ground for cor. of secs 1-6-7 and 12, marked 1 groove in N and 5 grooves in S edges and raised a mon. of stones 2 ft. base 1 1/2 ft. high W. of cor. A juniper, 16 ins. diam. brs. S 27°-47' E, 1.80 chus. dist. marked T 16 N R 7 W S 7 B T.</p> <p>A juniper 12 ins. diam. brs. N 81°-13' W, 2.54 chus. dist. marked T 16 N R 8 W S 1 B T.</p> <p>No other trees available. Pits impracticable. Land mountainous. Soil stony, 4th rate. timber, juniper. Undergrowth oak. Mountainous land, 80.00 chains.</p> | |
| <p>31.00</p> <p>40.00</p> | <p>South, bet. secs. 7 and 12 descend gradually</p> <p>cross gulch, 15 lbs. wide, course W brs. E. ascend</p> <p>Set a malpais stone, 24 x 12 x 3 ins., 18 ins. in the ground, for 1/4 sec. cor. marked 1/4 on W. face and raised a mon. of stones 2 ft. base 1 1/2 ft. high W. of cor. No bearings available. Pits impracticable. At this cor. I set off 11°-50' N on the decl. arc and at 4^h. 58^m. l.m. T. I observe the sun on the meridian and obtain an angle of 37°-47 1/2' on the lat. arc, which is about .2' less than the proper lat. ascend rapidly</p> | |

West Boundary of T16N, R7W.

chains

50.00 top and over rolling mountain, gradually descending, through scattered juniper

75.00 top of high ridge, bears E and W.

80.00 Set a malpais stone, 24 x 8 x 3 ins, 18 ins. in the ground for cor. of sec's 7-12-13 and 18, marked with 2 notches on N and 4 notches on S edges and raised a mound of stone 2 ft. base 2 ft. high W of cor. a juniper, 14" diam. bears S 8°-46' W, 310 chus. dist. marked T16N R8W S13 BT.
A juniper, 48" diam. bears N 5°-12' W, 2.71 chus. dist. marked T16N R8W S12 BT.
No other trees available. Pits impracticable.
Land mountainous.
Soil stony, 4th rate
Timber, juniper.
Mountainous land, 80 chus.

South, between sec's 13 and 18.

25.00 descend gradually, malpais boulders

40.00 bottom land ascend gradually

40.00 Set a malpais stone, 26 x 12 x 10 ins, 15 ins. in the ground, for 1/4 sec. cor. marked 1/4 on W face and raised a mound of stone 2 ft. base 2 ft. high W of cor. a juniper, 14" diam. bears N 48°-56' W, 1.93 chus. dist. marked T16N R8W S13 BT.
a juniper, 13" diam. bears S 76°-47' E, 3.23 chus. dist. marked T16N R7W S18 BT.

48.00 descend, through scattered brush

72.00 cross gulch, 15 lbs. wide, course S 85° E, 200' then SE to N 80° W.

ascend steep slope

80.00 Set a malpais stone, 22 x 7 x 4 ins, 20 ins. in the ground, for cor. of sec's 13-18-19 and 24, marked 3 notches on the N and S edges and raised a mound of stone 2 ft. base 2 ft. high W of cor. A limb of juniper, 5" diam. bears S 44°-54' W, 1.42 chus. dist. marked T16N R8W S24 BT.
A limb of juniper, 7" diam. bears S 37°-20' E, 2.66 chus. dist. marked T16N R7W S19 BT
No other trees available. Pits impracticable.
Land mountainous.
Soil, stony, 4th rate.
Timber, juniper.
Mountainous land, 80 chus.

August, 22, 1905

August, 23rd, 1905. At 8^h 00^m a.m. l.m.t. I set off 11°-33' N on the decl. arc and 34°-46' 1/2 on the lat. arc, and determine a true meridian by the solar, at the cor. of sec's 13-18-19 and 24, thence I run

West Boundary of Tp. 16 N, R 7 W.

chains

South, between sec's 19 and 24
 ascends steep slope
 2.00 top of hill
 4.00 descend over rough malpais boulders
 40.00 Point falls on a malpais stone in place, 30" x 18" x 18"
 above the ground, firmly set, mark a cross (+)
 on N face, as exact point, for 1/4 sec. cor. and
 mark 1/4 to N of cross, as the stone will not permit
 the 1/4 to be cut to the W of the cross, and raise a mound
 of stone 2 ft. base 2 ft. high W of cor.
 No trees available. Pits impracticable.

descend slope
 57.00 Cross flat draw, 50 lbs. wide, course S E bears N 70° W.
 across rocky flat, gradually ascending
 80.00 Set a malpais stone, 18 x 12 x 12 ins., 8 ins. in the ground
 to bedrock and rock in until set 12 ins. for cor. of
 sec's 19-24-25 and 30, marked with 4 notches on
 N and 2 notches on S edges and raised a mound
 of stone 2 ft. base 2 ft. high W of cor.
 No bearing available. Pits impracticable.

Land mountainous.
 Soil, stony, 4th rate
 Timber, Juniper, scattering.
 Mountainous land, 80 chus.

South, between sec's 25 and 30.

6.00 cross flat gulch, 1 ch. wide, course S W bears N 25° E.
 9.00 ascend rocky slope
 40.00 Point falls on malpais rock in place, 8' x 6' x 9"
 above the ground, firmly set, mark a cross (+) on
 the S. W cor. of rock, as the exact point, for 1/4 sec. cor.
 and mark 1/4 to W of cross and raise a mound
 of stone 2 ft. base 2 ft. high W. of cor.

A juniper, 12" diam. bears S 79° 17' W, 3.52 chus. dist.
 marked 1/4 S 25 BT.
 No other bearings available. Pits impracticable.
 At this cor. I set off $\frac{1}{4}$ sec. on the decl. arc and
 at $\frac{1}{4}$ h. $\frac{1}{4}$ m. l. m. t. observe the sun on the meridian
 and obtain an angle of 34° 45' on the lat. arc.
 which is the proper lat. nearly.

43.00 top of hill, descend rough rocky slope

78.00 cross flat draw, 50 lbs. wide, course W bears E.

ascend
 80.00 Set a malpais stone 18 x 10 x 6 ins., 12 ins. in the ground,
 for the cor. of sec's 25-30-31 and 36, marked with
 5 notches on N and 1 notch on S edges and raised
 a mound of stone 2 ft. base by 2 ft. high W of cor.
 No bearings available. Pits impracticable.
 Land mountainous.
 Soil, stony, 4th rate.

East Boundary of Tp. 17 N, R 7 W.

and 30, and mark 2 notches S and 4 notches N of cross.
 A juniper, 28" diam. bears N36°22'E, 35 lks. dist. marked T17 N R 6 W S 19 BT.
 A pine, 16" diam. bears S27°55'W, 89 lks. dist. marked T17 N R 7 W S 25 BT.
 A juniper, 24" diam. bears S28°59'E, 151 chns. dist. marked T17 N R 6 W S 30 BT.
 An oak, 6" diam. bears N41°54'W, 182 chns. dist. marked T17 R 7 W S 24 BT.
 Land mountainous.
 Soil stony, 4th rate.
 Timber, pine and juniper.
 Underbrush, oak.
 Mountainous land, 80 chns.

At the cor. of sec's 19-24-25 and 30, just established I set off 116°4½'N on the decl. arc and at 11th 59th l. m. I observed the sun on the meridian and obtain a reading of 34°50½' now the lat. arc which is about 1.25° less than the proper lat. North, between sec's 19 and 24.
 ascend steep granite mountain slope
 4.60 top, 150 ft. high
 descend, through pine timber
 8.80 cross gulch, 10 lks. wide, course S75°W bro. N75°E ascend
 13.00 top of slope and over rolling mountain
 28.50 cross gulch, 75 lks. wide, course N75°W bro. S80°E, leave pine timber
 ascend barren slope, pear cactus in patches
 40.00 Set a malpais stone, 15x6x5 ins., 10 ins. in the ground, for ¼ sec. cor. marked ¼ on W face and raised a mound of stones 2 ft. base 2 ft. high W of cor.
 No bearings available. Pits impracticable.
 56.00 top of ridge, and descended over broken side hill ground, ^{along a gully to W} through heavy scattered brush
 80.00 Set a granite stone 40"x20"x8 ins., laid flatwise on bedrock, there being no soil, and surrounded by rocks, for the cor. of sec's 13-18-19 and 24, cut a cross (+) on the center of the flat surface of rock at the exact cor. point with 3 notches or grooves to the N and S of the cross and raised a mound of stone 2 ft. base 2 ft. high W. of cor.

old 2nd M
 2nd P.M.
 N

East Boundary of Tp. 16 N., R. 7 W.

chains

a juniper, 14" diam. bears N 29°-22' W, 76 lks. dist. marked T17 N R 7 W S 13 BT

a pine, 10" diam. bears N 29°-42' E, 87 lks. dist. marked T17 N R 6 W S 18 BT.

A cross (+) on face of granite cliff 15' high facing W, bears S 52°-59' E, 37 lks. dist. marked BRS19. No other bearings available. Pits impracticable. Land mountainous.

Soil rocky, 4th rate. Timber pine and juniper. Underbrush, oak

Mountainous or heavily timbered land, rocks. This line was discontinued north of this cor. but was closed westward to the Baca Land Grant according to instructions from the Surveyor General.

August, 24th, 1905.

August, 25th, 1905. At 8^h. 00^m A.M. I set off 10° 55' 37" on the decl. arc and 34°-49' on the lat. arc and determine a true meridian by the solar, at the Standard T₁ Cor. of Tp. 17 N., R₆ and 7 W.

Thence I run East, on the Fourth Standard Parallel between Secs 1 and 31

12.22 Set (a granite stone, 24 x 12 x 6 ins., 18 ins. in the ground) for the (Closing Corner of T₁₆ N., R₆ and 7 W) according to the instructions from the Surveyor General, (marked C C on the S, with 6 notches on the S, E and W faces

a juniper, 16" diam. bears S 17°-54' E, 58 lks. dist. marked CCT 16 N R 6 W S 6 BT.

a juniper, 18" diam. bears S 27°-15' W, 1.04 chns. dist. marked CCT 16 N R 7 W S 1 BT.

Thence I run South, between sections 1 and 6.

descend, rough granite cross gulch, 20 lks. wide, course S 30° E bears N W.

4.50
 6.00 Cross Cook's wagon road bears N W and S E. over granite boulders, through dense oak brush and pine timber.

16.00 ascend steep slope of granite mountain, leave heavy pine and brush
 18.00 over enormous granite boulders
 24.85 top of large granite boulder 15' high.
 38.00 top of granite ridge b_s. E and W. ascends to W
 40.00 point falls on a granite ledge in place, part of general granite surface, cut a cross (+) at

East Boundary of T16N, R7W.

chains

- exact point for $\frac{1}{4}$ sec/cor., at the foot of and on E side of large granite ledge, with $\frac{1}{4}$ to W of cross.
- A piñon pine, 7" diam. bears $N72^\circ E$, 6 lks. dist. marked $\frac{1}{4} S 6$ BT.
- A piñon pine, 12" diam. bears $S22^\circ 26' W$, 56 lks. dist. marked $\frac{1}{4} S 1$ BT.
- 56.10 top of ridge and descend, $N. E. \frac{1}{4}$ Sec. 10. to Williams Valley
- 62.00 Cross Camp wood wagon road, brs. $S55^\circ W$ about $\frac{1}{2}$ miles to ~~Hyman Post Office~~ and $N75^\circ E$ to Camp Wood
- 80.00 Point falls on flat broad surface of a granite ledge, in place, cut a cross (+) at exact point for cor. of secs 1-6-7 and 12 with 1 groove to N and 5 grooves to S of cross.
- A pine 10" diam. bears $S35^\circ 19' E$, 58 lks. dist. marked T16N R6W S7 BT.
- A pine 16" diam. bears $S75^\circ 4' W$, 78 lks. dist. marked T16N R7W S12 BT.
- A pine 10" diam. bears $N24^\circ 48' E$, 76 lks. dist. marked T16N R6W S6 BT.
- A pine 17" diam. bears $N79^\circ W$, 1.01 chus. dist. marked T16N R7W S1 BT.
- Land mountainous.
- Soil rocky, 4th rate
- Timber, pine.
- Underbrush, oak.
- Mountainous and heavily timbered land, ~~8000~~ 116
connecting line - 12.22 chus.

- 40.00 South, between secs 7 and 12. thence over broken granite, through dense underbrush and pine timber
- Set a granite stone, $24 \times 10 \times 8$ ins., 18 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked $\frac{1}{4}$ on W face.
- A pine 24" diam. bears $S65^\circ 35' W$, 60 lks. dist. marked $\frac{1}{4} S 12$ BT.
- A pine 24" diam. bears $N69^\circ 38' E$, 82 lks. dist. marked $\frac{1}{4} S 7$ BT.
- At this cor. I set off $10^\circ 49' 27''$ ~~$10^\circ 48' 27''$~~ on the decl. arc and as 4^{th} ~~5^{th}~~ l. m. t. I observe the sun on the meridian and obtain a reading of $34^\circ 47\frac{1}{2}'$ on the lat. arc which is about .25' less than the proper lat.
- 50.00 leave pine timber
- 51.00 ascend through dense cedars and small pines
- 65.00 top of mt. 200' above prevailing level - descend
- 72.00 foot of hill enter pine timber
- 78.00 leave pine timber and ascend
- 80.00 Set a granite stone, $28 \times 10 \times 6$ ins., 21 ins. in the ground for the cor. of secs 7-12-13 and 18, marked

East Boundary of Tp. 16 N, R. 7 W.

Chains

with 2 grooves on the N and 4 grooves on the S edges.

A juniper 20" diam. bears N 51°-15' E, 37 lks. dist. marked T16 N R 6 W S 7 B.T.

A pine 8" diam. bears S 80°-24' E, 87 lks. dist. marked T16 N R 6 W S 18 B.T.

A juniper 28" diam. bears S 54°-58' W, 1.27 chns. dist. marked T16 N R 7 W S 13 B.T.

A pine 18" diam. bears N 66°-03' W, 1.33 chns. dist. marked T16 N R 7 W S 12 B.T.

Land mountainous.

Soil rocky, 4th rate.

Timber pine and juniper

Undergrowth, oak.

Mountainous and heavily timbered land 80 chains.

South between sec's. 13 and 18

2.00 descend over granite boulders through brushy cedar and oak

15.10 cross gulch, 15 lks. wide, course E, 100' to main gulch coursing S 15° E, and bears W. ascend through dense brush

24.25 top and descend rugged granite and dense brush -

34.60 top of lower hill, descend gradually

37.20 bottom, cross flat draw, course SW br NE 300'

40.00 Set a granite stone, for 1/4 sec. cor, 26 x 10 x

4 ins. ²⁰ ins. in the ground, marked 1/4 on W face 21

A pine 7" diam. bears N 24°-46' W, 52 lks. dist. marked 1/4 S 13 B.T.

A juniper 18" diam. bears N 55°-58' E, 77 lks. dist. marked 1/4 S 18 B.T.

August, 25th, 1905.

August, 26th, 1905.

At 8^{h.} ⁰⁸ mt. I set off 10°-32' N on the decl. arc and 34°-46' on the lat. arc and determine a true meridian by the solar, at 1/4 sec. cor. 13-18

Thence I continue,

South, between sec's 13 and 18 over rugged granite Country

44.00 top of ridge, bears E 200' and W 1/4 sec.

46.00 ridge

56.50 cross gulch, 15 lks. wide, course SW bears NE, is 200 ft. lower than ridge at 46.00 chns.

64.30 top of ridge, bears E and W

70.00 descend, through brush and pine and cedar trees

80.00 Set a granite stone, 26 x 12 x 6 ins., ²⁰ ins. in the ground for cor. of sec's 13-18-19 and 24, marked with

34.47

6.111

21

East Boundary of Tp. 16 N, R 7 W.

| | |
|---|--|
| chains | <p>3 grooves on the N and S edges and raised a mound of stones 2 ft. base 2 ft. high W of cor. No trees available. Pits impracticable. Land mountainous. Soil rocky, 4th rate. Timber, pine and juniper and piñon Undergrowth oak and manzanita. Mountainous land, 80 chains.</p> |
| <p>8.00 19.45 32.00 40.00 45.45 55.60 59.00 60.00 66.75 78.00 80.00</p> | <p>South, between sec's 19 and 24. through dense oak and manzanita brush, and rocky ridge. <u>descend</u> on high granite rock, descend rough steep slope cross gulch, 25 lks. wide, course S E brs. N W. Set a granite stone, 20 x 10 x 5 ins., 15 ins. in the ground, for 1/4 sec. cor, marked 1/4 on W face. A pine 9" diam. bears N 52°-37' W, 48 lks. dist. marked 1/4 S 24 BT. A pine 8" diam. bears N 40°-34' E, 1.55 chus. marked 1/4 S 19 BT. over broken country on ridge, gradually descend ^{ascend}, very rocky cross gulch, 15 lks. wide, course S 80° E brs. W. high point of rock descend abruptly descend more gradually cross gulch, 10 lks. wide, course S 60° E brs. S 75° W. Set a granite stone, 26 x 8 x 5 ins., 20 ins. in the ground for cor. of sec's 19-24-25 and 30, marked with 4 grooves on the N and 2 grooves on the S edges and raised a mound of stone 2 ft. base 2 ft. high W of cor. A piñon pine, 9" diam. bears S 45°-45' W, 27 lks. dist. marked T 16 N R 7 W S 25 BT. A piñon pine 12" diam. bears N 87°-15' E, 1.15 chus. dist. marked T 16 N R 6 W S 19 BT. A piñon pine 6" diam. bears S 64°-10' E, 77 lks. dist. marked T 16 N R 6 W S 30 BT. No other trees available. Pits impracticable. Land mountainous. Soil rocky, 4th rate. Timber, pine, juniper and piñon. Undergrowth oak and manzanita. Mountainous land, 80 chus.</p> |

At the cor. of sec's 19-24-25 and 30 I set off 10° 28' N on the dell. arc and at ~~4 1/2~~ ^{4 1/4} m. l. m. t. I observed the sun on the meridian and obtain a reading of

Observed P.M.

East Boundary of Tp. 16 N, R 7 W.

Chains

- 34°-45½' now the lat. arc which is very nearly the proper lat.
 South, between sec's 25 and 30 -
 ascend, rough granite boulders
 top and descend
 1.50
 6.25 cross gulch, 10 lks. wide, course SW brs. NE 400' to head.
 ascend over rolling and broken ground
 granite ridge E and W.
 21.20
 22.45 descend abruptly, through dense oak brush
 34.65 cross gulch, 30 lks. wide, course SE brs. NW ascend
 40.00 Set a granite stone, 24 x 10 x 6 ins., 18 ins. in the ground
 for ¼ sec. cor. marked ¼ on W face and raised
 a mound of stone 2 ft. base 2 ft. high W of cor.
 No bearings available. Pits impracticable. August, 26th, 1905.
 August, 28th, 1905.
 At 8^h 00^m. I set off 9° 50' N on the decl. arc
 and 34°-45' now the lat. arc and determine the
 true meridian by the solar, at ¼ sec. cor. 25-30.
 Thence I proceed
 South, between sec's 25 and 30
 descend steep slope through dense oak brush and
 cat claws
 43.95 cross gulch, 50 lks. wide, course S 30° W brs. E.
 47.00 Running water, 150' W of line, in gulch.
 51.00 Recross gulch, 75 lks. wide, course S 40° E brs. N 40° W.
 57.90 Gulch 300' E.
 62.15 Cross gulch, 15 lks. wide, course N 75° E brs. W.
 ascend
 66.60 on ridge, bears W and E 450 ft. to gulch
 67.80 on ridge
 descend broken slope through dense brush
 74.25 bottom, and over level ground, through dense brush.
 80.00 Point falls on a granite stone in place 16 x 6 x
 8 ins. above the ground, firmly set, for cor. of sec's
 25-30-31 and 36, marked a cross (+) for
 the exact cor. point and 5 grooves N and 1 groove
 to the S of the cross.
 An oak, 5" diam. bears S 54°-00' W, 41 lks. dist.
 marked T16 N R 7 W S 36 B T.
 A juniper, 36" diam. bears S 24°-45' E, 46 lks. dist.
 marked T16 N R 6 W S 31 B T.
 A juniper, 18" diam. bears N 63°-35' E, 1.73 chas. dist.
 marked T16 N R 6 W S 30 B T.
 An oak, 5" diam. bears N 53°-01' W, 1.37 chas. dist.
 marked T16 N R 7 W S 25 B T,
 Center of Gulch, 1 ch. wide, is 1 ch. E, course S brs. N.
 Land mountaineers

East Boundary of Tp. 16 N, R 7 W.

| chains | Soil stony, 4 th rate. Timber, juniper and piñon Undergrowth, oak and manzanita. Mountaineous land or land covered with dense undergrowth, 80 chus. |
|--------|---|
| | South, between secs 31 and 36. |
| 1.65 | along level ground, through clumps of tall oak W. bank of creek. |
| 2.40 | center of creek, thence down the middle |
| 7.00 | leave W bank of creek whose course is E ascend over broken ground through dense brush |
| 18.00 | Ridge, bears E and W, and descend |
| 21.75 | Cross gulch, 10 lks. wide, course E brs. W. ascend |
| 24.70 | Ridge bears E and W. descend over broken granite boulders |
| 40.00 | Set a granite stone, 18 x 10 x 6 ins, 6 ins. in the ground to bedrock and surrounded by stones, for a 1/4 sec. cor., marked 1/4 on W face An 8" diam. branch of juniper tree, bears S 70°-56' E, 93 lks. marked 1/4 S 31 B. T. A juniper, 10" diam. bears N 61°-27' W, 1.93 chus. marked 1/4 S 36 B. T. |
| 41.50 | descend steep hill, through dense brush |
| 53.00 | bottom of hill, leave dense brush and proceed through Walnut trees and scattered brush |
| 54.30 | Cross gulch, 1 ch. wide, course S E brs. N 80° W. |
| 59.00 | Creek 300' E |
| 68.00 | ascend steep slope, over malpais boulders |
| 78.65 | Malpais edge, bears N 70° W and S 75° E, build a mound of stones on edge of malpais rim, on line, 2 ft. base by 3 ft. high. |
| 80.00 | Quinn falls on a malpais rock in place. 36 x 36 x 10 ins. above the ground, cut a cross (+) at the exact point for the corner of Tps. 15 and 16 N, R 6 and 7 W, and marked 6 grooves to the N, S, E and W of cross and raised a mound of stone 2 ft. base 3 ft. high S of cor. A cedar 5" diam. bears S 46°-40' E, 1.30 chus. dist. marked T 15 N R 6 W S 6 B. T. A cedar 15" diam. bears N 66°-40' W, 31 lks. dist. marked T 16 N R 7 W S 36 B. T. A cedar 14" diam. bears S 39°-13' W, 1.37 chus. dist. marked T 15 N R 7 W S 1 B. T. No other trees available Pits impracticable. Land, mountaineous. |

South Boundary of T16 N, R7 W.

chains

Soil rocky, 4th rate.
 Timber, juniper and some Walnuts.
 Undergrowth, oak.
 Mountainous land and land covered with dense
 underbrush, 80 chus.
 Rain in P.M. August, 28th, 1905

*

August, 29th, 1905.
 At 7^h. 59^m l.m.t. I set off ^{9° 29' N} ~~9° 28' N~~ on the decl. arc and
^{34° 43' 3/4} ~~34° 43' 1/4~~ on the lat. arc, and determine a true
 meridian with the solar, at the cor. of Tps. 15 and
 16 N, Rgs 6 and 7 W.

Thence I run
 West, on a random line, along the S. bdy. of
 T16 N, R7 W, setting temporary 1/4 sec. and
 sec. cor. at intervals of 40 chus. and at
 478 chus. intersect the West boundary of T16 N
 R7 W, 72 lks. N of the Cor. of Tps. 15 and 16 N,
 Rgs 7 and 8 W, which is a malpais stone,
 previously set by me on August, 23rd, 1905.

The falling answers to a correction of 0° 05' ~~EA~~
~~12 lks. I pay mile, counting from the S.E. cor~~
~~of the Tps.~~ therefore I run,

W 89° 55' E, between sec's 6 and 31, marking
 and blazing true line

over level malpais flat covered with loose boulders

38.00 Set a malpais stone 16 x 10 x 4 ins., 11 ins. in the
 ground, for 1/4 sec. cor. marked 1/4 on N face
 and raised a mound of stone 2 ft. base 2 ft.
 high N of cor.

No bearings available. Pits impracticable.

67.50 Malpais edge, hrs. SW and NE.

deadends, quaterning slope, over rugged malpais
 bottom and second

75.00

78.00 Point falls on a malpais boulder in place, 6 x 7
 x 5 ft. high, at foot of malpais cliff to the N,
 25 ft. high, mark a cross on center of top of
 boulder at the exact point, for cor. of sec's
 5-6-31 and 32, and cut 1 groove to W and
 5 grooves to E of cross and raise a mound
 of stone 2 ft. base 2 ft. high N of cor. now built
 to N became more permanent than to W.

No bearings available. Rock of cliffs very shaly.
 Pits impracticable.

Land mountainous.

Soil rocky 4th, and 3rd rate W of 1/4 Sec. cor. 31.

Timber, some junipers.

Mountainous land, 78.00 chus. August, 29th, 1905

West Boundary of Tp. 16 N. Rg. 7 W.

| Chains | |
|--------|--|
| | Timber, a few juniper trees. Mountainous land, 80 chus. |
| | South, between sec's 31 and 36 ^{descend} ascend, rocky slope |
| 10.50 | Cross wagon road, bears SW to Hillside mine and NE to Camp Wood |
| 45.00 | Set a malpais stone, 17x12x6 ins., 12 ins. in the ground, for 1/4 sec. cor. marked 1/4 on W face and raised a mound of stone 2 ft. base 2 ft. high W of cor. No bearings available. Pts impracticable. |
| 60.00 | Cross cattle trail brs. N 80° E and S 80° W about 3/4 mile to Wilder's Corral. |
| 65.00 | Center of broad flat wash, course W bears E. |
| 80.00 | Set a malpais stone, 30x12x12 ins., 23 ins. in the ground for cor. of Tps. 15 and 16 N, Rgs 7 and 8 W, marked with 6 notches on the N, S, E and W edges, and raised a mound of stone 2 ft. base 3 ft. high S. of cor. |
| | A juniper, 17" diam. bears N 79° 25' W, 10.03 chus. dist. marked T16 N R8 W S 36 BT. |
| | A juniper, 14" diam. bears S 22° 5' E, 5.69 chus. dist. marked T15 N R7 W, S 6 BT. |
| | A mound of stone, 2 ft. base 1 1/2 ft. high on the S. end of an Indian mound, 5' high, bears N 49° 20' E, 6.60 chus. distant. No other bearings available. Pts impracticable. |
| | Land mountainous. Soil, stony, 4 th rate. |
| | Mountainous land, 80 chains. August 23 rd , 1905. |
| | August, 24 th , 1905. At 8 ^h 00 ^m a.m. l.m.t.: I set off with on the decl. arc and 34°-49' on the lat. arc and determine a true meridian by the solar, at the Standard Corner of Tps. 17 N, R6 and 7 W, which cor. I established on August, 16 th , 1905. Thence I run |
| | North, between sec's 31 and 36 |
| 6.20 | ascend gradually, through heavy pine timber and dense brush cross Chaparral wagon road, brs. N 40° W and S 40° E |
| 11.25 | ascend steep slope, through dense oak brush top of sharp ridge, 175' high, brs. E and W. descend to W. descend steep slope |
| 15.00 | bottom, and across flat through heavy pine timber |
| 22.00 | ascends over granite boulders, very broken |
| 34.00 | top of granite and descend |
| 40.00 | falls on a granite rock, in place, 24 x 18 ins. by 2 ins. above the ground, firmly set, mark a |

East Boundary of Tp. 17 N. R. 7 W.

| chains. | |
|---------|---|
| | cross (+) at the exact point, for $\frac{1}{4}$ sec. cor., and $\frac{1}{4}$ to the W of the cross. |
| | A juniper, 14 ins diam. bears $N44^{\circ}34'W$, 67 fms. dist. marked $\frac{1}{4}S36BT$. |
| | A juniper, 12 ins diam. bears $N72^{\circ}12'E$, 1.76 chns. dist. marked $\frac{1}{4}S31BT$. |
| 42.00 | cross gulch, 15 lbs. wide course $S70^{\circ}W$, bears $N85^{\circ}E$ |
| 49.00 | leaf pine timber and ascend steep broken slope top of hill, quartz ledge, br. NE and SW ledge of pine timber 350' W of line these bears very broken granite rocks |
| 80.00 | Set a malpais stone, 14 x 12 x 5 ins., 14 ins. in the ground, for cor. of secs 25-30-31 and 36 marked with 1 notch on the S and 5 notches on the N edges. |
| | A juniper, 17" diam. bears $S64^{\circ}36'W$, 3.11 chns. dist. marked T17N R. 7W S36 BT. |
| | A juniper, 20" diam. bears $N55^{\circ}48'W$, 2.99 chns. dist. marked T17N R. 7W S25 BT. |
| | A juniper, 12" diam. bears $N25^{\circ}39'E$, 1.24 chns. dist. marked T17N R. 6W S30 BT. |
| | A juniper, 10" diam. bears $S82^{\circ}02'E$, 2.31 chains. dist. marked T17N R. 6W S31 BT. |
| | Land mountainous. Soil rocky, 4 th rate. Timber, pine and juniper. Undergrowth, oak. Mountainous land and land covered with heavy timber or dense undergrowth - 80 chns. |
| | North between secs 25 and 30. |
| 23.00 | ascend over granite rocks |
| 35.00 | top of steep slope ascend more gradually top and descend |
| 40.00 | Set a malpais stone, 15 x 14 x 4 ins., 10 ins. in the ground for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on W face. |
| | A juniper, 30" diam. bears $N42^{\circ}9'E$, 1.80 chns. marked $\frac{1}{4}S30BT$. |
| | an oak, 6" diam. bears $N57^{\circ}50'W$, 1.49 chns. marked $\frac{1}{4}S25BT$. |
| | over rolling broken ground through scattered oak brush and juniper trees |
| 63.20 | cross gulch, 15 lbs. wide, course $S80^{\circ}W$, bears $N80^{\circ}E$. Pine timber in gulch - ascend |
| 72.00 | top of hill and descent |
| 76.50 | cross gulch, 20 lbs. wide, course W bears E. Ascend |
| 80.00 | Point falls on a granite stone in place, 3 x 3 1/2 x 3 ft. above the ground, cut a cross (+) on the S face of the rock, at exact point for cor. of secs 19-24-25 |

South Boundary of T16N, R7W.

| chains | |
|--------|---|
| | <p>August, 3rd 1905. 9° 7 1/2' m At 8th ^{34⁰⁰} ^{44⁰⁰} P.M. I set off 9° 7 1/2' N on the decl. arc and 34° 43 3/4' on the lat. arc and determine a true meridian with the solar at the cor. of secs 5-6-31 and 32. Thence I run N 89° 55' E, between secs 32 and 5. ascend gradually over large malpais boulders top of slick or ridge of malpais bldg. NW and SE descend very steep rough side of malpais canyon Cross gulch, 75 lks. wide, course S 15° E bldg. N ascend, steep rough malpais wall of canyon upper malpais edge, 200' above gulch, bldg. N 4 S over rough malpais surface, very broken ascend gradually Set a malpais stone, 18 x 9 x 5 ins., ^{12 ins} in the ground, for 1/4 sec. cor. marked 1/4 on N face. 12 A juniper 12" diam bears S 8° 14' E, 2.65 chus. dist. marked 1/4 S 5 B.T. A cedar 30" diam. bears N 24° 48' W, 0.99 chus. dist. marked 1/4 S 32 B.T. descend over rough large malpais rocks cross rocky gulch diagonally, 20 lks. wide, course N 80° W bears S 80° E. ascend rapidly over rough malpais slope Point falls on a malpais stone in place, 12 x 5 x 5 ins. above the ground, firmly set, cut a cross (+) at the exact point for cor. of secs 32-33-4 and 5 with 2 grooves to W and 4 grooves S of cross and raise a mound of stone 2 ft. base 2 ft. high W. of cor. A juniper 10" diam. bears S 40° 30' E, 87 lks. dist. marked T15N R7W S4 B.T. A juniper 20" diam. bears N 57° 04' E, 1.50 chus. dist. marked T16N R7W S33 B.T. A juniper 18" diam. bears N 85° 14' W, 1.07 chus. dist. marked T16N R7W S32 B.T. No other bearings available. Pits impracticable. Land mountainous. Soil rocky, 4th rate. Timber, juniper. Mountainous land, 80 chus.</p> |
| | <p>N 89° 55' E, between secs 33 and 4. ascend gradually over rough malpais boulders over top of ridge or hill top and descend rapidly Set a malpais stone, 15 x 10 x 6 ins., 10 ins. in the ground.</p> |

South Boundary of T16N, R7W.

chains

for $\frac{1}{4}$ sec. cor. marked $\frac{1}{4}$ on N face:
 A 14" diam. juniper limb, 4' above ground, bears
 $N 39^{\circ} 40' W$, 11 lks. dist. marked $\frac{1}{4} S 33 B T$.
 A juniper 6" diam. bears $S 12^{\circ} 31' E$, 61 lks. dist.
 marked $\frac{1}{4} S 4 B T$.
 At this cor. I set off $9^{\circ} 37' N$ on the decl. arc and
 at $4^{\text{h.}} 40^{\text{m.}} P.M.$ observe the sun on the meridian
 the resulting lat. is $34^{\circ} 43\frac{1}{2}'$ which is .25' less
 than the proper lat.
 40.80 cross gulch, 30 lks. wide, course $S 60^{\circ}$ then $S E$ thro. N
 ascend over very rough malpais ledges
 60.00 top of slope ascend gradually
 78.00 top of mountain and descend
 80.00 Point falls on the S. end of a malpais ledge in
 place, part of ledge used is $6 \times 3 \times 2$ ft. out of
 the ground, cut a cross (+) at the exact point
 for cor. of secs 3-4-33 and 34, and cut 3
 grooves to E and W of cross and raised a
 mound of stone 2 ft. base 2 ft. high W of cor.
 A juniper 18" diam. bears $S 35^{\circ} 57' E$, 2.26 chus.
 dist. marked T15N R7W S3 BT.
 A juniper 14" diam. bears $N 74^{\circ} 31' E$, 2.41 chus.
 dist. marked T16N R7W S34 BT.
 No other bearings available. Pits impracticable.
 Land mountainous.
 Soil rocky, 4th rate.
 Timber, juniper.
 Mountainous land 80 chus.

$N 89^{\circ} 55' E$, between sec's 34 and 3.
 descend steep, rough brushy slope
 28.00 bottom of slope and over level, rough bottom
 35.00 ascend granite slope, large boulders.
 40.00 Set a malpais stone, $16 \times 10 \times 7$ ins, 11 ins. in the
 ground for $\frac{1}{4}$ sec. ^{point} marked $\frac{1}{4}$ on N face
 and raise a mound of stone 2 ft. base 2 ft.
 high N of cor.
 No bearings available. Pits impracticable.
 44.00 leave large granite boulders, ascend gradually
 50.00 top of slope, descend gradually through
 scattered brush and cedars, rough surface
 70.50 cross gulch, 10 lks. wide, course $N 150^{\circ}$ to main gulch
 (crossing E and bearing $N 80^{\circ} W$) and bears S.
 ascend over rocky ground
 80.00 Set a malpais stone, $18 \times 9 \times 4$ ins, 14 ins. in the
 ground, for cor. of sec's 2-3-34 and 35, marked
 4 grooves on W and 2 grooves on E edges and
 raised a mound of stone 2 ft. base 2 ft. high

South Boundary of T.16N R.7W.

chains

W of cor.
 A wild cherry tree, 12" diam. bears S 24°-44' E, 94 lks. dist. marked T15N R7W S2 BT.
 A juniper, 30" diam. bears N 39°-46' W, 2.77 chus. dist. marked T16N R7W S34 BT.
 No other bearings available. Pits impracticable.
 Land mountainous.
 Soil, rocky, 4th rate.
 Timber, juniper.
 Undergrowth oak and greasewood.
 Mountainous land, 80 chus. August, 30th, 1905

August, 31st, 1905.
 At 7th h. 59th m. I set off 8°-47' N on the decl. arc and ~~34°-43'~~^{34°-44'} on the lat. arc and determine a true meridian with the solar, at the cor. of secs 2-3-34 and 35, thence I run N 89°-55' E, between secs 35 and 2 ascend over rough surface, through oak and greasewood brush top of hill and descend. Point falls on a malpais stone in place 24 x 18 x 10 ins above the ground, firmly set, cut a cross (+) at the exact point for 1/4 sec. cor. and 1/4 to N of cross and raised a mound of stone 2 ft. base by 2 ft. high N. of Cor.
 A juniper, 13 ins. diam. bears S 38°-29' W, 1.32 chus. dist. marked 1/4 S 2 BT.
 No other trees available. Pits impracticable.
 descend rough broken slope through brush and scattered cedars
 cross gulch, 60 lks. wide, course S 68° E brs. N 75° W ascend slope
 top and through cedars
 Set a malpais stone, 20 x 10 x 7 ins, 10 ins. in the ground to bedrock, and surrounded by stones, for the cor. of secs 1-2-35 and 36, and cut 5 grooves in W and 1 groove in E edges.
 A cedar 6" diam. bears N 12°-56' E, 76.5 lks. dist. marked T16N R7W S36 BT.
 A cedar 12" diam. bears S 60°-23' W, 1.96 chus. dist. marked T15N R7W S2 BT.
 A cedar 9" diam. bears S 12°-7' E, 47 lks. dist. marked T15N R7W S1 BT.
 A cedar 8" diam. bears N 62°-51' W, 63 lks. dist. marked T16N R7W S35 BT.
 Land mountainous.
 Soil, rocky, 4th rate
 Timber juniper and cedar.
 Undergrowth, oak.

35.50

40.00

59.00

75.00

80.00

Set 6
AM

South Boundary T16N, R7W.

| | |
|--------|---|
| chains | Mountainous land 80 chus. |
| | North $89^{\circ}-55'E$, between sec's 36 and 1. |
| 2.50 | descend rough slope Cross gulch, 8 lks. wide, course $S10^{\circ}E$ brs $N10^{\circ}W$, thick cedars in gulch - |
| 33.00 | ascend gradually over rocky broken country enter heavy cedars, br. N + S |
| 40.00 | Set a malpais stone, $16 \times 12 \times 10$ ins., 11 ins. in the ground, marked $\frac{1}{4}$ on N face. A 5" diam limb of cedar 36" diam. bears $S43^{\circ}-16'W$, 45 lks. dist. marked $\frac{1}{4}$ S1 BT. A cedar, 7" diam. bears $N19^{\circ}-3'E$, 52 lks. dist. marked $\frac{1}{4}$ S 36 BT. |
| 57.50 | At this cor. I set off $8^{\circ}-42'N$ on the decl. arc and at $11^{\frac{1}{2}}/58$ m. l.m. I observe the sun on the meridian, the resulting lat. is $34^{\circ}-43\frac{1}{2}'$ which is nearly the proper lat. At 1.80 chus. N. is a large malpais boulder at edge of malpais cliff. The boulder is covered with Indian or other hieroglyphics and drawings as are other rocks further N. descend over malpais edge, very rough, |
| 56.00 | leave malpais edge and descend more gradually |
| 80.00 | at edge of cedar forest. Intersect the cor. of Tps. 15 and 16 N, R's 6 and 7 West. Land, mountainous. Soil rocky, 4 th rate. Timber, cedar. Mountainous land and land covered with heavy timber, 80 chus. August, 31, 1905 |

Latitudes, departures, and closing errors. T16N, R7W.

| Line designated | True bearing | Distance chains | Latitudes | | Departures | |
|----------------------------|--------------------|-----------------|-----------|---------------|------------|---------|
| | | | N | S | E | W |
| Fourth Standard Parallel N | West | 477.97 | | | | 477.97 |
| West bdy. T16N, R7W | South | 480.00 | | 480.00 | | |
| South bdy. T16N, R7W | $N89^{\circ}-55'E$ | 478.00 | 0.72 | | 478.00 | |
| East bdy. T16N, R7W | North | 480.00 | 480.00 | | | |
| Convergancy | | | | | | 0.505 |
| Totals | | | 480.72 | 480.00 | 478.00 | 478.475 |
| | | | 480.00 | | | 478.000 |
| Error in Lat. | | | 0.72 | Error in Dep. | | 0.475 |

General Description T16N R7W.

This Township is rough and mountainous throughout its whole area, being granite in the easterly third and malpais flows in the balance, greatly gashed by deep and rough gulches. There are four or five peaks in the easterly part which are about 1000 ft. above the low level of the Tp. water is scarce and confined to the easterly valley where the ranches are located. The west is good grazing land. Arthur B. Mader U. S. Dep. Surveyor August, 31, 1905.

FINAL OATHS OF DEPUTY SURVEYOR AND HIS ASSISTANTS.

LIST OF NAMES.

BOOK 1906

A list of the names of the individuals employed by Arthur B. Mader

....., United States Deputy Surveyor, to assist in running, measuring, and marking the lines and corners described in the foregoing field notes of the survey of The Townships Boundaries and Range Lines of Tps. 16 and 17 N, Rg. 7 W. showing the respective capacities in which they acted:

B. F. Cusworth....., Chainman.

C. P. Boland....., Chainman.

Shirley Wetmore....., Moundman.

Shirley Wetmore....., Moundman.

H. W. Walker....., Axman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted Arthur B. Mader

....., United States Deputy Surveyor, in surveying all those parts or portions of the East and West boundaries of Tps. 16 and 17 North, Range 7 W and the south boundary of Tp. 16 N, Rg. 7 W,

..... of the Gila and Salt River Basins meridian, Territory of Arizona, which are represented in the foregoing field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for Arizona

B. F. Cusworth ✓, Chainman.

C. P. Boland ✓, Chainman.

Shirley Wetmore ✓, Moundman.

Shirley Wetmore ✓, Axman.

H. W. Walker ✓, Flagman.

Subscribed and sworn to before me this 1st day of September, 1905.

Arthur B. Mader
Notary Public



my Commission Expires June 30, 1909.

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BOOK 1906

FINAL OATH OF UNITED STATES DEPUTY SURVEYOR.

I, Arthur B. Mader, United States Deputy Surveyor, do solemnly swear that, in pursuance of a contract received from Frank S. Ingalls United States Surveyor General for Arizona, bearing date of the 26th day of May 1905, I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the United States Surveyor General for Arizona, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of East and West boundaries of Tps. N^o 16 and 17 North, Rg. 7 West and the South body of Tp. 16 N, R7 W.

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

Arthur B. Mader
United States Deputy Surveyor.

Subscribed by said Arthur B. Mader and sworn to before me }
this 27 day of January, 1906



Arthur W. J. Receiver
US Land Office Los Angeles
Cal

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix AZ, Nov 23rd 1906

The foregoing field notes of the survey of the East and West Boundaries of Tps. N^o 16 and 17 N, Range 7 West, and the South boundary of Tp. N^o 16 North Range 7 West.

executed by Arthur B. Mader, under his contract No. 132, dated May 26, 1905, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank S. Ingalls
United States Surveyor General.

I certify that the foregoing transcript of the field notes of the above-described surveys in _____, has been correctly copied from the original notes on file in this office.

United States Surveyor General.