

1011

with letter from the Secretary of Interior dated Jan. 19-1904 ¹²³⁹⁰

FIELD NOTES

OF THE SURVEY OF

BOOK 1811

THE

EASTERN, WESTERN. AND FRACTIONAL SOUTH BOUNDARY

OF THE

BLACK MESA FOREST RESERVE.

1811

Of the GILA & SALT RIVER Meridian,

AS SURVEYED BY

W. H. Thorn, United States Deputy Surveyor,

instructions Under his Contract No. _____, dated August 6, 1902., 180

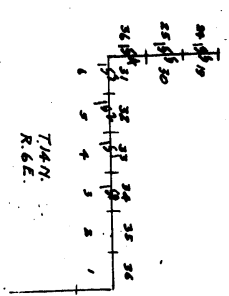
Survey commenced October 3, 1902., 180

Survey completed April 28, 1903., 183

Names and Duties of Assistants.

1902.		1903.
J. T. Price,	Chainmen	J. T. Price,
W. L. Foster,	"	W. L. Foster,
J. L. Spaw,	"	John W. Farmer,
W. P. Hawkins,	"	W. F. Bolinger,
	"	J. L. Spaw,
	"	Alvin Sands,
John Lightfoot,	Moundmen.	D. J. Woodward,
D. J. Woodward,	"	J. I. McKelvey,
	"	John W. Farmer,
W. D. Roach,	Axmen.	F. W. Powell, Elic Cox,
F. W. Powell,	"	J. I. McKelvey, Wm. Goswick,
T. M. Williamson,	"	A. L. Haught,
	"	John H. Haught,
	"	P. C. Haught,
	"	W. F. Bolinger,
H. S. Smith,	Flagmen.	W. D. Roach,
W. D. Roach,	"	J. I. McKelvey,
	"	D. C. Martin.

18

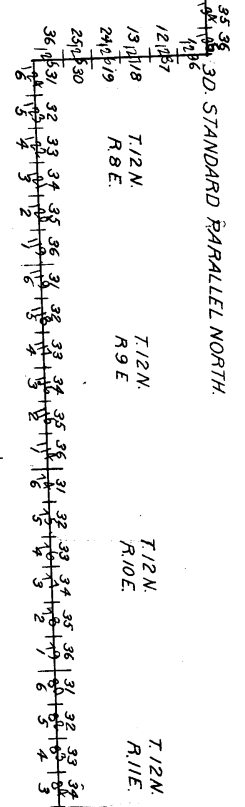


T/14N
R/6E

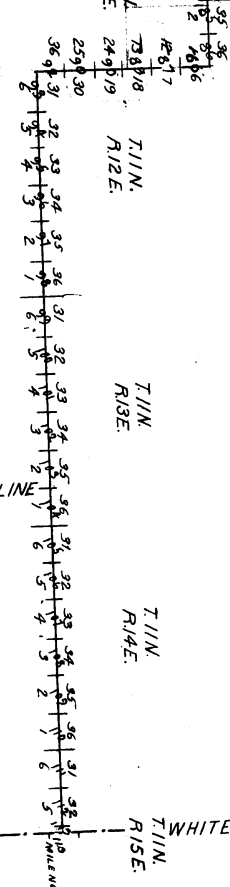
BOOK 1811

T/13N
R/7E

T/12N
R/7E



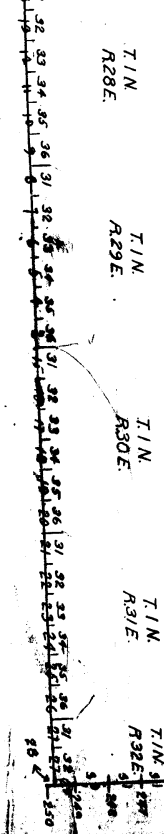
T/11N
R/11E



WHITE MOUNTAIN IND. RES. BOUNDARY LINE

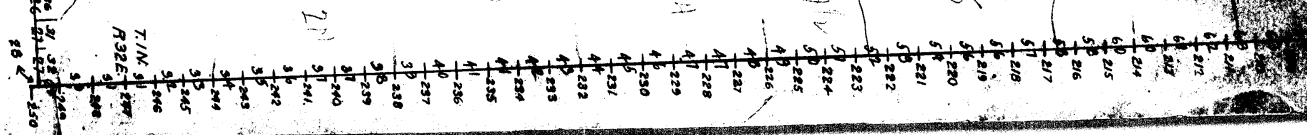
WHITE MOUNTAIN IND. RES. BOUNDARY LINE

BASE LINE



BOOK 1811

ARIZONA



1811

INDEX DIAGRAM.

Township _____, Range _____

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page _____

Preliminary Oaths of Assistants.

WE, J. T. Price, W. L. Foster, ~~xxx~~ J. L. Spaw, and W.P. Hawkins, do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of the E., W., and Fracl. S. Bdy. Black Mesa Forest Reserve.

J. T. Price, W. L. Foster, Chainmen.
J. L. Spaw, W. P. Hawkins, Chainmen.

Subscribed and sworn to before me this 3rd day of October, 1902. ~~xxx~~



W. H. Thorn,
U. S. Surveyor.

WE, John Lightfoot, and D. J. Woodward, do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of the E., W., and Fracl. S. Bdy. Black Mesa Forest Reserve.

John Lightfoot, Moundmen.
D. J. Woodward, Moundmen.

Subscribed and sworn to before me this 3rd day of October, 1902. ~~xxx~~



W. H. Thorn,
U. S. Surveyor.

WE, W. D. Roach, F. W. Powell, and T. M. Williamson, do solemnly swear that we will well and truly perform the duties of axmen in the establishment of corners and other duties, according to instructions given us, to the best of our skill and ability, in the survey of the E., W., and Fracl. S. Bdy. Black Mesa Forest Reserve.

W. D. Roach, F. W. Powell, Axmen.
T. M. Williamson, Axmen.

Subscribed and sworn to before me this 3rd day of October, 1902. ~~xxx~~



W. H. Thorn,
U. S. Surveyor.

We, ~~xx~~ H. S. Smith and W. D. Roach, do solemnly swear that ^{we} will well and truly perform the duties of flagmen according to instructions given ^{us} ~~me~~, to the best of ^{our} ~~my~~ skill and ability, in the survey of the R., W., and Fracl. S. Bdy. Black Mesa Forest Reserve.

H. S. Smith and W. D. Roach, Flagmen.

Subscribed and sworn to before me this 3rd day of October, 1902. ~~xxx~~



December 1, 1902, for W.D. Roach.
W. H. Thorn,
U. S. Surveyor.

INDEX DIAGRAM.

Township _____, *Range* _____

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Meanders Page _____

Preliminary Oaths of Assistants.

WE, J.T.Price, W.L.Foster, John W. Farmer, W.F.Bolinger, J.L.Spaw, and Alvin Sands, do solemnly swear that we will well and faithfully execute the duties of chainmen; that we will level the chain upon even and uneven ground, and plumb the tally pins, either by sticking or dropping the same; that we will report the true distances to all notable objects, and the true lengths of all lines that we assist in measuring, to the best of our skill and ability, and in accordance with instructions given us, in the survey of the E., W., and Fracl. S. Bdy. Black Mesa Forest Reserve.

J.T.Price, W.L.Foster, John W. Farmer, Chainman.
W.F.Bolinger, J. L. Spaw, Alvin Sands, Chainman.

Subscribed and sworn to before me this 15th day of January, 1903.

Jan. 21, for J.L.Spaw,

W. H. Thorn,

Feb. 9, for Alvin Sands.

U. S. Surveyor.

WE, J.D.Woodward, J.I.McKelvey, and John W. Farmer, do solemnly swear that we will well and truly perform the duties of moundmen in the establishment of corners, according to the instructions given us, to the best of our skill and ability, in the survey of the E., W., and Fracl. S. Bdy. Black Mesa Forest Reserve.

J.D.Woodward, J.I.McKelvey, Moundman.
John W. Farmer, Moundman.

Subscribed and sworn to before me this 15th day of January, 1903. for Woodward

Jan. 21, for McKelvey, again on March 18.

W. H. Thorn,

Feb. 9, for Farmer.

U. S. Surveyor.

Names of Axmen, and dates of preliminary oaths of same.

- F. W. Powell and J. I. McKelvey, January 15, 1903.
Elic Cox and Wm. Goswick, January 21, 1903.
John H. Haught and A. L. Haught, February 9, 1903.
P. C. Haught - - - - - March 18, 1903.
W. F. Bolinger - - - - - April 16, 1903.

W. H. Thorn,

U. S. Surveyor.

We, W.D.Roach, J.I.McKelvey, D.C.Martin do solemnly swear that we will well and truly perform the duties of flagman according to instructions given us, to the best of my skill and ability, in the survey of the E., W., and Fracl. S. Bdy., Black Mesa Forest Reserve.

W. D. Roach, J.I.McKelvey, D.C.Martin, Flagman.

Subscribed and sworn to before me this 15th day of January, 1903. for Roach.

Feb. 9, for McKelvey,

W. H. Thorn,

March 21, for Martin.

U. S. Surveyor.

1 E

Chains. Survey commenced October 3, 1902, by W. H. Thorn, U. S. Surveyor, and executed with a Young & Sons light mountain transit, No. 6935, with Smith solar attachment; the horizontal limb having two double verniers placed opposite to each other and reading to single minutes of arc, which is also the least count of the latitude and declination arcs.

October 2: At camp in sec. 36, T. 1 N., R. 29 E., about 45.00 chs. N. of the Gila and Salt River Base line, at 3 p.m., l.m.t., I set off $35^{\circ} 23'$ N. on the lat. arc; $3^{\circ} 27'$ S. on the decl. arc; and determine a true meridian with the solar; and mark the line thus determined by a tack driven in a wooden plug, set firmly in the ground, 5.00 chs. N. of my station.

At $6^{\text{h}} 41^{\text{m}}$ p.m., l.m.t., I observe Polaris at Eastern elongation, and mark the line thus determined by a tack driven in a wooden plug set in the ground, 5.00 chs. N. of my station.

October 2, 1902.

October 3: At 8 a.m., l.m.t., I lay off the azimuth of Polaris $1^{\circ} 27'$ to the west. This line falls at the exact point established by solar observation.

At 9 a.m., l.m.t., I set off $35^{\circ} 23'$ N. on the lat. arc; $3^{\circ} 45'$ S. on the decl. arc; and determine a true meridian with the solar. This line falls at the exact point established by solar observation. The p.m. and a.m. solar observations agree with the observations on Polaris.

Magnetic declination $12^{\circ} 40'$ E.

Therefore I conclude that the adjustments of the instrument are satisfactory.

At $11^{\text{h}} 49^{\text{m}} 18^{\text{s}}$ a.m., l.m.t., I set off $3^{\circ} 48'$ S. on the decl. arc; and observe the sun on the meridian; the resulting lat. is $33^{\circ} 23'$, which is about 6" less than the proper lat.

At the cor. of T. 1 N., Rs. 29 and 30 E., on the Gila and Salt River Base line, lat. $33^{\circ} 22' 40''$ N., Lon. $109^{\circ} 17' 56''$ W., which is a granite stone, $20 \times 12 \times 8$ ins. in small mound of stone, marked B L and 6 notches on N., E., and W. faces; from which

A juniper, 20 ins. diam., bears S. $80^{\circ} 30'$ E.,
15 lks. dist., marked B L W B T T. 1 N., R. 30 E.
S. 31.

I raise a mound of stone, 3 ft. base, 1 ft. high, around cor., also raise a mound of stone, 5 ft. base, $2\text{-}1/2$ ft. high, N. of cor.

At 2 p.m., l.m.t., I set off $33^{\circ} 23'$ N. on the lat. arc; $3^{\circ} 50'$ S. on the decl. arc; and determine a true meridian with the solar.

Magnetic declination $12^{\circ} 40'$ E.

Thence I run
West on a random line along S. bdy. sec. 36.

40.04 $1/4$ sec. cor. bears S., 6 lks. dist., which is a malpious rock, $14 \times 12 \times 8$ ins. in small mound of stone marked B L $1/4$ on N. face; I mark bearing trees as follows:

A juniper, 10 ins. diam., bears N. $41^{\circ} 50'$ E.,
128 lks. dist., marked B L $1/4$ S., B. T.
A juniper, 18 ins. diam., bears N. $83^{\circ} 50'$ W.,
95 lks. dist., marked B L $1/4$ S., B. T.

Set over cor. and continue line W.

68.70 C. C. to T. 1 S., Rs. 29 and 30 E., bears S., 10 lks. dist., which is a volcanic rock, $12 \times 10 \times 8$ ins., in small mound of rock, marked C C and 6 notches on S., E., and W. faces; I enlarge mound about cor.

Chains. Raise a mound of stone, 5 ft. base, 2-1/2 ft. high, S. of cor.
 I return to the cor. to T. 1 N., Rs. 29 and 30 E. Thence I run
 S. 89° 55' W. on a true line along S. bdy. sec. 36. Descend over steep W. slope, through oak brush and scattering juniper and pine.

10.00 Dry drain, course N., foot of descent, 100 ft. below cor. Ascend steep N. E. slope.

30.40 Change to steep N. slope.
 Difference between measurements of 40.04 chs. by two sets of chainmen is 12 lks.; position of middle point
 By 1st set, 39.98 chs.
 By 2nd set, 40.10 chs.; the mean of which is

40.04 Standard 1/4 sec. cor.
 Thence I run
 S. 89° 48' W.
 Descend over N. W. slope.

41.00 Head of dry drain, course N. Ascend steep N. E. slope.

51.00 Top of ridge, bears N. 10° W. and S. 10° E., 600 ft. above Tp. cor. Descend gradual W. slope.

68.00 Small drain, course S.
 Difference between measurements of 68.70 chs. by two sets of chainmen is 16 lks.; position of middle point
 By 1st set, 68.78 chs.
 By 2nd set, 68.62 chs.; the mean of which is

68.70 C. C. to T. 1 S., Rs. 29 and 30 E.
 From this cor. I continue line W. along S. bdy. sec. 36.
 Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point
 By 1st set, 80.08 chs.
 By 2nd set, 79.92 chs.; the mean of which is

80.00 Set boundary post No. 14, for the cor. to secs. 35 and 36, which is an iron post, 4 ft. long, 4 ins. diam., with brass cap filled with cement, set 30 ins. in the ground in cement and rock; raised a mound of earth and stone 4 ft. base, 1 ft. high, around post; marked

No. 14	on S. side of cap.
1902	on S. side of rim.
RESERVE	in N. E. and N. W. quadrants.

Also marked

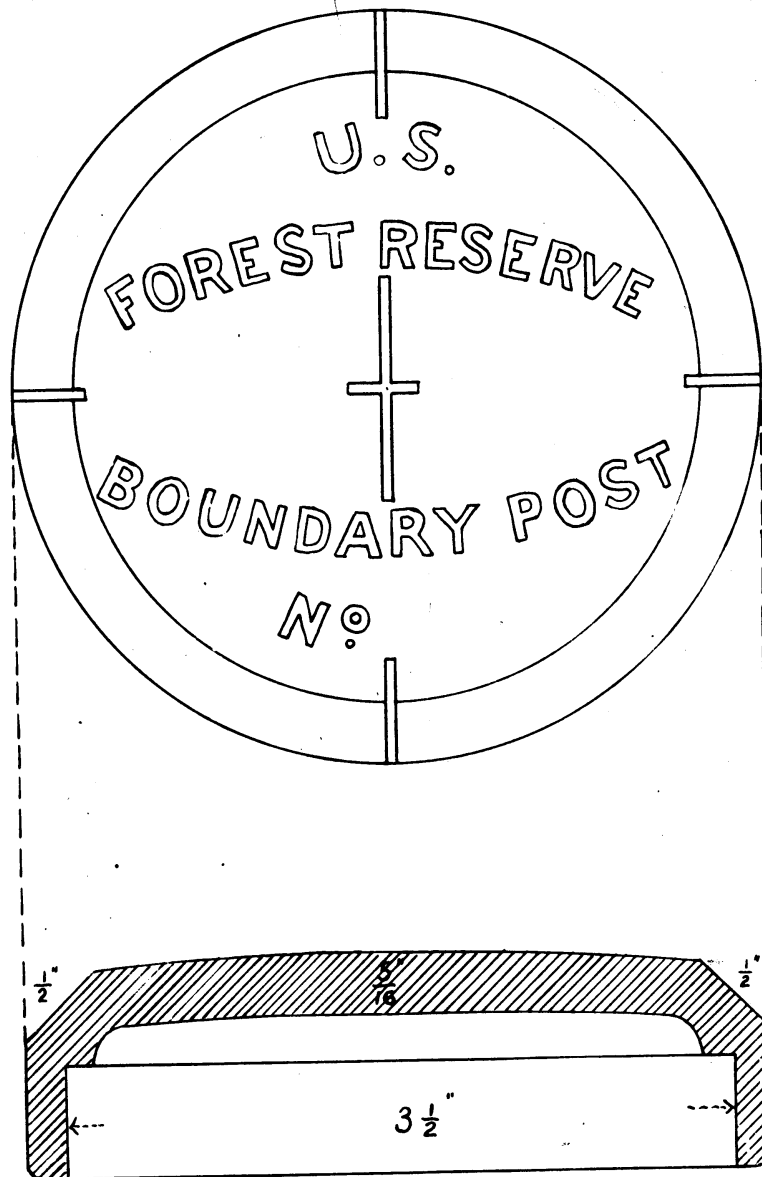
B L	on N. side of rim.
T 1 N S 36	in N. E. quadrant on rim.
N 29 E S 35	in N. W. " " "

1 notch on E. and 5 notches on W. edges of rim; from which
 A juniper, 40 ins. diam., bears N. 44° 00' E., 133 lks. dist., marked B L T 1 N R 29 E., S 36 B T.

No other trees in limits. Raise a mound of stone, 5 ft. base, 2-1/2 ft. high, N. of cor.
 Land, mountainous.
 Soil, 4th rate.
 Timber, scattering yellow pine and juniper, dense growth of oak brush.

October 3, 1902.

Note: The following print shows additional markings on preceding post, which are the same on all posts. Mound of earth and stone, similar to the foregoing, at each succeeding post.



Black Mesa Forest Reserve Boundary.
Gila & Salt River Base Line,
Through R. 29 E.

Chains.	October 6, 1902. At the cor. to secs. 35 and 36, on the Gila and Salt River Base line, At 8 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 4° 53' S. on the decl. arc; and determine a true meridian with the solar. Thence I run West on a true line along S. bdy. sec. 35. Over gradual S. W. slope, through oak and mahogany brush.
3.80	Granite ledge, 10 ft. high, bears N. and S. Descend steep W. slope.
10.35	Pipe Stem Creek, 30 lks. wide (dry), course south, foot of 500-ft. descent, yellow pine along banks of creek and scattering sycamore. Ascend steep S. E. slope, along N. side of small dry drain, course E.
28.00	Top of ridge, bears N. 10° W. and S. 20° E., 300 feet above creek, thence along gradual S. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is
40.00	Set a granite stone, 24x8x6 ins. in mound of stone, 3 ft. base, 1-1/2 ft. high, around stone, for 1/4 sec. cor., marked B L 1/4 on N. face; from which A juniper, 18 ins.diam., bears N. 71° 00' W., 95 lks. dist., marked B L 1/4 S B T An oak, 8 ins.diam., bears N. 3° 10' E., 53 lks. dist., marked B L 1/4 S B T At this 1/4 sec. cor. I set off 4° 57' S. on the decl. arc; and at 11 ^h 49 ^m a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the latitude given in the manual of instructions, 1902, for the Gila and Salt River Base Line. At 2 p.m., l.m.t., I set off 33° 23' N. on the lat. arc; 4° 59' S. on the decl. arc; and determine a true meridian with the solar.
42.00	Descend steep W. slope.
50.80	Dry drain, course S. 10° E., foot of 100-ft.descent. Ascend steep S. E. slope.
54.81	Rock ledge, 15 ft. high, bears N. and S.
70.00	Slope changes to south; gradual slope.
73.00	A granite rock, 20 ft. high, 10 ft. wide, 2 ft. thick, bears S. 50 lks. dist.
77.50	Granite ledge, 20 ft. high, bears N. E. and S. W.
78.00	A high peak, bears S., 40.00 chs. dist. Descend S. W. slope.
78.50	Granite ledge, 10 ft. high, bears N. and S. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 79.99 chs. By 2nd set, 80.01 chs.; the mean of which is
80.00	Set boundary post No. 13, for the cor. to secs. 34 and 35. Post, cap, and mound heretofore described. Cap marked No. 13 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked B L on N. side of rim T 1 N S 35 in N.E. quadrant on rim. R 29 E S 34 in N.W. " " " 2 notches on E. and 4 notches on W. edges of rim;

Black Mesa Forest Reserve Boundary.
Gila & Salt River Base Line,
Through R. 29 E.

Chains	from which
	<p>An oak, 15 ins.diam., bears N. 19° 20' E., 88 lks. dist., marked B L, T 1 N R 29 E S 35 B T</p> <p>A pine, 8 ins.diam., bears N. 70° 35' W., 167 lks. dist., marked B L, T 1 N R 29 E S 34 B T</p> <p>Land, mountainous. Soil, 4th rate. Timber, oak, yellow pine, and juniper, oak and mahogany brush. Granite formation.</p>
	<p>West on a true line along S. bdy. sec. 34. Descend steep W. slope, through scattering oak, yellow pine, and oak brush.</p>
4.65	A dry creek, 20 lks. wide, course S. 20° E., foot of 100-ft. descent; ascend steep S. E. slope.
12.00	Top of ascent, bears N. and S., thence along S. slope.
33.00	A small dry drain, course S., good quality of yellow pine along drain; ascend gradual S. E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	<p>By 1st set, 39.96 chs. By 2nd set, 40.04 chs.; the mean of which is</p>
40.00	Set a granite stone, 26x14x10 ins. in mound of stone, 4 ft. base, 20 ins. high, around cor., for 1/4 sec. cor., marked B L 1/4 S on N. face; from which
	<p>A juniper, 10 ins.diam., bears N. 9° 30' E., 66 lks. dist., marked B L 1/4 S B T</p> <p>A pine, 8 ins.diam., bears N. 25° 10' W., 49 lks. dist., marked B L 1/4 S B T</p>
41.60	Pack trail, bears N. E. and S. W.
43.00	Saddle divide between Blue River and Eagle Creek, bears N. 20° W. and S. 20° E. Difference between measurements of 43.11 chs. by two sets of chainmen is 8 lks.; position of middle point
	<p>By 1st set, 43.07 chs. By 2nd set, 43.15 chs.;, the mean of which is</p>
43.11	Set boundary post No. 12, Post, cap, and mound heretofore described. Cap marked
	<p>No. 12 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. October 6, 1902.</p>
	<p>October 7: At 10 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 5° 18' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 13° 10' E.</p>
	<p>Continue true line west along S. bdy. sec. 34. Descend gradual W. slope.</p>
59.00	A dry creek, 15 lks. wide, course N. W. Yellow pine along banks of creek; ascend gradual N. E. slope.
60.00	At this point I set off 5° 20' S. on the decl. arc; and at 11 ^h 48 ^m 06 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the proper lat. At 2 p.m., l.m.t., I set off 33° 23' N. on the lat. arc; 5° 22' S. on the decl. arc; and determine a true meridian with the solar. Continue true line west.
63.00	Change to N. slope.
69.00	Change to N. W. slope.
78.50	Bend in same creek from N. E. to N. W. Foot of 100-ft. descent. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point

Chains.	By 1st set, 79.94 chs. By 2nd set, 80.06 chs.; the mean of which is
80.00	Set boundary post No. 11, for the cor. to secs. 33 and 34. Post, cap, and mound heretofore described. Cap marked No. 11 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked B L on N. side of rim. T 1 N S. 34 in N. E. quadrant on rim R 29 E S 33 in N. W. " " " with 3 notches on E. and W. edges of rim; from which An oak, 8 ins. diam., bears N. 58° 35' E., 42 lks. dist., marked B L T 1 N R 29 E S 34 B T A juniper, 30 ins. diam., bears N. 18° 32' W., 214 lks. dist., marked B L T 1 N R 29 E S 33 B T Land, mountainous. Soil, 4th rate. Timber, juniper, yellow pine, oak brush, scattering pinon pine. Granite formation.
1.50	West on a true line along S. bdy. sec. 33. Through yellow pine and juniper, dense growth of oak and mahogany brush. A dry creek, 20 lks. wide, course S. 40° W. Ascend gradual S. E. slope.
13.00	Indications of copper. Descend gradual S. W. slope.
23.30	Creek (dry), 20 lks. wide, course S. 20° W., ascend gradual S. E. slope.
25.00	N. E. edge of pine flat.
30.03	Juniper tree, 14 ins. diam., cut down, marked 2 notches on E. and W. faces.
30.50	Change to gradual S. W. slope. October 7, 1902. October 8: At 8 a.m., l.m.t., I set off 33° 23' N. on lat. arc; 5° 39' S. on the decl. arc; and determine a true meridian with the solar.
32.00	Continue line W. along S. bdy. sec. 33. Point of rock ledge, 10 ft. high, bears N., 150 lks. dist.
34.25	Head of small drain, course S.
39.25	Small drain, course S. Change to S. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set granite stone, 23x12x6 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone for 1/4 sec. cor., marked B L 1/4 on N. face; from which A pinon pine, 8 ins. diam., bears N. 28° 50' E., 33 lks. dist., marked B L 1/4 S B T A pinon pine, 6 ins. diam., bears N. 1° 10' W., 16 lks. dist., marked B L 1/4 S B T
47.00	Enter heavy yellow pine timber, bears N. W. and S. E.
52.80	Creek, 20 lks. wide (dry), low banks, course S.
62.80	At this point I set off 5° 43' S. on the decl. arc; and at 11 ^h 47 ^m 49 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the proper lat.
73.00	Creek, 30 lks. wide, 5 ft. banks, course S. There is running water about 20.00 chs. N. of this point, sinks before it reaches this point.

<p>Chains. 80.00</p>	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is nothing. Set boundary post No. 10, for the cor. to secs. 32 and 33. Post, cap, and mound heretofore described. Cap marked No. 10 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. Also marked B L on N. side of rim. T 1 N S 33 in N. E. quadrant on rim R 29 E S 32 in N. W. " " " 4 notches on E. and 2 notches on W. edges of rim; from which A juniper, 24 ins.diam., bears N. 50° 05' E., 109 lks.dist., marked B L T 1 N R 29 E S 33 B T A juniper, 18 ins.diam., bears N. 16° 05' W., 69 lks.dist., marked B L T 1 N R 29 E S 32 B T Land, rolling. Soil, 3rd and 4th rate. Timber, yellow pine, pinon pine, juniper. Pine flat lies just south of this section, there is about a section of good yellow pine and juniper, good saw timber.</p>
<p>5.00 18.00 24.50 27.50 32.00 38.25 41.00</p>	<p>At the cor. to secs. 32 and 33, on the G. & S. R. base line, at 2 p.m., l.m.t., I set off 33° 23' N. on the lat. arc; 5° 45' S. on the decl. arc; and determine a true meridian with the solar. Thence I run West on a true line along S. bdy. sec. 32, Over nearly level land, through juniper and yellow pine; dense growth of oak and mahogany brush. Ascend gradual E. slope, leave yellow pine, bears N. and S.; continue in juniper and oak brush. Top of 50-ft. ascent, bears N. and S., descend gradual W. slope. Small dry drain, course S. Magnetic declination 11° 54' E. Top of 50-ft. ascent, bears N. and S. Ravine, 20 lks. wide, 10 ft. deep, course S. A dry branch, 10 lks. wide, course S. 70° E., yellow pine along creek banks. Ascend steep N. E. slope. True point for 1/4 sec. cor. falls on slide rock. Difference between measurements of 41.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 40.99 chs., By 2nd set, 41.01 chs.; the mean of which is Set a granite stone, 24x14x6 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone for the witness 1/4 sec. cor., marked W. C. B. L. 1/4 on N. face; from which A juniper, 5 ins.diam., bears N. 49° 50' W., 61 lks. dist., marked W C B L 1/4 S B T A juniper, 12 ins.diam., bears N. 75° 00' E., 26 lks. dist., marked W C B L 1/4 S B T October 8, 1902. October 9: At 8 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 6° 02' S. on the decl. arc; and determine a true meridian with the solar, at the W. C. 1/4 sec. cor., S. bdy. sec. 32.</p>

Chains.	<p>Magnetic declination 12° 06' E. Continue line W. along S. bdy. sec. 32, Over gradual N. E. slope. 64.00 Saddle divide, bears N. 20° E. and S. 20° W., thence over nearly level land. 78.00 Head of small drain, course S. W. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 79.95 chs. By 2nd set, 80.05 chs.; the mean of which is 80.00 Set boundary post No. 9, for the cor. to secs. 31 and 32. Post, cap, and mound heretofore described. Cap marked No. 9 On S. side of cap. 1902 on S. side of rim. RESERVE IN N.E. and N.W. quadrants. Also marked B L on N. side of rim T 1 N S 32 in N.E. quadrant on rim. R 29 E S 31 in N.W. " " " 5 notches on E. and 1 notch on W. edges of rim; from which A juniper, 20 ins.diam., bears N. 26° 20' E., 175 lks. dist., marked B L T 1 N R 29 E S 32 B T A juniper, 16 ins.diam., bears N. 3° 30' W., 282 lks. dist., marked B L T 1 N R 29 E S 31 B T Land, rolling and broken. Soil 4th rate. Timber, yellow pine, juniper, oak and mahogany brush.</p>
15.00	<p>West on a true line along S. bdy. sec. 31, Over top of ridge, bears E. and W., through juniper and pine timber, oak and mahogany brush.</p>
32.00	<p>Change to gradual S. W. slope of spur. At this point I set off 6° 06' S. on the decl. arc; and at 11^h 47^m 32^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the proper lat.</p>
40.00	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is Set a granite stone, 30x14x7 ins. in mound of stone, 4 ft. base, 2 ft. high, around stone, for 1/4 sec. cor.; marked B L 1/4 on N. face; from which An oak, 8 ins.diam., bears N. 43° 00' E., 132 lks. dist., marked B L 1/4 S B T A pine, 10 ins.diam., bears N. 89° 30' W., 75 lks. dist., marked B L 1/4 S B T</p>
45.00	<p>Enter heavy yellow pine timber, bears S.W. and N.E.</p>
52.80	<p>Creek, 30 lks. wide (dry), course S. W., foot of 200-ft. descent.</p>
59.00	<p>Same creek, course N. 70° W., thence along N. slope</p>
75.00	<p>Granite ledge, 10 ft. high, bears N. W. and S. E. Ascend steep N. E. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 79.99 chs. By 2nd set, 80.01 chs.; the mean of which is</p>

Chains.
80.00

Set boundary post No. 8, for the cor. to T. 1 N.,
Rs. 28 and 29 E. Post, cap, and mound heretofore
described. Cap marked

No. 8 on S. side of cap.
1902 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.

Also marked

B L on N. side of rim.
T 1 N R 29 E S 31 in N.E. quadrant on rim.
R 28 E S 36 in N.W. " " "

6 notches on N., E., and W. edges of rim; from
which

A juniper, 24 ins.diam., bears N 57° 20' E.,
53 lks. dist., marked B L T 1 N R 29 E S 31 B T

A juniper, 24 ins.diam., bears N.21° 25' W.,
157 Lks.dist., marked B L T 1 N R 28 E S 36 B T

This cor. falls on steep N. E. slope.

Land, mountainous.

Soil, 4th rate.

Timber, yellow pine and juniper, oak and mahogany
brush.

Granite formation.

At the cor. to T. 1 N., Rs. 28 and 29 E., on Gila
and Salt River Base Line, at 3^h 30^m p.m., l.m.t.,
I set off 33° 23' N. on the lat. arc; 6° 09' S. on
the decl. arc; and determine a true meridian with
the solar.

I mark the true meridian thus determined by a tack
driven in a wooden plug set 6.00 chs. north of my
station.

At 6^h 15^m p.m., l.m.t., I observe Polaris at eastern
elongation, and mark the line thus determined by
a wooden plug set in the ground 6.00 chs. north
of my station.

October 9, 1902.

October 10: At 8 a.m., l.m.t., I lay off the azi-
muth of Polaris 1° 27' to the west, and mark the
true meridian thus determined by a tack driven in
the wooden plug set by the solar observation yes-
terday. The line falls at the same point.

At 9 a.m., l.m.t., I set off 33° 23' N. on the lat.
arc; 6° 25' S. on the decl. arc; and determine a
true meridian with the solar. The line thus de-
termined falls at the exact point established by
Polaris observation, therefore the p.m. and a.m.
observations agree with the Polaris observation.
I therefore conclude that the adjustments of the
solar apparatus and transit are satisfactory.

Magnetic declination 12° 35' E.

Thence I run

West on a true line on the Gila and Salt River Base
Line, through R. 28 E., along the S. bdy. Sec. 36.
Ascend steep N. E. slope, through scattering yellow
pine, juniper, oak and mahogany brush.

15.00 Top of spur, bears N. 70° W. and S. 70° E.

17.50 Descend gradual S. W. slope.

27.10 Change to steep W. slope.

Magnetic declination 14° 00' E.

Difference between measurements of 40.00 chs. by two
sets of chainmen is 12 lks.; position of middle
point

By 1st set, 39.94 chs.

By 2nd set, 40.06 chs.; the mean of which is

Chains.	
40.00	26x12x8 ins., in mound of stone, Set granite stone, 4 ft. base, 1-1/2 ft. high, around stone, for 1/4 sec. cor., marked B L 1/4 on N. face; from which A pinon pine, 6 ins. diam., bears N. 35° 00' E., 63 lks. dist., marked B L 1/4 S B T A juniper, 18 ins. diam., bears N. 49° 35' W., 37 lks. dist., marked B L 1/4 S B T
44.80	A dry branch, 15 lks. wide, course N. W., foot of 200-ft. descent, yellow pine along banks of branch.
47.50	Dry drain, course N., ascend steep E. slope.
55.00	At this point I set off 6° 29' S. on the decl. arc; and at 11 ^h 47 ^m 15 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the proper lat.
59.50	Change to gradual S. E.
65.85	Top of ascent, bears N. and S.; head of drain, course N. W., thence along gradual N. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 80.06 chs. By 2nd set, 79.94 chs.; the mean of which is
80.00	Set boundary post No. 7, for the cor. to secs. 35 and 36. Post, cap, and mound heretofore de- scribed. Cap marked No. 7 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. Also marked B L on N. side of rim. T.1 N S 36 in N. E. quadrant on rim. R 28 E S 35 in N. W. " " " 1 notch on E. and 5 notches on W. edges of rim; from which A juniper, 20 ins. diam., bears N. 62° 00' E., 82 lks. dist., marked B L T 1 N R 28 E S 36 B T An oak, 10 ins. diam., bears N. 67° 35' E., 63 lks. dist., marked B L T 1 N R 28 E S 35 B T Land, mountainous. Soil, 4th rate. Timber, yellow pine, juniper, oak brush. Granite formation.
	At the cor. to secs. 35 and 36, at 2 p.m., l.m.t., I set off 33° 23' N. on the lat. arc; 6° 31' S. on the decl. arc; and determine a true meridian with the solar. Thence I run West on a true line along S. bdy. sec. 35. Along gradual N. slope, through scattering juniper.
22.50	Change to steep W. slope into canyon.
29.90	Drain, course N., foot of 200-ft. descent, yellow pine in bottom of canyon. Ascend steep E. slope.
37.00	Top of ascent, bears N. and S., 200 ft. above bottom of canyon, thence along gradual N. slope, through scattering juniper. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a malpais rock, 28x14x12 ins. in mound of stone, 4 ft. base, 2 ft. high, around stone for 1/4 sec. cor., marked B L 1/4 on N face; from which

Black Mesa Forest Reserve Boundary.
Gila & Salt River Base Line.
Through R. 28 E.

BOOK 1811

Chains.	<p>A juniper, 8 ins.diam., bears N. 21° 00' E., 79 lks.dist., marked B L 1/4 S B T A juniper, 36 lks.dist., bears N. 59° 40' W., 419 lks.dist., marked B L 1/4 S B T 57.30 Lone juniper, 24 ins. diam., bears S. 72 lks. I blaze N. side of tree. 60.00 Change to gradual W. slope, over top of ridge. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 80.01 chs. By 2nd set, 79.99 chs.; the mean of which is 80.00 Set boundary post No. 6, for the cor. to secs. 34 and 35. Post, cap, and mound heretofore de- scribed. Cap marked No. 6 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. Also marked B L on N. side of rim. T 1 N S 35 in N. E. quadrant on rim. R 28 E S 34 in N. W. " " " 2 notches on E. and 4 notches on W. edges of rim; from which A juniper, 30 ins.diam., bears N. 31° 00' E., 120 lks.dist., marked B L T 1 N R 28 E S 35 B T A juniper, 40 ins.diam., bears N. 89° 30' W., 367 lks.dist., marked B L T 1 N R 28 E S 34 B T Land, rolling and level, surface stony. Soil, 3rd and 4th rate. Timber, juniper and pinon pine. Malpais rock.</p>
26.50	<p>West on a true line along S. bdy. sec. 34. Over gradual W. slope of ridge, through scattering juniper; Change to steep W. slope into canyon, enter oak brush, bears N. and S. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is</p>
40.00	<p>Set a malpais rock, 26x12x8 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone for 1/4 sec. cor., marked B L 1/4 on N. face; from which An oak, 10 ins.diam., bears N. 10° 00' E., 87 lks. dist., marked B L 1/4 S B T A pine, 12 ins.diam., bears N. 44° 00' W., 39 lks. dist., marked B L 1/4 S B T</p>
46.50	<p>October 10, 1902. October 11: At 8 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 6° 47' S. on the decl. arc; and determine a true meridian with the solar. Continue line west. A dry creek, 100 lks. wide, course S. 50° W. Sycamore, Box elder, walnut, oak, along creek banks, foot of 600-ft. descent; ascend gradual E. slope, through prairie, over stone surface.</p>
70.00	<p>Top of mesa, bears N. E. and S. W., thence over level land. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 79.99 chs. By 2nd set, 80.01 chs.; the mean of which is</p>

Chains. 80.00	<p>Set boundary post No. 5, for the cor. to secs. 33 and 34. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 5 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants.</p> <p>Also marked</p> <p>B L on N. side of rim. T 1 N S 34 in N. E. quadrant on rim. R 28 E S 33 in N. W. " " "</p> <p>3 notches on E. and W. edges of rim. Dig pits, 24x18x12 ins. E. and W. of post, 3 ft. dist., and N. of cor. 7 ft. dist.</p> <p>Land, mountainous and level. Soil, 3rd and 4th rate. Timber, yellow pine, juniper, oak, sycamore, box elder, ash, and walnut. Volcanic rock.</p>
40.00	<p>West on a true line along S. bdy. sec. 33. Over level land, through prairie. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p>By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is</p> <p>Set a granite stone, 28x14x10 ins. in mound of stone, 4 ft. base, 2 ft. high, around stone for 1/4 sec. cor., marked B L 1/4 on N. face; dig pits, 18x18x12 ins. E and W. of cor. 3 ft. dist.; raise mound of earth and stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.</p>
57.50	Change from level land to gradual N. W. slope.
71.00	Change to W. slope.
77.75	Dry drain, course N. 10° W., foot of 200-ft. descent; ascend steep N. E. slope, through scattering timber.
80.00	<p>Top of spur bears N. and S. Difference between measurements of 80.00 chs. by two sets of chainmen is 20 lks.; position of middle point</p> <p>By 1st set, 79.90 chs. By 2nd set, 80.10 chs.; the mean of which is</p>
80.00	<p>Set boundary post No. 4, for the cor. to secs. 32 and 33. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 4 on S. side of cap. 1902 on S. side of rim. RESERVE in N.E. and N.W. quadrants.</p> <p>Also marked</p> <p>B L on N. side of rim. T 1 N S 33 in N. E. quadrant on rim. R 28 E S 32 in N. W. " " "</p> <p>4 notches on E. and 2 notches on W. edges of rim; from which</p> <p>A juniper, 24 ins. diam., bears N. 50° 30' E., 186 lks. dist., marked B L T 1 N R 28 E S 33 B T An oak, 6 ins. diam., bears N. 56° 20' W., 179 lks. dist., marked B L T 1 N R 28 E S 32 B T</p> <p>Land, level and mountainous, surface stony. Soil, 3rd and 4th rate. Timber, scattering juniper and oak on drain. Granite formation.</p>

Chains.	<p>West on a true line along S. bdy. sec. 32, Over N. slope, through scattering juniper and oak timber.</p> <p>8.10 Side hill drain, course N.</p> <p>30.00 Change to W. slope. At this point I set off 6° 52' S, on the decl. arc; and at 11^h 47^m a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the proper lat. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 39.97 chs. By 2nd set, 40.03 chs.; the mean of which is</p> <p>40.00 Set a malpais rock, 26x14x10 ins., 19 ins. in the ground for 1/4 sec. cor. marked B L 1/4 on N. face; dig pits, 18x18x12 ins. E. and W. of cor. 3 ft. dist.; raise a mound of earth and stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.</p> <p>47.00 A dry creek, 50 lks. wide, low banks, course S. 50° W. Oak, juniper, sycamore, ash, and box elder along banks, 500 ft. below sec. cor. Ascend gradual S. E. slope.</p> <p>60.35 A dry drain, course S., thence along gradual S. slope, through scattering juniper, red cedar, and oak brush. Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 79.96 chs. By 2nd set, 80.04 chs.; the mean of which is</p> <p>80.00 Set boundary post No. 3, for the cor. to secs. 31 and 32. Post, cap, and mound heretofore described. Cap marked No. 3 on S. side of cap. 1902 on S. side of rim. RESERVE In N. E. and N. W. quadrants. also marked B L on N. side of rim. T 1 N S 32 in N. E. quadrant on rim. R 28 E S 31 in N. W. " " " 5 notches on E. and 1 notch on W. edges of rim; from which A red cedar, 12 ins. diam., bears N. 14° 40' E., 224 lks. dist., marked B. L T 1 N R 28 E S 32 B T A red cedar, 8 ins. diam., bears N. 24° 50' W., 192 lks. dist., marked B L T 1 N R 28 E S 31 B T Soil, 4th rate. Timber, scattering red cedar and juniper. Granite formation. Land, mountainous and rolling.</p>
23.28	<p>West on a true line along S. bdy. sec. 31. Over gradual W. slope, through prairie.</p> <p>A dry creek, 100 lks. wide, low banks, course S., Oak, sycamore, and walnut along creek banks, thence over level land.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 39.99 chs. By 2nd set, 40.01 chs.; the mean of which is</p>
40.00	<p>Set a granite stone, 26x12x6 ins., 19 ins. in the ground for 1/4 sec. cor., marked B L 1/4 on N. face; dig pits, 18x18x12 ins. E. and W. of cor. 3 ft. dist.; raise a mound of earth and stone, 3-1/2 ft. base, 1-1/2 ft. high, north of cor.</p>

Chains.	
46.95	Dry drain, course S.
59.00	Dry drain, course S.
70.00	Descend gradual W. slope.
79.50	Eagle Creek bottom bears N. 20° E. and S. 20° W. Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 79.97 chs. By 2nd set, 80.05 chs.; the mean of which is
80.00	Set boundary post No. 2, for the cor. to T. 1 N., Rs. 27 and 28 E. Post, cap, and mound heretofore described. Cap marked No. 2 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked B L on N. side of rim. T. 1 N. R. 28 E. S. 31 in N.E. quadrant on rim. R. 27 E., S. 36 in N.W. " " " 6 notches on N., E., and W. edges of rim; from which A juniper, 12 ins. diam., bears N. 52° 00' E., 399 lks. dist., marked B L T 1 N R 28 E S 31 B T A walnut, 10 ins. diam., bears N. 89° 00' W., 150 lks. dist., marked B L T 1 N R 27 E S 36 B T Land, rolling and level; surface stony. Soil, 3rd and 4th rate. Timber, scattering red cedar, juniper, oak, walnut, and sycamore, along banks of creek.
	At the cor. to T. 1 N., Rs. 27 and 28 E., on the Gila & Salt River Base Line, at 3 p.m., l.m.t., I set off 33° 23' N. on the lat. arc; 6° 55' S. on the decl. arc; and determine a true meridian with the solar. Thence I run West on a true line along S. bdy. sec. 36, Over Eagle Creek bottom, through scattering cottonwood and sycamore timber,
.20	Wagon road, bears N. E. and S. W.
7.16	Eagle Creek, 30 lks. wide, 3 ins. deep, pure water, rapid current, course S. 20° W.
17.88	Corner of corral bears N. E. and N.
18.00	Leave creek bottom, bears N. E. and S. W., ascend gradual S. E. slope.

*Note:

October 12, 1902. I retrace the Indian Reservation boundary line for 5 miles north. Find good mound of stone at each mile; could not find any marks on stones. At about 5 miles west find blazed line. Abandon the line at this point. The line is well marked in the timber. Did not chain this line. The No. of the mile corner near the closing of the base line can be inserted when that part of the forest reserve is completed.

W. H. Thorn,
U. S. Surveyor.

B L on N. side of rim.
C C on E " " "
T 1 N R 27 E S 36 in N. E. quadrant on rim.
From which

Chains. A red cedar, 8 ins.diam., bears N. 4° 55' E.,
101 lks. dist., marked C C B L T 1 N R 27 E
S 36 B T
Land, rolling and creek bottom.
Soil, 2nd and 4th rate.
Timber, sycamore, cottonwood, juniper, and oak.
October 11, 1902.

Gila & Salt River Base Line, R. 30 E.

October 18, 1902.
At the cor. to T. 1 N., Rs. 29 and 30 E., on the
Gila & Salt River Base Line, at 8 a.m., l.m.t.,
I set off 33° 23' N. on the lat. arc; 9° 23' S.
on the decl. arc; and determine a true meridian
with the solar.

Magnetic declination 12° 40' E.

I mark bearing trees as follows:

A juniper, 14 ins.diam., bears N. 20° W., 114 lks.
dist., marked B L T 1 N R 29 E S 36 B T

An oak, 14 ins.diam., bears N. 63° 55' E., 67 lks.
dist., marked B L T 1 N R 30 E S 31 B T

Thence I run

East on a true line along S. bdy. sec. 31.

Ascend steep W. slope, through juniper and oak timber,
dense growth of live oak brush.

.06 Set boundary post No. 15. Post, cap, and mound here-
tofore described. Cap marked

No. 15 on S. side of cap.

1902 on S. side of rim.

RESERVE in N. W. and N. E. quadrants.

2.75 Top of ascent, bears N. and S., thence over gradual
S. E. slope.

12.80 Small drain, course S. Ascend gradual S. W. slope.

20.00 A juniper, 24 ins.diam., on line. Cut 2 notches on
E. and W. faces.

Note: This tree was not in the way of alignment.

22.00 Top of ridge, bears N. W. and S. 20° E.

36.50 Saddle of divide, bears E. and W. Ascend gradual
W. slope.

Difference between measurements of 40 00 chs. by two
sets of chainmen is 10 lks.; position of middle
point

By 1st set, 39 95 chs.

By 2nd set, 40.05 chs.; the mean of which is

40.00 Set a granite stone, 24x14x7 ins. in mound of stone,
3-1/2 ft. base, 1-1/2 ft. high, around stone, for
1/4 sec. cor., marked B L 1/4 on N. face; from
which

A juniper, 16 ins.diam., bears N. 41° 20' E.,
86 lks. dist., marked B L 1/4 S B T

A juniper, 14 ins.diam., bears N. 49° 50' W.,
148 lks.dist., marked B L 1/4 S B T

42.00 Change to steep N. slope.

43.50 Change to steep N. E. slope.

62.00 Side hill drain, course N. E., ascend steep N. W.
slope.

67.50 Top of spur, bears N. E. and S. W., descend steep
E. slope.

72.00 Rock ledge, 5 ft. high, bears N. and S.

75.05 A dry drain, course N., foot of 700-ft. descent.
Ascend steep W. slope.

Difference between measurements of 80.00 chs. by two
sets of chainmen is 4 lks.; position of middle
point

Chains. 80.00	<p>By 1st set, 79.98 chs. By 2nd set, 80.02 chs.; the mean of which is Set boundary post No. 16, for the cor. to secs. 31 and 32. Post, cap, and mound heretofore described. Cap marked No. 16 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. Also marked B L on N. side of rim. T 1 N S 32 in N. E. quadrant on rim. R 30 E S 31 in N. W. " " " with 5 notches on E. and 1 notch on W. edges of rim. From which A juniper, 5 ins.diam., bears N. 51° 15' W., 36 lks. dist., marked B L T 1 N R 30 E S 31 B T A pine, 6 ins.diam., bears N. 62° 35' E., 98 lks. dist., marked B L T 1 N R 30 E S 32 B T Land, mountainous; surface, stony. Soil, 4th rate. Timber, Juniper, yellow pine, live oak brush, Granite formation.</p>
3.50 10.55 20.50 26 00 29.00 31.30	<p>At the cor. to secs. 31 and 32, on base line, - Bdy. post No. 16, I set off 9° 28' S. on the decl. arc; and at 11ⁿ 45^m 22^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the proper lat. Thence I run East on a true line along the S. bdy. sec. 32. Ascend steep W. slope, through scattering juniper and dense growth of live oak and mahogany brush. Top of spur bears N. 20° W. and S. 20° E., thence along N. slope. Side hill drain, course N. 20° W. Change to gradual N. W. slope. Change to N. E. slope. Change to N. slope. Granite rock, 10 ft. high, bears S., 10 lks. dist. Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p>
40.00 41.75 48.64 51.00 56.00 61.00	<p>By 1st set, 40.01 chs. By 2nd set, 39.99 chs.; the mean of which is Set a granite rock, 26x14x10 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high around stone for 1/4 sec. cor., marked B L 1/4 on N. face; from which A juniper, 24 ins.diam., bears N. 84° 20' E., 76 lks. dist., marked B L 1/4 S B T A pine, 12 ins.diam., bears N. 84° 10' W., 123 lks. dist., marked B L 1/4 S B T Dry drain, course N., ascend steep N. W. slope, over granite boulders. Granite boulder, 5 ft. high, 3 ft. wide, 2 ft. thick, on line; cut a cross (+) on line on top of boulder. Granite ledge, 30 ft. high, bears N. E. and S. W. Change to gradual N. slope. Change to gradual E. slope of ridge. Difference between measurements of 30.00 chs. by two sets of chainmen is 4 lks.; position of middle point</p>
	<p>By 1st set, 79.98 chs. By 2nd set, 80.02 chs.; the mean of which is</p>

Black Mesa Forest Reserve Boundary,
Gila & Salt River Base Line,
Through R. 30 E.

BOOK 1811

17

Chains.

80.00 Set boundary post No. 17, for the cor. to secs. 32 and 33. Post, cap, and mound heretofore described.
Cap marked
No. 17 on S. side of cap.
1902 on S. side of rim.
RESERVE in N. W. and N. E. quadrants.
also marked
B L on N. side of rim.
T 1 N S 33 in N. E. quadrant on rim.
R 30 E S 32 in N. W. " " "
with 4 notches on E. and 2 notches on W. edges of rim, from which
A juniper, 6 ins.diam., bears N. 36° 35' E., 80 lks. dist., marked B L T 1 N R 30 E S 33 B T
A juniper, 18 ins.diam., bears N. 22° 35' W., 126 lks. dist., marked B L T 1 N R 30 E S 32 B T
Land, mountainous; surface stony.
Soil, 4th rate.
Timber, yellow pine, juniper and oak; live oak and mahogany brush.
Granite formation.
October 18, 1902.

October 20: At the cor. to secs. 32 and 33, bdy. post No. 17, at 8 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 10° 07' S. on the decl. arc; and determine a true meridian with the solar.
Thence I run
East on a true line along S. bdy. sec. 33.
Along top of ridge, through juniper and pine timber, live oak brush.
10.56 A pine, 10 ins.diam., cut down, marked with 2 notches on E. and W. faces (left stump 2-1/2 ft. high).
38.00 Descend steep N. E. slope.
Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point
By 1st set, 40.01 chs.
By 2nd set, 39.99 chs.; the mean of which is
40.00 Set a granite rock, 26x12x6 ins. in mound of stone, 4 ft. base, 18 ins. high around stone for 1/4 sec. cor., marked B L 1/4 on N. face; from which
A pine, 8 ins.diam., bears N. 38° 25' E., 111 lks. dist., marked B L 1/4 S B T
An oak, 8 ins.diam., bears N. 74° W., 52 lks. dist., marked B L 1/4 S B T
53.00 Change to steep E. slope.
69.00 Dry drain, course N. E., foot of 600-ft. descent; ascend steep N. W. slope.
78.00 Top of round peak, bears S. 35.00 chs.
79.00 Top of spur, bears N. and S., thence along N. slope.
Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point

By 1st set, 79.96 chs.
By 2nd set, 80.04 chs.; the mean of which is
80.00 Set boundary post No. 18, for the cor. to secs. 33 and 34. Post, cap, and mound heretofore described.
Cap marked
No. 18 on S. side of cap.
1902 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked
B L on N. side of rim.
T 1 N S 34 in N. E. quadrant on rim.
R 30 E S 33 in N. W. " " "
3 notches on E. and W. edges of rim; from which

Chains.	<p>A pine, 8 ins.diam., bears N. 41° 30' E., 47 lks. dist., marked B L T 1 N R 30 E S 34 B T</p> <p>A pine, 10 ins.diam., bears N. 87° 05' W., 70 lks. dist., marked B L T 1 N R 30 E S 33 B T</p> <p>Land, mountainous; surface stony.</p> <p>Soil, 4th rate.</p> <p>Timber, juniper, pine, and oak, dense growth of live oak brush.</p> <p>Granite formation.</p>
	<p>At the cor. to secs. 33 and 34, I set off 10° 12' S. on the decl. arc; and at 11^h 45^m a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the proper lat.</p> <p>Thence I run</p> <p>E. on a true line along S. bdy. sec. 34,</p> <p>Over N. slope, through pine and juniper timber and live oak brush.</p>
1.05	Side hill drain, course N.
5.15	Side hill drain, course N.
21.00	Side hill drain, course N. E.
29.95	Dry drain, course N. E., change to N. W. slope.
34.50	Change to steep N. E. slope.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st set, 39.96 chs.
	By 2nd set, 40.04 chs.; the mean of which is
40.00	Set a granite rock, 24x12x6 ins., 18 ins. in the ground for 1/4 sec. cor., marked B L 1/4 on N. face;
	A yellow pine, 24 ins.diam., bears N. 40° 10' E., 106 lks. dist., marked B L 1/4 S B T
	A juniper, 20 ins.diam., bears N. 71° W., 99 lks. dist., marked B L 1/4 S B T
44.00	Foot of 400-ft. descent, bears N. W. and S. E.
46.30	Squaw Creek (dry), 20 lks. wide, course S. 70° E., water in pools about 20.00 chs. up the creek; cottonwood, sycamore, yellow pine, walnut, box elder, and ash along creek. Ascend steep S. W. slope.
56.00	Side hill drain, course S. W.
73.50	Top of spur, bears N. and S., 400 ft. above creek. Descend steep E. slope.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point
	By 1st set, 79.95 chs.
	By 2nd set, 80.05 chs.; the mean of which is
80.00	Set boundary post No. 19, for the cor. to secs. 34 and 35. Post, cap, and mound heretofore described. Cap marked
	No. 19 on S. side of cap.
	1902 on S. side of rim.
	RESERVE in N. E. and N. W. quadrants.
	Also marked
	B L on N. side of rim.
	T 1 N S 35 in N. E. quadrant on rim.
	R 30 E S 34 in N. W. quadrant on rim.
	4 notches on W. and 2 notches on E. edges of rim; from which
	A red cedar, 8 ins.diam., bears N. 18° 50' W., 108 lks. dist., marked B L T 1 N R 30 E S 34 B T
	A red cedar, 10 ins.diam., bears N. 89° 00' E., 103 lks. dist., marked B L T 1 N R 30 E S 35 B T

Black Mesa Forest Reserve Boundary.
Gila & Salt River Base Line,
Through R. 30 E.

19

Chains.	<p>Land, mountainous; surface stony. Soil, 4th rate. Timber, yellow pine, pinon pine, juniper, oak, cottonwood, sycamore, walnut, box elder, ash. Malpais formation.</p> <p style="text-align: right;">October 20, 1902.</p>
	<p>October 21: At the cor. to secs. 34 and 35, bdy. post No. 19, at 10 a.m., l.m.t., I set off $33^{\circ}23'N$. on lat. arc; $10^{\circ}31'S$. on the decl. arc; and determine a true meridian with the solar.</p> <p>Thence I run East on a true line along S. bdy. sec. 35. Descend over steep E. slope, through juniper and red cedar, dense growth of live oak and mahogany brush.</p> <p>2.00 Change to steep S. E. slope</p> <p>12.55 Squaw Creek, 5 lks. wide, pure water, 2 ins. deep, course $N. 30^{\circ} E$. The creek only runs about 20.00 chs. from this point either way, sinks in the sand, foot of 400-ft. descent. Ascend steep N. W. slope.</p> <p>23.80 At this point I set off $10^{\circ}32'S$. on the decl. arc; and at $11^h 44^m 50^s$ a.m., l.m.t., observe the sun on the meridian; the resulting lat. is $33^{\circ}25'N$., which is 20" greater than the latitude given in the manual of instructions for the Gila & Salt River Base Line.</p> <p>36.00 Top of spur, bears N. and S., 600 ft. above creek; descend steep N. E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is</p> <p>40.00 Set a granite stone, $26 \times 18 \times 12$ ins. in mound of stone, 4 ft. base, $1-1/2$ ft. high, around stone, for $1/4$ sec. cor., marked B L $1/4$ on N. face; from which An ash, 6 ins. diam., bears $N. 61^{\circ}00'E$., 86 lks. dist., marked B L $1/4$ S B T A juniper, 12 ins. diam., bears $N. 18^{\circ}05'W$., 68 lks. dist., marked B L $1/4$ S B T</p> <p>41.00 Top of peak, bears S. 20.00 chs. dist.</p> <p>42.15 Side hill drain, course $N. 10^{\circ} E$.</p> <p>48.55 Side hill drain, course $N. E$.</p> <p>55.70 Dry drain, course $N. W$. Ascend steep W. slope.</p> <p>65.00 Top of spur, bears N. and S. Ascend $N. E$. slope.</p> <p>70.00 Dry drain, course $N. W$. Ascend steep W. slope.</p> <p>79.50 Top of ridge, bears N. and S., 800 ft. above Squaw Creek. Descend gradual $N. E$. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 79.96 chs. By 2nd set, 80.04 chs.; the mean of which is</p> <p>80.00 Set boundary post No. 20, for the cor. to secs. 35 and 36. Post, cap, and mound heretofore described. Cap marked No. 20 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. Also marked B L on N. side of rim. T 1 N S 36 in N. E. quadrant on rim. R 30 E S 35 in N. W. quadrant on rim. 5 notches on W. and 1 notch on E. edges of rim; from which</p>

Black Mesa Forest Reserve Boundary.
Gila & Salt River Base Line,
Through R. 30 E.

Chains.	<p>A pine, 8 ins.diam., bears N. 45° 35' E., 51 lks. dist., marked B L T 1 N R 30 E S 36 B T A pine, 10 ins.diam., bears N. 19° 50' W., 13 lks. dist., marked B L T 1 N R 30 E S 35 B T Land, mountainous; surface stony. Soil, 4th rate. Timber, pine, juniper, red cedar, sycamore, box elder, ash, cottonwood, walnut, Malpais formation.</p> <p style="text-align: right;">October 21, 1902.</p>
<p>5.40 23.50 40.00 41.75 53.00 69.75 80.00</p>	<p>October 22: At the cor. to secs. 35 and 36, bdy. post No. 20, at 9 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 10° 50' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 17° 40' E.</p> <p>Thence I run East on a true line along S. bdy. sec. 36. Over steep N. slope of mountain, through pine and juniper timber.</p> <p>Side hill drain, course N. E. Change to steep N. E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is</p> <p>Set granite rock, 24x15x7 ins., 18 ins. in the ground for 1/4 sec. cor., marked B L 1/4 on N. face; from which A red cedar, 6 ins.diam., bears N. 65° 00' E., 151 lks. dist., marked B L 1/4 S B T A pine, 8 ins.diam., bears N. 17° 20' W., 201 lks. dist., marked B L 1/4 S B T</p> <p>Dry drain, course N. 10° E., foot of 600-ft. descent. Ascend steep N. W. slope.</p> <p>Top of spur, bears N. and S., descend steep N. E. slope. At this point I set off 10° 55' S. on the decl. arc; and at 11^h 44^m 50^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the proper lat.</p> <p>Drain, course N. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 79.99 chs. By 2nd set, 80.01 chs.; the mean of which is</p> <p>Set a granite rock, 22x14x6 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, for cor. to T. 1 N., Rs. 30 and 31 E., marked B L on N. face, with 6 notches on N., E., and W. faces; from which A pine, 8 ins.diam., bears N. 25° 40' E., 53 lks. dist., marked B.L T 1 N R 31 E S 31 B T A pine, 8 ins.diam., bears N. 37° 30' W., 35 lks. dist., marked B L T 1 N R 30 E S 36 B T</p> <p>Land, mountainous; surface stony. Soil, 4th rate. Timber, pine, juniper, red cedar and oak, dense growth of live oak brush. Granite formation.</p> <p style="text-align: right;">October 22, 1902.</p>

Chains.	October 27, 1902. At the cor. to T. 1 N., Rs. 30 and 31 E., on Gila and Salt River Base Line, at 9 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 12° 36' S. on the decl. arc; and determine a true meridian with the solar. Thence I run East on a true line along S. bdy. sec. 31. Through scattering red cedar, juniper, pine, and oak, over steep N. E. slope.
1.50	Ravine, 100 lks. wide, 50 ft. deep, course N. E.
9.06	Ledge, 100 ft. high, W. wall of Blue River Canyon bears N. W. and S. E.
10.30	Bottom of ledge, bears N. W. and S. E., thence over river bottom.
12.33	Clifton and Luna Valley wagon road, bears N. W. and S. E.
	Difference between measurements of 12.78 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 12.77 chs. By 2nd set, 12.79 chs.; the mean of which is
12.78	Set boundary post No. 21. Post, cap, and mound here- tofore described. Cap marked No. 21 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants.
14.64	Blue River, 20 lks. wide, 2 ins. deep, pure water, course S. 20° E. The width of the river bed at mean high water is about 2.00 chs. Cottonwood, sycamore, ash, box elder, and walnut along river banks.
18.00	Leave river bottom, bears N. and S. Ascend gradual W. slope, through juniper, red cedar, and oak timber, live oak brush.
22.50	Rock ledge, 50 ft. high, bears N. and S., change to steep W. slope. True point for 1/4 sec, cor. falls in head of drain. Difference between measurements of 39.50 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 39.45 chs. By 2nd set, 39.55 chs., the mean of which is
39.50	Set malpais rock, 26x14x10 ins. for witness 1/4 sec. cor., in mound of stone, 4 ft. base, 20 ins. high, marked W C B L 1/4 on N. face; from which A red cedar, 6 ins. diam., bears N. 1° 00' W., 138 lks. dist., marked W C B L 1/4 S B T No other trees large enough in limits. Raise a mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.
40.00	Head of drain, course S.
45.00	Top of ridge, bears N. E. and N. W., 500 ft. above Blue River, thence along steep S. slope.
57.00	At this point I set off 12° 39' S. on the decl. arc; and at 11 ^h 44 ^m 08 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is almost 20" greater than the proper lat.
57.50	Change to steep E. slope.
63.80	Ravine, 100 lks. wide, 30 ft. deep, course S. 30° E.
71.00	Change to gradual E. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 79.94 chs. By 2nd set, 80.06 chs.; the mean of which is

Black Mesa Forest Reserve Boundary.
Gila & Salt River Base Line,
Through R. 31 E.

Chains.
80.00

Set boundary post No. 22, for the cor. to secs. 31 and 32. Post, cap, and mound heretofore described. Cap marked
 No. 22 on S. side of cap.
 1902 on S. side of rim.
 RESERVE in N. E. and N. W. quadrants.
 Also marked
 B L on N. side of rim.
 T 1 N S 32 in N. E. quadrant on rim.
 R 31 E S 31 in N. W. quadrant on rim.
 1 notch on W. and 5 notches on E. edges of rim; from which
 A red cedar, 20 ins.diam., bears N. 45° 55' E., 133 lks. dist., marked B L T 1 N R 31 E S 32 B T
 A red cedar, 6 ins.diam., bears N. 12° 25' W., 164 lks. dist., marked B L T 1 N R 31 E S 31 B T
 Land, mountainous; rocky surface.
 Soil, 2nd and 4th rate. cottonwood
 Timber, juniper, red cedar and oak on upland; sycamore, ash, box elder and Walnut along Blue River.
 Malpais formation.

At the cor. to secs. 31 and 32 (bdy. post No. 22), at 2 p.m., l.m.t., I set off 33° 23' N. on the lat. arc; 12° 41' S. on the decl. arc; and determine a true meridian with the solar.

Thence I run

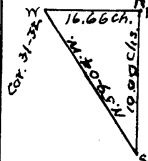
East on a true line along S. bdy. sec. 32.

Descend steep E. slope into Little Blue River Canyon, through scattering red cedar and juniper, dense growth of live oak and catsclaw brush.

5.25 Foot of 400-ft. descent, bears N. and S.

6 35 Little Blue River, 5 lks. wide, 2 ins. deep, pure water, course S. for about 3.00 chs., thence S. W.

7.00 Ascend steep W. slope; E. wall of canyon. Impossible to chain to flag on line on E. bank of canyon. I measure a base 10.00 chs. S., from which a flag at the cor. of secs. 31 and 32 bears N. 59° 04' W., therefore tangent 59° 04' X base or 1.666 X 10.00 chs. = 16.66 chs. to flag.



16:66 Flag on line on E. bank of canyon.

30.00 Change from steep W. slope to gradual S. W. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 39.97 chs.

By 2nd set, 40.03 chs.; the mean of which is

40.00 Set a granite rock, 24x18x12 ins. in mound of stone, 4 ft. base, 18 ins. high, for 1/4 sec. cor., marked B L 1/4 on N. face; from which

A juniper, 14 ins.diam., bears N. 80° E., 7 lks. dist., marked B L 1/4 S B T

A juniper, 20 ins.diam., bears N. 70° 25' W., 133 lks. dist., marked B L 1/4 S B T

46.00 Top of ascent, bears N. W. and N. E., 1050 ft. above Little Blue River, thence along S. slope.

57.50 Ravine, 50 lks. wide, 20 ft. deep, course S. E., change to gradual S. W. slope.

66.00 Dry drain, course S. W.

75.60 Rock ledge, 12 ft. high, bears N. and S., thence over level land.

77.50 Descend over E. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point

Chains. By 1st set, 79.96 chs.
 By 2nd set, 80.04 chs.; the mean of which is
 80.00 Set boundary post No. 23, for the cor. to secs. 32
 and 33. Post, cap, and mound heretofore described.
 Cap marked
 No. 23 on S. side of cap.
 1902 on S. side of rim.
 RESERVE in N. E. and N. W. quadrants.
 Also marked
 B L on N. side of rim.
 T 1 N S 33 in N. E. quadrant on rim.
 R 31 E S 32 in N. W. quadrant on rim.
 4 notches on E. and 2 notches on W. edges of rim;
 from which
 A pine, 10 ins.diam., bears N. 30° 30' E., 157 lks.
 dist., marked B L T 1 N R 31 E S 33 B T
 A pine, 6 ins.diam., bears N. 66° 45' W., 54 lks.
 dist., marked B L T 1 N R 31 E S 32 B T
 Land, mountainous; surface stony.
 Soil, 4th rate.
 Timber, juniper, pine, oak, cedar, sycamore, and
 cottonwood along creek; dense growth of live oak,
 catsclaw, mahogany and manzanita brush.
 Malpais and cement rock formation.
 October 27, 1902.

October 28: At the cor. to secs. 32 and 33 (bdy.
 post No. 23), I set off 12° 59' S. on the decl.
 arc; and at 11^h 44^m a.m., l.m.t., observe the sun
 on the meridian; the resulting lat. is 33° 23' N.,
 which is 20" greater than the proper lat.
 At 2 p.m., l.m.t., I set off 33° 23' N. on the lat.
 arc; 13° 00' S. on the decl. arc; and determine a
 true meridian with the solar.
 Thence I run
 East on a true line along S. bdy. sec. 33.
 Over E. slope, through juniper and pine timber, dense
 growth of live oak and other brush.
 10.68 Ravine, 150 lks. wide, 50 ft. deep, course S. 10° E.,
 300-ft. descent, thence over broken S. W. slope.
 20.00 About 2.00 chs. S. there is good water in pools in
 rock basin.
 23.00 Side hill drain, course S. 10° W.
 39.00 Side hill drain, course S. 20° W. Ascend steep W.
 slope.
 Difference between measurements of 40.00 chs. by two
 sets of chainmen is 8 lks.; position of middle
 point
 By 1st set, 39.96 chs.
 By 2nd set, 40.04 chs.; the mean of which is
 40.00 Set a granite stone, 26x16x6 ins. in mound of stone,
 4 ft. base, 20 ins. high, for 1/4 sec. cor., marked
 B L 1/4 on N. face; from which
 A pine, 8 ins.diam., bears N. 43° 10' W., 41 lks.
 dist., marked B L 1/4 S B T
 No other trees large enough in limits. Raise mound
 of stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.
 62.00 Change to level land.
 75.00 Change to N. slope.
 Difference between measurements of 80.00 chs. by two
 sets of chainmen is 6 lks.; position of middle
 point
 By 1st set, 79.97 chs.
 By 2nd set, 80.03 chs.; the mean of which is
 80.00 Set boundary post No. 24, for the cor. to secs. 33
 and 34. Post, cap, and mound heretofore described.

Black Mesa Forest Reserve Boundary.
Gila & Salt River Base Line.
Through R. 31 E.

Chains.	<p>Cap marked</p> <p>No. 24 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants.</p> <p>Also marked</p> <p>B L on N. side of rim. T 1 N S 34 in N. E. quadrant on rim. R 31 E S 33 in N. W. quadrant on rim.</p> <p>3 notches on E. and W. edges of rim; from which</p> <p>A juniper, 20 ins.diam., bears N. 36° 05' E., 183 lks. dist., marked B L T 1 N R 31 E S 34 B T</p> <p>A juniper, 8 ins.diam., bears N. 21° 40' W., 122 lks. dist., marked B L T 1 N R 31 E S 33, B T</p> <p>Land, mountainous; surface stony. Soil, 4th rate. Timber, scattering juniper, red cedar, oak, dense growth of live oak and mahogany brush. Cement rock formation.</p> <p style="text-align: right;">October 28, 1902.</p>
12.00 14.00 30.00 40.00 42.20 50.00 57.00 65.95 76.00 80.00	<p>October 29: At the cor. to secs. 33 and 34 (bdy. post No. 24), at 9 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 13° 16' S. on the decl. arc; and determine a true meridian with the solar. Thence I run</p> <p>East on a true line along S. bdy. sec. 34, Over gradual N. W. slope, through scattering juniper and cedar timber, dense growth of live oak and mahogany brush.</p> <p>Top of ridge, bears N. 20° W. and S. 20° E.</p> <p>Descend steep E. slope.</p> <p>Side hill drain, course N., foot of 300-ft. descent. Ascend steep W. slope.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point</p> <p>By 1st set, 40.05 chs. By 2nd set, 39.95 chs.; the mean of which is</p> <p>Set a malpais rock, 26x14x7 ins. in mound of stone, 4 ft. base, 20 ins. high, for 1/4 sec. cor., marked B L 1/4 on N. face; from which</p> <p>A juniper, 6 ins.diam., bears N. 30° 55' E., 76 lks. dist., marked B L 1/4 S B T</p> <p>No other trees near. Raise mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.</p> <p>Top of ridge, bears N. and S., 400 ft. above drain, Descend gradual N. E. slope.</p> <p>Side hill drain, course N.</p> <p>Top of spur, bears N. and S., descend steep E. slope.</p> <p>Drain, course N., 300-ft. descent, ascend steep W. slope.</p> <p>Top of spur, bears N. and S., 300-ft. ascent. Descend E. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p>By 1st set, 79.98 chs. By 2nd set, 80.02 chs.; the mean of which is</p> <p>Set boundary post No. 25, for the cor. to secs. 34 and 35. Post, cap, and mound heretofore described.</p> <p>Cap marked</p> <p>No. 25 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants.</p> <p>Also marked</p>

Chains.	<p>B L on N. side of rim. T 1 N S 35 in N. E. quadrant on rim. R 31 E S 34 in N. W. " " "</p> <p>4 notches on W. and 2 notches on E. edges of rim; from which A pine, 12 ins.diam., bears N. 19° 00' E., 230 lks. dist., marked B L T 1 N R 31 E S 35 B T A juniper, 12 ins.diam., bears N. 74° 30' W., 89 lks. dist., marked B L T 1 N R 31 E S 34 B T</p> <p>Land, mountainous; surface stony. Soil, 4th rate. Timber, pinon pine, juniper, oak, dense growth of live oak and mahogany brush. Malpais and cement rock formation. Note: Cloudy; no observation for latitude taken. October 29, 1902.</p>
<p>8.00 17.20 27.50 29.00 40.00 51.50 52.00 60.25 67.80 76.25 80.00</p>	<p>October 30: At the cor. to secs. 34 and 35 (Bdy. post No. 25), at 9 a.m., l.m.t., I set off 33° 23' N. on the lat. arc; 13° 36' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 12° 55' E.</p> <p>Thence I run East on a true line along S. bdy. sec. 35. Over steep E. slope, through juniper and pinon pine timber, dense growth of live oak brush.</p> <p>Side hill drain, course N., 300-ft. descent; ascend steep N. W. slope.</p> <p>Top of spur, bears N. and S., 300 ft. above drain.</p> <p>Side hill drain, course N. 20° W.</p> <p>Dry drain, course N. 70° W., 200-ft. descent; ascend steep S. W. slope.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 39.95 chs. By 2nd set, 40.05 chs.; the mean of which is</p> <p>Set a malpais rock, 22x18x10 ins., 16 ins. in the ground for 1/4 sec. cor., marked B L 1/4 on N.face; from which A juniper, 20 ins.diam., bears N. 22° 00' E., 22 lks. dist., marked B L 1/4 S B T No other trees near. Raise a mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.</p> <p>Top of ridge, bears N. 40° W. and S. 40° E. Descend over gradual N. E. slope.</p> <p>At this point I set off 13° 39' S. on the decl. arc; and at 11^h 43^m 48^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N., which is 20" greater than the latitude given in the Manual of Instruction, which is 33° 22' 40" N.</p> <p>Side hill drain, course N., foot of 200-ft. descent, ascend steep N. W. slope.</p> <p>Top of spur, bears N. and S., descend E. slope.</p> <p>Side hill drain, course N., foot of 200-ft. descent; ascend steep N. W. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 79.92 chs. By 2nd set, 80.08 chs.; the mean of which is</p> <p>Set boundary post No. 26, for the cor. to secs. 35 and 36. Post, cap, and mound heretofore described. Cap marked No. 26 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked</p>

Black Mesa Forest Reserve Boundary.
Gila & Salt River Base Line,
Through R. 31 E.

Chains.	<p>B L on N. side of rim. T 1 N S 36 in N. E. quadrant on rim. R 31 E S 35 in N. W. quadrant on rim. 5 notches on W. and 1 notch on E. edges of rim; from which A juniper, 8 ins.diam., bears N. 7° 30' E., 140 lks. dist., marked B L T 1 N R 31 E S 36 B T A juniper, 18 ins.diam., bears N. 62° 30' W., 182 lks. dist., marked B L T 1 N R 31 E S 35 B T Land, mountainous; surface stony. Soil, 4th rate. Timber, juniper, pinon pine, oak, dense growth of live oak and mahogany brush. Malpais formation.</p> <p style="text-align: right;">October 30, 1902.</p>
10.00 25.55 35.20 40.00 45.00 56.50 80.00	<p>October 31: At the cor. to secs. 35 and 36 (bdy. post No. 26), at 8 a.m., 1.m.t., I set off 33° 23' N. on the lat. arc; 13° 54' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 12° 25' E.</p> <p>Thence I run East on a true line along S. bdy. sec. 36 and Ascend steep N. W. slope, through juniper, oak tim- ber, dense oak and other brush.</p> <p>Top of spur, bears N. and S., descend steep E. slope. Side hill drain, course N. E., 100-ft. descent; yellow pine along drain, thence over gradual N. slope.</p> <p>Ravine, 200 lks. wide, 50 ft. deep, course N. 20° W., yellow pine along ravine. Ascend steep W. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 39.92 chs. By 2nd set, 40.08 chs.; the mean of which is</p> <p>Set malpais rock, 22x20x12 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, for 1/4 sec. cor., marked B L 1/4 on N. face; from which An oak, 10 ins. diam., bears N. 37° 45' W., 74 lks. dist., marked B L 1/4 S B T An oak, 8 ins.diam., bears N. 55° 20' E., 45 lks. dist., marked B L 1/4 S B T</p> <p>Change to gradual W. slope. Leave underbrush, con- tinue in scattering juniper, bears N. and S.</p> <p>Top of ridge or saddle divide, bears N. and S., descend gradual S. E. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 79.97 chs. By 2nd set, 80.03 chs.; the mean of which is</p> <p>Set boundary post No. 27, for the cor. to T. 1 N., Rs. 31 and 32 E. Post, cap, and mound heretofore described. Cap marked No. 27 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants.</p> <p style="text-align: center;">Also marked</p> <p>B L on N. side of rim. T 1 N R 32 E S 31 in N. E. quadrant on rim. R 31 E S 36 in N. W. quadrant on rim. 6 notches on N., E., and W. edges of rim; from which A juniper, 36 ins.diam., bears N. 44° 30' E., 149 lks. dist., marked B L T 1 N R 32 E S 31 B T A juniper, 6 ins.diam., bears N. 72° 00' W., 224 lks. dist., marked B L T 1 N R 31 E S 36 B T</p>

Chains.	<p>Land, mountainous; surface stony. Soil, 4th rate. Timber, pine, oak, and juniper; live oak and mahogany brush. Malpais formation.</p>
6.00	<p>At the cor. to T. 1 N., Rs. 31 and 32 E. (bdy. post No. 27), I set off 13° 58' S. on the decl. arc; and at 11^h 43^m 45^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 23' N. which is 20" greater than the proper lat. Thence I run East on a true line along S. bdy. sec. 31. Over gradual S. E. slope, through scattering juniper. Small drain, course S. E. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is</p>
40.00	<p>Set a malpais rock, 24x20x7 ins., 18 ins. in the ground for 1/4 sec. cor., marked B L 1/4 on N. face; from which A juniper, 48 ins. diam., bears N. 69° 55' E., 377 lks. dist., marked B L 1/4 S B T A juniper, 18 ins. diam., bears N. 26° 15' W., 277 lks. dist., marked B L 1/4 S B T</p>
76.50	<p>Enter oak brush, bears N. and S. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks., position of middle point By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is</p>
80.00	<p>Set boundary post No. 28, for the cor. to secs. 31 and 32. Post, cap, and mound heretofore described. Cap marked No. 28 on S. side of cap. 1902 on S. side of rim. RESERVE in N. E. and N. W. quadrants. Also marked B L on N. side of rim. T 1 N S 32 in N. E. quadrant on rim. R 32 E S 31 in N. W. quadrant on rim. 5 notches on E. and 1 notch on W. edges of rim; from which A juniper, 10 ins. diam., bears N. 63° 25' E., 104 lks. dist., marked B L T 1 N R 32 E S 32 B T A juniper, 20 ins. diam., bears N. 50° 30' W., 116 lks. dist., marked B L T 1 N R 32 E S 31 B T Land; gradual S. E. slope; surface stony. Soil, 4th rate. Timber, scattering juniper and oak. Malpais formation.</p>
11.00	<p>At the cor. to secs. 31 and 32 (bdy. post No. 28), At 3 p.m., l.m.t., I set off 33° 23' N. on lat. arc; 14° 01' S. on the decl. arc; and determine a true meridian with the solar. Thence I run East on a true line along S. bdy. sec. 32, Over gradual S. E. slope, through juniper timber and oak brush.</p>
15.90	<p>Wire fence, bears N. 70° W. and S. 70° E.</p>
27.00	<p>Dry drain, course S. E. Enter heavy yellow pine.</p>
	<p>Bend in a dry creek from S. W. to S. E.</p>

Black Mesa Forest Reserve Boundary,
Gila & Salt River Base Line,
Through R. 32 E.

Chains.
31.00 Same dry creek, 30 lks. wide, course N. 70° E., foot of 500-ft. descent; ascend gradual N. W. slope.
35.00 Change to level land, bears N. E. and S. W.
38.50 Brush fence, bears N. and S.
Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
By 1st set, 40.02 chs.
By 2nd set, 39.98 chs.; the mean of which is
40.00 Set a granite rock, 24x12x8 ins., 18 ins. in the ground for 1/4 sec. cor., marked B L 1/4 on N. face; from which
A juniper, 10 ins.diam., bears N. 1° 20' E., 10 lks. dist., marked B L 1/4 S B T
A juniper, 20 ins.diam., bears N. 42° 25' W., 12 lks. dist., marked B L 1/4 S B T
58.82 Drain, course N. 10° E. Ascend gradual W. slope.
70.00 Brush fence, bears N. and S.
77.00 Leave timber, enter prairie.
79.00 Top of spur, bears N. and S.
Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point
By 1st set, 79.99 chs.
By 2nd set, 80.01 chs.; the mean of which is
80.00 Set a malpais rock, 24x12x10 ins., 18 ins. in the ground, for the cor. to secs. 32 and 33, marked with 2 notches on W. and 4 notches on E. faces, B L on N. face; from which
A juniper, 12 ins.diam., bears N. 43° 25' E., 80 lks. dist., marked B L T 1 N R 32 E S 33 B T
A juniper, 12 ins.diam., bears N. 88° 45° W., 90 lks. dist., marked B L T 1 N R 32 E S 32 B T
Land, rolling and level.
Soil, 3rd rate.
Timber, yellow pine, juniper, and oak.

East on a true line along S. bdy. frac'l sec. 33, Over nearly level land.
Difference between measurements of 2.58 chs. by two sets of chainmen is nothing.
2.58 Intersect the New Mexico and Arizona boundary line, 18.07 chs. N. 0° 01' W. of the 250th mile post. Set boundary post No. 29, for the closing corner to frac'l. sec. 33. Post, cap, and mound heretofore described. Cap marked
No. 29 on S. side of cap.
1902 on S. side of rim.
RESERVE IN N. W. quadrant.
Also marked
B L on N. side of rim.
C C on W. side of rim.
T 1 N R 32 S 33 in N. W. quadrant on rim.
3 notches on W. edge of rim; from which
A juniper, 8 ins.diam., bears N. 49° 10' W., 211 lks. dist., marked
B L T 1 N R 32 E S 33 C C B T

October 31, 1902.

Black Mesa Forest Reserve Boundary,
Between New Mexico & Arizona.

Chains.	<p>November 1, 1902. At the 250th mile corner on the bdy. between New Mexico and Arizona, which is a granite stone, 20x12x5 ins. in small mound of stone. I enlarge mound to 4 ft. base, 1-1/2 ft. high around stone. The stone is marked</p> <p>250 on N. face, N M on E. " 32° W L on S. " ARIZ on W. "</p> <p>No witness trees given in original notes. I mark trees as follows: A juniper, 10 ins.diam., bears S. 86° 30' W., 46 lks. dist., marked ARIZ 250 M. B T A juniper, 8 ins.diam., bears N. 61° 55' E., 68 lks. dist., marked N M 32° W L B T At 3 p.m., l.m.t., I set off 33° 23' N. on the lat. arc; 14° 21' S. on the decl. arc; and determine a true meridian with the solar.</p> <p>Thence I run</p>
81.81	<p>North on a random line on the 250th mile. At The 249th mile cor., bears W. 2 lks., which is a scoria rock, 24x18x12 ins. in mound of stone, marked</p> <p>249 on N. face, N M on E. " 32° W L on S. " ARIZ on W. "</p> <p>I mark bearing trees as follows: A yellow pine, 10 ins.diam., bears S. 26° 30' E., 86 lks. dist., marked N M 32° W L B T A juniper, 20 ins.diam., bears N. 34° 45' W., 68 lks. dist., marked ARIZ 249 M B T</p> <p>I return to the 250th mile corner.</p> <p>Thence I run</p>
8.00	<p>N. 0° 01' W. on a true line on the 250th mile, Along top of low ridge, through scattering juniper. Change to gradual N. slope.</p>
18.07	<p>Difference between measurements of 18.07 chs. by two sets of chainmen is nothing.</p> <p>The Closing Cor. to the Gila & Salt River Base Line set October 31, 1902.</p>
35.00	<p>Enter heavy pine and oak timber, bears E. and W. Dense growth of oak brush.</p>
54.00	<p>Change to steep N. slope.</p>
57.37	<p>Creek (dry) 10 lks. wide, course N. W.</p>
62.65	<p>Creek (dry) 25 lks. wide, course N. 70° E., foot of 200-ft. descent.</p>
65.00	<p>A good spring bears E., 50 lks. dist.</p>
68.30	<p>Wm. Morgan's house, bears W., 40 lks. dist.</p> <p>Difference between measurements of 70.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p>By 1st set, 70.01 chs. By 2nd set, 69.99 chs.; the mean of which is</p>
70.00	<p>Set boundary post No. 30. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 30 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.</p> <p>From post ascent gradual S. E. slope.</p> <p>Difference between measurements of 81 81 chs. by two sets of chainmen is 3 lks.; position of middle point</p> <p>By 1st set, 81.77 chs. By 2nd set, 81.85 chs.; the mean of which is</p>
81.81	<p>The 249th mile corner.</p>

Chains.	<p>Land, rolling and mountainous; surface stony. Soil, 3rd and 4th rate. Timber, yellow pine, juniper, red cedar, and oak; cottonwood, sycamore, box elder, and Walnut near spring; live oak and mahogany brush.</p>								
	<p>November 1, 1902.</p>								
	<p>At the 249th mile corner. November 2: At 10 a.m., l.m.t., I set off 33° 24' N. on the lat. arc; 14° 35' S. on the decl. arc; and determine a true meridian with the solar.</p>								
80.67	<p>Thence I run North on a random line on the 249th mile. The 248th mile corner bears E., 25 lks., which is a trap rock, 26x10x6 ins., in mound of stone, marked</p> <table data-bbox="462 787 906 916"> <tr> <td>248</td> <td>on N. face</td> </tr> <tr> <td>N M</td> <td>on E. "</td> </tr> <tr> <td>32° W L</td> <td>on S. "</td> </tr> <tr> <td>ARIZ</td> <td>on W. "</td> </tr> </table>	248	on N. face	N M	on E. "	32° W L	on S. "	ARIZ	on W. "
248	on N. face								
N M	on E. "								
32° W L	on S. "								
ARIZ	on W. "								
	<p>I return to the 249th mile corner. Thence I run N. 0° 11' E. on a true line on the 249th mile, Ascend S. slope, through scattering pine, juniper, and oak timber.</p>								
12.00	<p>Top of low ridge, bears E. and W., 400 ft. above last creek, thence along gradual E. slope.</p>								
22.75	<p>Side hill drain, course E.</p>								
38.15	<p>Side hill drain, course E., ascend gradual S. E. slope.</p>								
64.00	<p>Top of ridge, bears E. and W. Difference between measurements of 64.50 chs. by two sets of chainmen is 4 lks.; position of middle point</p>								
	<p>By 1st set, 64.48 chs. By 2nd set, 64.52 chs.; the mean of which is</p>								
64.50	<p>Set boundary post No. 31. Post, cap, and mound heretofore described. Cap marked</p> <table data-bbox="462 1499 1105 1607"> <tr> <td>No. 31</td> <td>on S. side of cap.</td> </tr> <tr> <td>1902</td> <td>on S. side of rim.</td> </tr> <tr> <td>RESERVE</td> <td>in N. W. and S. W. quadrants.</td> </tr> </table>	No. 31	on S. side of cap.	1902	on S. side of rim.	RESERVE	in N. W. and S. W. quadrants.		
No. 31	on S. side of cap.								
1902	on S. side of rim.								
RESERVE	in N. W. and S. W. quadrants.								
65.00	<p>At this point I set off 14° 37' S. on the decl. arc; and at 11^h 43^m 21^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 24' N., which is 2" greater than the proper lat.</p>								
65.00	<p>Descend steep N. slope.</p>								
80.00	<p>Small drain, course E. Change to steep E. slope. Difference between measurements of 80.67 chs. by two sets of chainmen is 10 lks.; position of middle point</p>								
	<p>By 1st set, 80.62 chs. By 2nd set, 80.72 chs.; the mean of which is</p>								
80.67	<p>The 248th mile corner. Land, rolling and mountainous. Soil, 3rd and 4th rate. Timber, scattering pine, juniper, and oak, dense growth of live oak brush. Granite formation.</p>								

Black Mesa Forest Reserve Boundary.
Between New Mexico and Arizona.

31

Chains. 81.15	<p>North on a random line on the 248th mile. The 247th mile corner, bears E. 10 lks., which is a sandstone, 20x14x6 ins., in mound of stone, marked</p>
14.00	<p>247 on N. face, N M on E. " 32° W L on S. " ARIZ on W. "</p>
17.87	<p>I mark bearing trees as follows: A juniper, 8 ins.diam., bears S. 88° 30' E., 108 lks. dist., marked N M 32° W L B T A juniper, 20 ins.diam., bears S. 69° 10' W., 183 lks. dist., marked ARIZ 247 M B T</p>
28.00	<p>I return to the 248th mile corner. Thence I run N. 0° 04' E. on a true line on the 248th mile, Over steep E. slope, through scattering timber, dense growth of mahogany and live oak brush.</p>
73.00	<p>Descend steep N. slope into canyon. Bottom of canyon, a dry creek 20 lks. wide, course E. for about 10.00 chs. thence S. 1000 chs. Foot of 650-ft. descent. Ascend steep S. slope of canyon.</p>
73.15	<p>Change from steep slope to gradual S. slope. Top of low ridge, bears E. and W. Difference between measurements of 73.15 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 73.23 chs. By 2nd set, 73.07 chs.; the mean of which is</p>
73.15	<p>Set boundary post No. 32. Post, cap, and mound heretofore described. Cap marked No. 32 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.</p>
81.15	<p>Descend gradual N. slope from bdy. post. Difference between measurements of 81.15 chs. by two sets of chainmen is 16 lks.; position of middle point By 1st set, 81.23 chs. By 2nd set, 81.07 chs.; the mean of which is</p>
81.15	<p>The 247th mile corner. Land, mountainous and rolling. Soil, 4th rate. Timber, scattering juniper and pine.</p>
80 84	<p>At the 247th mile, at 4 p.m., l.m.t., I set off 33° 25' N. on the lat. arc; 14° 39' S. on the decl. arc; and determine a true meridian with the solar. I line in flag about 30.00 chs. N. of this cor. on the meridian thus determined. At 4^h 44^m p.m., l.m.t., I observe Polaris at eastern elongation. I lay off the azimuth of Polaris 1° 27' 30" to the W., the meridian thus determined falls at the exact point as the one established by solar observation.</p>
	<p>November 2, 1902. November 3: At the 247th mile corner, at 9 a.m., l.m.t., I set off 33° 25' N. on the lat. arc; 14° 53' S. on the decl. arc; and determine a true meridian with the solar; the meridian thus deter- mined falls at the same point as that established by Polaris and solar observation November 2, therefore I conclude that the adjustments of the instrument are satisfactory.</p>
	<p>Thence I run North on a random line on the 247th mile. At The 246th mile corner bears E. 71 lks. dist., which is a sandstone, 18x12x3 ins. in small mound of stone, marked</p>

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	246	on N. face
	N M	on E. "
	32° W L	on S. "
	ARIZ	on W. "
	I enlarge mound of stone to 4 ft. base, 1 ft. high, around cor.	
	I return to the 247th mile cor.	
	Thence I run	
	N. 0° 30' E. on a true line on the 247th mile,	
	Over gradual N. slope, through prairie; a few scattering juniper trees.	
18.75	Small drain, course W. Ascend gradual S. W. slope.	
37.45	To flag lined in on November 2, by solar observation, also top of ridge, bears E. and W. Descend gradual N. slope through juniper and oak timber.	
45.00	Change from N. slope to level land, enter prairie, bears E. and W.	
	Difference between measurements of 80.84 chs. by two sets of chainmen is 8 lks.; position of middle point	
	By 1st set, 80.80 chs.	
	By 2nd set, 80.88 chs.; the mean of which is	
80.84	The 246th mile corner.	
	Land, rolling and level.	
	Soil, 3rd rate.	
	Timber, scattering pine, juniper and oak.	
	Sandstone formation.	
29.91	North on a random line on the 246th mile.	
	Intersect astronomical monument, which is a hard sandstone, 32x16x12 ins. in mound of stone, marked 245.63, 33° 26' 22" N L on N. face.	
	32° W L	on S. "
	N M	on E. "
	ARIZ	on W. "
	A S 1875	on top
	Small mound of stone around monument. I enlarge mound to 6 ft. base, 2 ft. high, Witness trees in good state of preservation.	
79.88	The 245th mile corner, bears W. 53 lks., which is a sandstone, 16x10x3 ins. in small mound of stone. I enlarge mound to 4 ft. base, 1 ft. high, around corner, marked	
	245	on N. face.
	N. M.	on E. "
	32° W L	on S. "
	ARIZ	on W. "
	I return to the 246th mile corner.	
	Thence I run	
	North on a true line on the 246th mile,	
	Over gradual N. slope, through prairie.	
06	Set boundary post No. 33. Post, cap, and mound heretofore described. Cap marked	
	No. 33	on S. side of cap.
	1902	on S. side of rim.
	RESERVE	in S. W. and N. W. quadrants.
18.65	Small drain, course E. Ascend gradual S. slope.	
	Difference between measurements of 29.91 chs. by two sets of chainmen is nothing.	
29.91	Astronomical monument.	
	Thence I run	
	N. 0° 36' W.	
45.00	Top of low ridge, bears E. and W.	
47.00	Leave prairie, enter timber, bears E. and W.	
48.15	Small drain, course E.	

Black Mesa Forest Reserve Boundary.
Between New Mexico and Arizona.

Chains.	
51.00	Leave timber, enter prairie, bears E. and W., over nearly level land.
60.00	At this point I set off $14^{\circ} 56'$ S. on the decl. arc; and at $11^h 43^m 40^s$ a.m., l.m.t., observe the sun on the meridian; the resulting lat. is $33^{\circ} 27'$, which is the correct lat.
	Difference between measurements of 79.88 chs. by two sets of chainmen is 2 lks.; position of middle point
	By 1st set, 79.87 chs.
	By 2nd set, 79.89 chs.; the mean of which is
79.88	The 245th mile corner. Land, rolling and level. Soil, 3rd rate. Timber, pine and juniper.
	At the 245th mile corner, at 2 p.m., l.m.t., I set off $33^{\circ} 27'$ N. on the lat. arc; $14^{\circ} 57'$ S. on the decl. arc; and determine a true meridian with the solar.
	Magnetic declination $12^{\circ} 30'$ E.
	Thence I run
	North on a random line on the 245th mile.
81.50	The 244th mile corner, bears W., 9 lks. dist., which is a scoria rock, $14 \times 10 \times 4$ ins. in small mound of stone, marked
	244 on N. face
	N M on E. "
	32° W L on S. "
	ARIZ on W. "
	Witnessed by three bearing trees in good state of preservation.
	I return to the 245th mile corner.
	Thence I run
	N. $0^{\circ} 04'$ W. on a true line on the 245th mile.
06	Set boundary post No. 34. Post, cap, and mound heretofore described. Cap marked
	No. 34 on S. side of cap.
	1902 on S. side of rim.
	RESERVE in S. W. and N. W. quadrants.
1.50	Drain, course S. E. Ascend gradual S. W. slope.
13.00	Top of low ridge, bears N. W. and S. E.
14.00	Descend gradual N. E. slope, through scattering juniper and pine timber.
24.90	A dry creek, 10 lks. wide, course S. E. Ascend gradual S. E. slope.
64.00	Top of low ridge, bears N. W. and S. E. Descend gradual N. E. slope, through timber.
75.05	A dry branch, 10 lks. wide, course S. 70° E.
77.45	Drain, course S. E. Ascend gradual S. W. slope.
	Difference between measurements of 81.50 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 81.48 chs.
	By 2nd set, 81.52 chs.; the mean of which is
81.50	The 244th mile corner. Land, rolling. Soil, 3rd and 4th rate. Timber, pine, juniper, and oak.

Black Mesa Forest Reserve Boundary.
Between New Mexico and Arizona.

34

- Chains. At the 244th mile corner, at 3 p.m., l.m.t., I set off $33^{\circ} 28'$ N. on the lat. arc; $14^{\circ} 58'$ S. on the decl. arc; and determine a true meridian with the solar.
- Thence I run
North on a random line on the 244th mile.
- 25.00 At this point, at 4 p.m., l.m.t., I set off $33^{\circ} 28'$ N. on the lat. arc; $14^{\circ} 58'$ S. on the decl. arc; and determine a true meridian with the solar. I line in flag about 40.00 chs. N. on the meridian thus determined. At this same point, at 4^h 40^m p.m., l.m.t., I observe Polaris at eastern elongation and lay off the azimuth of Polaris $1^{\circ} 27' 30''$ to the west; the meridian thus determined falls at the exact point established by the solar observation.
November 3, 1902.
- 60.00 November 4:
At the flag lined in on the evening of November 3, at 9 a.m., l.m.t., I set off $33^{\circ} 28'$ N. on the lat. arc; $15^{\circ} 12'$ S. on the decl. arc; and determine a true meridian with the solar. I then turn off 180° on the horizontal limb. The line thus determined falls on flag left the evening before at 25.00 chs. The a.m. and p.m. observations fall at the same point established by Polaris observations.
- 80.30 Continue random line north.
The 243rd mile corner, bears west 55 lks. dist., which is a granite, 20x10x8 ins. in mound of stone, marked
- | | |
|------------------|------------|
| 243 | on N. face |
| N M | on E. " |
| 32° W L | on S. " |
| ARIZ | on W. " |
- I enlarge mound of stone to 4 ft. base, 1 ft. high, around cor.
I return to the 244th mile corner.
Thence I run
N. $0^{\circ} 23'$ W. on a true line on the 244th mile.
- .06 Set boundary post No. 35. Post, cap, and mound heretofore described. Cap marked
- | | |
|---------|-------------------------------|
| No. 35 | on S. side of cap. |
| 1902 | on S. side of rim. |
| RESERVE | in S. W. and N. W. quadrants. |
- 15.00 Ascend S. W. slope through oak and pine timber.
Leave oak and pine timber, enter prairie and scattering juniper, bears N. W. and S. E.
- 65.00 Top of ridge, bears E. and W.
Difference between measurements of 65.00 chs. by two sets of chainmen is 2 lks.; position of middle point
- | | |
|-------------|----------------------------------|
| By 1st set, | 64.99 chs. |
| By 2nd set, | 65.01 chs.; the mean of which is |
- 65.00 Set boundary post No. 36. Post, cap, and mound heretofore described. Cap marked
- | | |
|---------|-------------------------------|
| No. 36 | on S. side of cap. |
| 1902 | on S. side of rim. |
| RESERVE | in S. W. and N. W. quadrants. |
- 68.00 Descend N. slope, through dense growth of oak and mahogany brush.
- 73.80 Small drain, course E., foot of 50-ft. descent, thence along gradual E. slope, through dense thicket of oak, mahogany, manzanita, and other brush, over rock boulders.
Difference between measurements of 80.30 chs. by two sets of chainmen is 2 lks.; position of middle point.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	By 1st set, 80.31 chs. By 2nd set, 80.29 chs.; the mean of which is
80.30	The 243rd mile corner. Land, rolling. Soil, 3rd rate. Timber, yellow pine, juniper, and oak. Malpais formation.
	At the 243rd mile corner, at 10 a.m., l.m.t., I set off 33° 28' N. on the lat. arc; 15° 13' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 12° 45' E.
	Thence I run
80.00	North on a random line on the 243rd mile. Find no trace of the 242nd mile corner. Set temporary cor. and continue line north on 242nd mile.
151.00	The 241st mile corner, bears W. 3 lks. dist., which is a red fir tree, 14 ins. diam., in good state of preservation, marked 241 on N. face. N M on E. " 32° W L on S. " ARIZ on W. "
	witnessed by three bearing trees in good state of preservation. I return to the 243rd mile corner. Thence I run
1.15	N. 0° 01' W. on a true line on the 243rd mile. Small drain, course S. E., ascend gradual S. W. slope, through dense growth of oak and mahogany brush.
25.00	Change to steep S. slope.
57.00	Top of spur of four peaks, bears E. and W., 1500 ft. above 243rd mile cor. Difference between measurements of 57.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 57.04 chs. By 2nd set, 56.96 chs.; the mean of which is
57.00	Set boundary post No. 37. Post, cap, and mound heretofore described. Cap marked No. 37 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
57.50	At this point I set off 15° 15' S. on the decl. arc; and at 11 ^h 43 ^m 40 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 29' N., which is the proper lat. From this point descend steep N. slope, through heavy yellow pine and juniper timber.
70.10	Drain, course W., foot of 200-ft. descent. Ascend steep S. slope of mountain. Difference between measurements of 75.50 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 75.53 chs. By 2nd set, 75.47 chs.; the mean of which is
75.50	Set a granite stone, 20x12x12 ins. in mound of stone, 4 ft. base, 1 ft. high, marked 242 on N. face, N M on E. " 32° W L on S. " ARIZ on W. " from which

Black Mesa Forest Reserve Boundary.
Between New Mexico and Arizona.

Chains.	<p>A juniper, 8 ins. diam., bears N. 34° 05' W., 29 lks. dist., marked ARIZ 242 M B T A juniper, 12 ins. diam., bears S. 34° 00' E., 27 lks. dist., marked N M 32° W L B T Land, mountainous. Soil, 4th rate. Timber, yellow pine, pinon pine, juniper; dense growth of live oak, mahogany, and manzanita brush. Granite formation.</p>
<p>29.00 30.00 42.25 62.85 67.36 69.00 75.50</p>	<p>N. 0° 01' W. on a true line on 242nd mile. Ascend steep S. slope of one of the four peaks, through dense growth of live oak brush, and scat- tering juniper timber. Top of spur, bears E. and W. Magnetic declination 15° 45' E. Descend steep N. W. slope. Change to steep S. W. slope. Top of ridge, bears N. W. and S. E. The west one of the four peaks bears S. 50° E., about 2000 chs. (elevation about 9,500 ft. above sea level.) Difference between measurements of 67.36 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 67.40 chs. By 2nd set, 67.32 chs.; the mean of which is Set boundary post No. 38. Post, cap, and mound here- tofore described. Cap marked No. 38 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants. Descend steep N. slope, through heavy yellow pine, red fir, and oak. Difference between measurements of 75.50 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 75.45 chs. By 2nd set, 75.55 chs.; the mean of which is The 241st mile corner heretofore described. Land, mountainous. Soil, 3rd and 4th rate. Timber, on N. slopes very heavy yellow pine, red fir, and oak; some of the fir trees are 5 ft. in diam. White pine is also found near this cor. Live oak brush on S. slope. November 4, 1902.</p>
82.08	<p>At the 241st mile corner, November 5: at 10 a.m., 1, m. t., I set off 33° 31' N. on the lat. arc; 15° 31' S. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a random line on the 241st mile. The 240th mile corner, bears E. 21 lks., which is a malpais rock, 14x12x8 ins. in mound of stone, marked 240 on N. face, N M on E. " 32° W L on S. " ARIZ on W. " witnessed by 3 bearing trees in good state of pre- servation. I return to the 241st mile corner, Thence I run</p>

Black Mesa Forest Reserve Boundary.
Between New Mexico and Arizona.

Chains.	N. $0^{\circ} 09'$ E. on a true line on the 241st mile. Over steep N. slope, through heavy pine and red fir timber.
5.65	Small drain, course N. W., aspen along drain. Change to gradual S. W. slope.
15.00	Change to gradual N. slope, over top of ridge, bears N. and S. Difference between measurements of 55.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 54.96 chs. By 2nd set, 55.04 chs.; the mean of which is
55.00	Set boundary post No. 39. Post, cap, and mound heretofore described. Cap marked No. 39 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
56.00	Change to steep N. slope.
80.35	A dry branch, 10 lks. wide, course N. E., foot of 500-ft. descent; ascend steep S. slope. Difference between measurements of 82.08 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 82.04 chs. By 2nd set, 82.12 chs.; the mean of which is
82.08	The 240th mile corner. Soil, 2nd and 4th rate. Timber, heavy yellow pine, red fir, oak, and aspen. Note: No observation for latitude taken, it being cloudy at noon. November 5, 1902.
<p>November 6: At the 240th mile corner, at 8 a.m., 1.m.t., I set off $33^{\circ} 32'$ N. on the lat. arc; $15^{\circ} 47'$ S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination $12^{\circ} 45'$ E.</p> <p>Thence I run North on a random line on the 240th mile.</p>	
81.50	The 239th mile corner, bears E. 67 lks. dist., which is a malpais rock, 14x10x6 ins. in small mound of rock, marked 239 on N. face, N M on E. face, 32° W L on S. face, ARIZ on W. face. I enlarge mound of stone to 4 ft. base, 1 ft. high, around stone; witnessed by two bearing trees in good state of preservation. I return to the 240th mile corner. Thence I run
31.25	N. $0^{\circ} 29'$ E. on a true line on the 240th mile, Ascend gradual S. E. slope, through heavy yellow pine, red fir, and oak timber.
40.00	Change to steep rocky slope. Top of ascent, bears E. and W., 400 ft. above the 240th mile corner, thence over gradual N. slope through heavy pine timber. Difference between measurements of 40.86 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.83 chs. By 2nd set, 40.89 chs.; the mean of which is
40.86	Set boundary post No. 40. Post, cap, and mound heretofore described. Cap marked

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	No. 40 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
53.00	Change to steep N. slope. Difference between measurements of 81.50 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 81.46 chs. By 2nd set, 81.54 chs.; the mean of which is
81.50	The 239th mile corner. Land, mountainous. Soil, 2nd and 3rd rate. Timber, good quality of yellow pine, red fir, white pine, white oak, balsam fir, and aspen.
	At the 239th mile corner, I set off 15° 51' S. on the decl. arc; and at 11 ⁿ 43 ^m 43 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 33' N., which is 20" greater than the proper lat. Thence I run North on a random line on the 239th mile.
80.96	The 238th mile corner, bears W. 63 lks. dist., which is a granite stone, 15x8x4 ins. in small mound of stone. I enlarge mound to 4 ft. base, 1 ft. high, around cor. The stone is marked 238 on N. face N. M. on E. " 32° W L on S. " ARIZ on W. " witnessed by three trees in good state of preservation. I return to the 239th mile corner. Thence I run N. 0° 27' W. on a true line on the 239th mile, Descend N. E. slope; heavy timber, dense undergrowth of young pine and oak.
20.00	Change to steep N. slope.
46.00	Foot of ascent, bears E. and W., thence over nearly level land. Difference between measurements of 49.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 49.05 chs. By 2nd set, 48.95 chs.; the mean of which is
49.00	Set boundary post No. 41. Post, cap, and mound heretofore described. Cap marked No. 41 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
50.00	Descend into canyon, bears N. E. and S. W.
58.00	Bottom of canyon, a dry creek, 20 lks. wide, course N. E. Have descended 1000 ft. below bdy. post No. 40. There is a small spring in canyon about 40.00 chs. N. E. of this point. Ascend steep S. E. slope.
62.20	Top of ascent, bears N. E. and S. W., 400 ft. above bottom of canyon, thence along steep E. slope.
70.00	Rock ledge, 60 ft. high, bears N. W. and S. E., descend steep N. E. slope. Difference between measurements of 80.96 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 81.02 chs. By 2nd set, 80.90 chs.; the mean of which is

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.

80.96

The 238th mile corner.
Land, mountainous.
Soil, 2nd and 4th rate.
Timber, good quality of yellow pine, red fir, white
pine, and oak; oak and aspen brush.
Granite formation.

November 6, 1902.

November 14:

At the 238th mile corner, at 9 a.m., l.m.t., I set
off $33^{\circ} 33'$ N. on the lat. arc; $18^{\circ} 04'$ S. on the
decl. arc; and determine a true meridian with the
solar.

Magnetic declination $14^{\circ} 00'$ E.

Thence I run

North on a random line on the 238th mile.

80.04

The 237th mile corner, bears E. 146 lks., which is
a granite stone, 20x18x18 ins. in mound of stone, marked

237 on N. face

N M on E. "

 32° W L on S. "

ARIZ on W. "

I mark bearing trees as follows:

A juniper, 24 ins. diam., bears N. $3^{\circ} 30'$ E.,
217 lks. dist., marked N M 32° W L B T

A juniper, 36 ins. diam., bears N. $55^{\circ} 30'$ W.,
87 lks. dist., marked ARIZ 237 M B T

I return to the 238th mile corner.

Thence I run

N. $1^{\circ} 03'$ E. on a true line on the 238th mile.

Descend steep N. slope, through timber.

.50

A dry branch, 10 lks. wide, course E., foot of 400-ft.
descent. Ascend steep S. slope, through scatter-
ing pine and juniper, dense growth of live oak,
mahogany, manzanita brush.

4.40

Ledge, 30 ft. high, bears N. E. and S. W.

11.00

Ledge 20 ft. high, bears N. E. and S. W.

15.00

Point of ledge, bears N. 10° W. and S. 20° W.

20.00

Top of ascent, bears N. E. and S. W., 500 ft. above
creek, thence over nearly level land.

22.00

At this point I set off $18^{\circ} 07'$ S. on the decl. arc;
and at 11^h 45^m a.m., l.m.t., observe the sun on the
meridian; the resulting lat. is $33^{\circ} 33'$ N., which
is 20" less than the proper lat.

Difference between measurements of 32.00 chs. by two
sets of chainmen is 6 lks.; position of middle
point

By 1st set, 31.97 chs.

By 2nd set, 32.03 chs.; the mean of which is

32.00

Set boundary post No. 42. Post, cap, and mound here-
tofore described, with the exception that mound of
stone is 6 ft. base and 2 ft. high around post.
(Note: Impossible to set post deeper than 1-1/2 ft.
in the ground on account of solid rock.) Cap
marked

No. 42 on S. side of cap.

1902 on S. side of rim.

RESERVE in S. W. and N. W. quadrants.

38.50

Descend gradual N. E. slope, bears N. W. and S. E.

46.00

Change to steep N. slope.

58.20

A dry creek, 10 lks. wide, course N. 80° E., foot of
700-ft. descent. Ascend steep S. E. slope, through
dense growth of live oak and mahogany brush.

76.40

Side hill drain, course S. E.

Difference between measurements of 80.04 chs. by two
sets of chainmen is 8 lks.; position of middle
point

Black Mesa Forest Reserve Boundary.
Between New Mexico and Arizona.

Chains. 80.04	<p>By 1st set, 80.00 chs. By 2nd set, 80.08 chs.; the mean of which is The 237th mile corner. Land, mountainous. Soil, 4th rate. Timber, yellow pine, red fir, oak, dense growth of live oak brush.</p> <p style="text-align: right;">November 14, 1902</p>								
79.63	<p>November 15: At the 237th mile corner, I set off 18° 23' S. on the decl. arc; and at 11^h 44^m 35^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 35' N., which is 44" greater than the proper lat. At 1 p.m., l.m.t., I set off 33° 35' N. on the lat. arc; 18° 23' S. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a random line on the 237th mile. The 236th mile corner, bears E. 44 lks. dist., which is a pine tree, 14 ins.diam., marked</p> <table border="0" style="margin-left: 40px;"> <tr><td>236</td><td>on N. face</td></tr> <tr><td>N M</td><td>on E. "</td></tr> <tr><td>32° W L</td><td>on S. "</td></tr> <tr><td>ARIZ</td><td>on W. "</td></tr> </table> <p>(in good state of preservation). Witnessed by 3 bearing trees in good state of preservation. I return to the 237th mile corner. Thence I run</p>	236	on N. face	N M	on E. "	32° W L	on S. "	ARIZ	on W. "
236	on N. face								
N M	on E. "								
32° W L	on S. "								
ARIZ	on W. "								
28.10	<p>N 0° 19' E. on a true line on the 237th mile. Ascend steep S. slope, through dense growth of live oak and mahogany brush, scattering pine and juniper.</p>								
29.75	<p>Top of ridge, bears S. W. and N. 20° E. Change to gradual S. W. slope, through heavy yellow pine timber.</p>								
67.00	<p>Top of ridge, bears E. and W. Saddle of divide, about 5.00 chs. W. of this point. Difference between measurements of 67.00 chs. by two sets of chainmen is 10 lks.; position of middle point</p>								
67.00	<p>By 1st set, 67.05 chs. By 2nd set, 66.95 chs.; the mean of which is Set boundary post No. 43. Post, cap, and mound here- tofore described. Cap marked</p> <table border="0" style="margin-left: 40px;"> <tr><td>No. 43</td><td>on S. side of cap.</td></tr> <tr><td>1902</td><td>on S. side of rim.</td></tr> <tr><td>RESERVE</td><td>in S. W. and N. W. quadrants.</td></tr> </table> <p>From post descend gradual N. slope. Difference between measurements of 79.63 chs. by two sets of chainmen is 10 lks.; position of middle point</p>	No. 43	on S. side of cap.	1902	on S. side of rim.	RESERVE	in S. W. and N. W. quadrants.		
No. 43	on S. side of cap.								
1902	on S. side of rim.								
RESERVE	in S. W. and N. W. quadrants.								
79.63	<p>By 1st set, 79.68 chs. By 2nd set, 79.58 chs.; the mean of which is The 236th mile corner. Land, mountainous. Soil, 4th rate. Timber, yellow pine and oak, live oak and mahogany brush.</p>								
	<p>Five lks. N. of the 236th mile corner, at 3^h 45^m p.m., l.m.t., I set off 33° 35' N. on the lat. arc; 18° 23' S. on the decl. arc; and determine a true meridian with the solar. Drive a wooden plug in ground 5.00 chs. N. of my station; drive tack in plug for the true meridian thus determined.</p>								

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains. At 3^h 52^m p.m., l.m.t., I turn off 1° 28' on the horizontal limb to the east, and 33° 35' on the vertical arc and observe Polaris at eastern elongation. The vertical wire in the telescope falls 1' E. of the star. I lay off the azimuth of Polaris 1° 27' 4 to the west. The meridian thus determined falls at the exact point established by solar observation.

November 15, 1902.

November 16: At the point 5 lks. N. of the 236th mile corner, at 9 a.m., l.m.t., I set off 33° 35' N. on the lat. arc; 18° 35' S. on the decl. arc; and determine a true meridian with the solar.

Magnetic declination 12° 40' E.

The meridian thus determined falls at the same point as established by Polaris; therefore the a.m. and p.m. solar observations agree with the true meridian established by Polaris.

Thence I run

North on a random line on the 236th mile.

80:90 The 235th mile corner, bears W. 149 lks. dist., which is a granite stone, 14x10x6 ins. in mound of stone, marked

- 235 on N. face
- N M on E. "
- 32° W L on S. "
- ARIZ on W. "

No bearing trees given in original notes. I mark bearing trees as follows:

A juniper, 12 ins.diam., bears S. 21° E., 65 lks. dist., marked N M 32° W L B T

A yellow pine, 24 ins.diam., bears S. 76° 05' W., 50 lks. dist., marked ARIZ 235 M B T

I return to the 236th mile corner.

Thence I run

N. 1° 04' W. on a true line on the 236th mile, Over gradual N. slope, through heavy yellow pine.

8.65 Rock ledge, 10 ft. high, bears N. 70° W. and S. 70° E.

44 70 Side hill drain, course N. E., thence along E. slope.

64 50 Change to steep N. slope.

71 15 A dry branch, 10 lks. wide, course N. 40° W., foot of descent, 1100 ft. below bdy. post No. 43. Ascend gradual S. W. slope.

Difference between measurements of 80.90 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 80.92 chs.

By 2nd set, 80.88 chs.; the mean of which is

80.90 The 235th mile corner.

Land, mountainous.

Soil, 3rd rate.

Timber, heavy yellow pine, oak, red fir, good quality.

80.68 North on a random line on the 235th mile.

The 234th mile corner, bears E., 50 lks. dist., which is a granite stone, 20x20x4 ins. in small mound of stone. I enlarge mound to 4 ft. base, 16 ins. high, around cor., marked

- 234 on N. face
- N M on E. "
- 32° W L on S. "
- ARIZ on W. "

Witnessed by 3 bearing trees in good state of preservation.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	I return to the 235th mile corner. Thence I run N. $0^{\circ} 21' E.$ on a true line on the 235th mile. Over gradual W. slope, through yellow pine and juniper timber.
.06	Set boundary post No. 44. Post, cap, and mound heretofore described. Cap marked No. 44 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
6.50	Change to N. W. slope.
18.30	A dry branch, 10 lks. wide, course N. $80^{\circ} W.$ Ascend steep S. slope.
31.00	Top of ridge, bears E. and W. Descend over gradual N. W. slope.
32.00	At this point I set off $18^{\circ} 38' S.$ on the decl. arc; and at $11^h 44^m 45^s$ a.m., l.m.t., observe the sun on the meridian; the resulting lat. is $33^{\circ} 36' N.$, which is the proper lat.
38.50	Small drain, course W. Ascend gradual S. W. slope.
45.50	Top of low ridge, bears E. and W.
49.00	Descend gradual N. slope.
62.00	Saddle of divide between Blue and San Francisco rivers, bears E. and W.
70.00	Ascend gradual S. slope. Difference between measurements of 80.68 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.66 chs. By 2nd set, 80.70 chs.; the mean of which is
80.68	The 234th mile corner. Land, rolling; surface stony. Soil, 3rd rate. Timber, good quality of yellow pine, Juniper, live oak brush. Granite formation.
	At the 234th mile corner, at 3 p.m., l.m.t., I set off $33^{\circ} 36' N.$ on the lat. arc; $18^{\circ} 39' S.$ on the decl. arc; and determine a true meridian with the solar. Magnetic declination $12^{\circ} 40' E.$
	Thence I run North on a random line on the 234th mile.
80.43	The 233rd mile corner bears E. 13 lks. dist., which is a granite stone, 26x16x8 ins. in mound of stone. I enlarge mound to 5 ft. base, 20 ins. high, around stone, which is marked 233 on N. face, N M on E. face $32^{\circ} W L$ on S. face ARIZ on W. face witnessed by 3 bearing trees in good state of preservation. I return to the 234th mile corner. Thence I run N. $0^{\circ} 06' E.$ on a true line on the 234th mile, Over nearly level land, through heavy yellow pine and juniper timber.
.15	Set boundary post No. 45. Post, cap, and mound heretofore described. Cap marked No. 45 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
2.00	Small drain, course W.
20.23	Wire fence, bears N. $70^{\circ} W.$ and S. $70^{\circ} E.$

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	
34.45	Small drain, course W. Difference between measurements of 37.66 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 37.65 chs. By 2nd set, 37.67 chs.; the mean of which is
37.66	Set boundary post No. 46. Post, cap, and mound heretofore described. Cap marked No. 46 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
37.76	Alma and Blue pack trail, bears N. 70° W. and S. 70° E.
63.50	Top of ridge, bears E. and W. Descend gradual N. slope.
72.50	Small drain, course N. W. Difference between measurements of 80.43 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 80.40 chs. By 2nd set, 80.46 chs.; the mean of which is
80.43	The 233rd mile corner. Land, rolling and level. Soil, 2nd and 4th rate. Timber, good quality of yellow pine, juniper, and oak. Granite formation.
	At the 233rd mile corner, at 3 ^h 48 ^m p.m., l.m.t., I observe Polaris at eastern elongation, and lay off the azimuth of Polaris 1° 27' to the west, and mark the true meridian thus determined by a tack driven in a wooden plug set 5.00 chs. N. of my station. Magnetic declination 12° 55' E. At 4 p.m., l.m.t., I set off 33° 37' N. on the lat. arc; 18° 38' N. on the decl. arc; and determine a true meridian with the solar. The meridian thus determined falls at the exact point established by Polaris observation. November 16, 1902. November 17: At the same point, at 9 a.m., l.m.t., I set off 33° 37' N. on the lat. arc; 18° 50' S. on the decl. arc; and determine a true meridian with the solar. The meridian thus determined falls at the exact point established by Polaris observations, therefore the a.m. and p.m. observations agree with the Polaris observation, and the solar apparatus is in perfect adjustment. Thence I run North on a random line on the 233rd mile. 79.97 Intersect the 232nd mile corner, which is a malpais rock, 18x14x8 ins. in mound of stone, marked 232 on N. face N M on E. " 32° W L on S. " ARIZ on W. " witnessed by 3 bearing trees in good state of preservation. I return to the 233rd mile corner. Thence I run North on a true line on the 233rd mile, Through heavy yellow pine and juniper timber, over gradual N. W. slope.

Black Mesa Forest Reserve Boundary.
Between New Mexico and Arizona.

Chains.	
8.15	Small drain, course W. Ascend gradual S. slope.
15.00	Change to gradual S. W. slope.
30.50	Top of ridge, bears E. and W. Difference between measurements of 32.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 31.98 chs. By 2nd set, 32.02 chs.; the mean of which is
32.00	Set boundary post No. 47. Post, cap, and mound heretofore described. Cap marked No. 47 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
32.50	Descend gradual N. slope.
45.00	A dry drain, 5 lks. wide, course S. W., foot of 50-ft. descent. Ascend gradual S. slope.
54.50	A rock ledge, 20 ft. high, bears E. and W.
65.00	Change to gradual S. E. slope. Difference between measurements of 79.97 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 79.95 chs. By 2nd set, 79.99 chs.; the mean of which is
79.97	The 232nd mile corner. Land, rolling and mountainous. Soil, 3rd and 4th rate. Timber, yellow pine ^{oak} and juniper.
	At the 232nd mile corner, I set off 18° 53' S. on the decl. arc; and at 11 ^h 44 ^m 56 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 38' N., which is 4" less than the proper lat. Thence I run North on a random line on the 232nd mile.
81.20	The 231st mile corner, bears E., 25 lks., which is a granite stone, 20x16x4 ins. in small mound of stone. I enlarge mound to 4 ft. base, 16 ins. high, around corner. Stone marked 231 on N. face N M on E. " 32° W L on S. " ARIZ on W. "
	No trees in limits large enough for bearing trees. I return to the 232nd mile corner. Thence I run N. 0° 11' E. on a true line on the 232nd mile. Ascend gradual S. E. slope, through pine, oak, and juniper timber.
2.00	Top of ridge, bears E. and W.
3.00	Descend N. slope.
15.00	Change to gradual N. slope. Difference between measurements of 22.63 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 22.62 chs. By 2nd set, 22.64 chs.; the mean of which is
22.63	Set boundary post No. 48 Post, cap, and mound heretofore described. Cap marked No. 48 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
24.00	Descend steep N. slope of Johnson Canyon.
57.00	Bottom of canyon, bears E. and W., foot of 950-ft. descent below 232nd mile corner.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	
59.32	Johnson Creek, 2 lks. wide, 1 inch deep, pure water, course S. W. Ascend steep S. slope, through dense growth of live oak and mahogany brush.
	Difference between measurements of 81.20 chs. by two sets of chainmen is 16 lks.; position of middle point
	By 1st set, 81.12 chs.
	By 2nd set, 81.28 chs.; the mean of which is
81.20	The 231st mile corner.
	Land, mountainous.
	Soil, 4th rate.
	Timber, yellow pine, oak, and juniper, dense growth of live oak and mahogany brush on S. slope.
	Granite formation.
	November 17, 1902.
	November 18: At the 231st mile corner, at 9 a.m., l.m.t., I set off 33° 39' N. on the lat. arc; 19° 04' S. on the decl. arc; and determine a true meridian with the solar.
	Magnetic declination 14° 40' E.
	Thence I run
	North on a random line on the 231st mile.
64.85	S. bank of Nollans Canyon, bears E. and W. Perpendicular wall; impossible to chain. I set flag on N. bank of canyon, and then measure a base east 10.00 chs., from which flag bears N. 33° 30' W. Cotang 33° 30' X base, or 1.5110 X 10.00 chs. = 15 110 chs. to flag, which, added to 64.85 chs. =
79.96	N. bank of canyon from flag; flag at E. end of base bears S. 33° 30' E.
80.00	The 230th mile corner, bears E., 53 lks., which is a sandstone, 15x14x6 ins. in mound of stone, marked
	230 on N. face,
	N M on E. "
	32° W L on S. "
	ARIZ on W. "
	witnessed by 2 bearing trees.
	I return to the 231st mile corner.
	Thence I run
	N. 0° 23' E. on a true line on the 231st mile.
	Ascend steep S. slope, through dense growth of live oak and mahogany brush.
1 50	Sandstone ledge, 30 ft. high, bears E. and W.
6 60	Top of spur, bears E. and W. Enter yellow pine, juniper, and oak, bears E. and W.
7 50	Change to N. E. slope.
17.10	Drain, course S. E. Ascend steep S. E. slope, through live oak brush.
32.50	Top of ridge, bears E. and W., 900 ft. above last creek, thence over nearly level land, through heavy yellow pine.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 39.98 chs.
	By 2nd set, 40 02 chs.; the mean of which is
40.00	Set boundary post No. 49. Post, cap, and mound heretofore described. Cap marked
	No. 49 on S. side of cap.
	1902 on S. side of rim.
	RESERVE IN S. W. and N. W. quadrants.
40.10	Pack trail, bears N. 70° E. and S. 70° W.
48.05	Head of small canyon, 3.00 chs. wide, 60 ft. deep, course W.
62.30	Change to steep W. slope.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	
64.85	Descend steep N. slope into Nollan's Canyon.
68.00	A dry creek at bottom of canyon, 10 lks. wide, course S. 70° W., 450 ft. descent. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 79.99 chs. By 2nd set, 80.01 chs.; the mean of which is
80.00	The 230th mile corner. Land, mountainous and level. Soil, 3rd and 4th rate. Timber, yellow pine, oak, and juniper, dense growth of live oak and mahogany brush on S. slopes. Sandstone and granite formation.
	At the 230th mile corner, I set off 19° 06' S. on the decl. arc; and at 11 ^h 45 ^m 08 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 40' N., which is the proper lat. At 1 p.m., l.m.t., I set off 33° 40' N. on the lat. arc; 19° 07' S. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a random line on the 230th mile. At
80.71	The 229th mile corner bears E. 14 lks., which is a granite stone, 14x10x6 ins., in mound of stone, marked 229 on N. face N M on E. " 32° W L on S. " ARIZ on W. " witnessed by 3 bearing trees in good state of preservation. I return to the 230th mile corner. Thence I run N. 0° 06' E. on a true line on the 230th mile.
11.00	Ascend gradual S. slope, through pine and oak timber.
29.40	Change to gradual N. E. slope. Change to gradual S. E. slope. Difference between measurements of 61.50 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 61.48 chs. By 2nd set, 61.52 chs.; the mean of which is
61.50	Set boundary post No. 50. Post, cap, and mound here- tofore described. Cap marked No. 50 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
62.00	Top of ridge, bears E. and W. Descend gradual N. E. slope.
66.75	Drain, course S. E. Ascend gradual S. slope.
76.00	Top of ridge, bears E. and W. Descend gradual N. slope. Difference between measurements of 80.71 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 80.75 chs. By 2nd set, 80.67 chs.; the mean of which is
80.71	The 229th mile corner. Land, mountainous. Soil, sandy, 3rd rate. Timber, yellow pine, juniper, and oak.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains. At the 229th mile corner, at 3 p.m., l.m.t., I set off 33° 41' N. on the lat. arc; 19° 08' S. on the decl. arc; and determine a true meridian with the solar.

Thence I run
North on a random line on the 229th mile.

81.37 The 228th mile corner, bears E. 10 lks., which is a granite stone, 20x12x10 ins. in mound of stone, marked

228	on N. face,
N M	on E. "
32° W L	on S. "
ARIZ	on W. "

The N. E. bearing tree destroyed. I mark new one as follows:
A yellow pine, 30 ins. diam., bears N. 6° 30' E., 138 lks. dist., marked NEW MEXICO 228 M, 32° W L B T.

Other bearing trees in good state of preservation. I return to the 229th mile corner.

Thence I run
N. 0° 04' E. on a true line on the 229th mile.

Descend gradual N. slope, through heavy yellow pine timber.

3 75 Side hill drain, course N. E.

16 55 Dry drain, course S. E. Ascend gradual S. E. slope.

36 70 Top of mountain, bears E. and W.

Difference between measurements of 36.78 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 36.79 chs.
By 2nd set, 36.77 chs.; the mean of which is

36 78 Set boundary post No. 51. Post, cap, and mound here-
tofore described. Cap marked

No. 51	on S. side of cap.
1902	on S. side of rim.
RESERVE	in S. W. and N. W. quadrants.

Descend gradual N. slope from post.

57.65 Small drain, course N. E. Change to gradual N. E. slope.

Difference between measurements of 81.37 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 81.39 chs.
By 2nd set, 81.35 chs.; the mean of which is

81.37 The 228th mile corner.
Land, gently rolling.
Soil, 3rd rate.
Timber, heavy yellow pine and oak.

November 18, 1902.

November 19: At the 228th mile corner, at 8 a.m., l.m.t., I set off 33° 42' N. on the lat. arc; 19° 17' S. on the decl. arc; and determine a true meridian with the solar.

Magnetic declination 13° 10' E.

Thence I run

North on a random line on the 228th mile.

79.75 The 227th mile corner bears W. 44 lks., which is a sandstone, 16x12x8 ins. in mound of stone, marked

227	on N. face
N M	on E. "
32° W L	on S. "
ARIZ	on W. "

witnessed by 3 bearing trees in good state of preservation.

Black Mesa Forest Reserve Boundary.
Between New Mexico and Arizona.

Chains.	I return to the 228th mile corner. Thence I run N. 0° 19' W. on a true line on the 228th mile. Through heavy yellow pine.
2.00	Descend steep N. slope.
26.75	Side hill drain, course N. W., foot of 750-ft. descent; ascend steep S. slope.
30.00	Top of spur, bears E. and W., thence over steep W. slope.
32.45	Ravine, 2.00 chs. wide, 30 ft. deep, course W.
39.75	Side hill drain, course W.
44.00	Top of spur, bears E. and W. Difference between measurements of 44.50 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 44.46 chs. By 2nd set, 44.54 chs.; the mean of which is
44.50	Set boundary post No. 52. Post, cap, and mound here- tofore described. Cap marked No. 52 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
54.40	Side hill drain, course W.
58.00	Top of spur, bears E. and W.
63.50	Side hill drain, course W.
68.85	Top of ridge, bears E. and W. Descend over steep N. slope, over nearly bare rock. Difference between measurements of 79.75 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 79.80 chs. By 2nd set, 79.70 chs.; the mean of which is
79.75	The 227th mile corner. Land, mountainous. Soil, 4th rate. Timber, yellow pine, juniper, and oak. Cement rock formation.
	At the 227th mile corner I set off 19° 22' S. on the decl. arc; and at 11 ^h 45 ^m 20 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 43' N., which is about 20" less than the proper lat. Thence I run North on a random line on the 227th mile.
81.33	The 226th mile corner, bears E. 11 lks., which is a granite stone, 20x8x6 ins. in mound of stone, marked 226 on N. face N M on E. " 32° W L on S. " ARIZ on W. " Witnessed by 2 bearing trees in good state of preservation. I return to the 227th mile corner. Thence I run N. 0° 05' E. on a true line on the 227th mile. Descend broken N. slope, through heavy yellow pine and juniper timber.
9.40	Drain, course N. W. Ascend S. W. slope.
17.75	Top of ridge, bears E. and W. Descend over steep N. slope.
22.00	Foot of descent, bears E. and W., 1600 ft. below the 228th mile corner, enter Blue River bottom.
23.33	Blue River, 25 lks. wide, 4 ins. deep, pure water, rapid current, low banks, course W. for about 10.00 chs., thence S. W.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.

- 24.71 Clifton and Luna Valley road, bears E. and W. at this point.
Difference between measurements of 24.84 chs. by two sets of chainmen is 2 lks.; position of middle point
By 1st set, 24.95 chs.
By 2nd set, 24.83 chs.; the mean of which is
- 24.84 Set boundary post No. 53. Post, cap, and mound heretofore described. Cap marked
No. 53 on S. side of cap.
1902 on S. side of rim.
RESERVE in S. W. and N. W. quadrants.
- 24.86 Rail fence, bears E. and W., enter cultivated land.
- 27.00 Hamblin's house, bears E., 10.00 chs. dist.
- 32 32 Rail fence, bears N. 60° W. and S. 60° E. Leave cultivated land, enter timber; leave river bottom at same point, ascend S. W. slope.
- 57 50 Side hill drain, course E.
- 58 66 Cement rock ledge, 30 ft. high, bears E. and W.
- 62 41 Top of ridge or spur, bears E. and W. Descend steep N. slope.
- 69.50 Rock ledge, 20 ft. high, bears E. and W.
- 70.00 Foot of descent, enter river bottom, bears N. W. and S. E.
- 73.36 W. Fork Blue River, 20 lks. wide, 4 ins. deep, course S. E., cottonwood brush along banks.
Difference between measurements of 81.33 chs. by two sets of chainmen is 4 lks.; position of middle point
By 1st set, 81.35 chs.
By 2nd set, 81.31 chs.; the mean of which is
- 81.33 The 226th mile corner.
Land, mountainous, and level.
Soil, 2nd and 4th rate.
Timber, yellow pine, oak, and cottonwood.
Cement rock formation.

November 19, 1902.

November 23: At the 226th mile corner, at 3 p.m., l.m.t., I set off 33° 44' N. on the lat. arc; 20° 15' S. on the decl. arc; and determine a true meridian with the solar.

I set wooden plug firmly in the ground 5.00 chs. N. of my station, and mark the meridian thus determined by a tack driven in the wooden plug.

At 3^h 30^m p.m., l.m.t., I observe Polaris at eastern elongation. I lay off the azimuth of Polaris 1° 27' to the west, and the meridian thus determined falls at the exact point established by solar observations.

November 23, 1902.

November 24: At 9 a.m., l.m.t., I set off 33° 44' N. on the lat. arc; 20° 25' S. on the decl. arc; and determine a true meridian with the solar.

Magnetic declination 12° 40' E.

The meridian thus determined falls at the exact point established by Polaris observation. The a.m. and p.m. solar observations agree with the meridian established by Polaris observation.

Thence I run

North on a random line on the 226th mile.

- 33.51 The Closing Cor. to Tps. 6 and 7 S., R. 21 W., New Mexico survey, bears E. 35 lks., which is a sandstone, 16x12x6 ins. above ground, marked C C N M on E., with 6 notches on E. and N. faces; witnessed by 3 bearing trees in good state of preservation.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	
81.35	<p>The 225th mile corner, bears E. 13 lks., which is a granite stone, 12x10x6 ins., in mound of stone, marked</p> <p>225 on N. face N M on E. " 32 W L on S. " ARIZ on W. "</p> <p>Witnessed by 3 bearing trees in good state of preservation.</p> <p>I return to the 226th mile corner. Thence I run N. 0° 06' E. on a true line on the 226th mile, Over bottom land through yellow pine timber.</p>
2.50	Small drain, course S. W.
3 25	Rail fence, bears E. and W. Leave river bottom, bears E. and W., ascend gradual S. slope.
7 50	Clifton and Springerville road, bears N. 60° W. and S. 60° E.
	Difference between measurements of 7.80 chs. by two sets of chainmen is nothing.
7.80	Set boundary post No. 54. Post, cap, and mound heretofore described. Cap marked
	No. 54 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
12.00	Drain, course S. W.
23.00	Same drain, course S. E.
26.65	Same drain, course S. W. Ascend steep S. W. slope.
	Difference between measurements of 33.31 chs. by two sets of chainmen is 2 lks.; position of middle point
	By 1st set, 33.32 chs. By 2nd set, 33.30 chs.; the mean of which is
33.31	The Closing Cor. to Tps. 6 and 7 S., R. 21 W., New Mexico survey, bears E. 29-1/2 lks. dist.
43.00	Top of hill, bears E. and W., 400 ft. above Blue River; descend gradual N. slope.
53.75	Ravine, 3.00 chs. wide, 50 ft. deep, course E.
70.90	Same drain, course S. E.
71.75	Bend in same drain from N. W. to S. W.
77.00	Ascend steep S. W. slope.
79.75	Top of ridge, bears E. and W.
	Difference between measurements of 81.35 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 81.37 chs. By 2nd set, 81.33 chs.; the mean of which is
81.35	The 225th mile corner. Land, level and mountainous. Soil, 2nd and 3rd rate. Timber, yellow pine, Cement rock formation.
79.00	<p>North on a random line on the 225th mile.</p> <p>The 224th mile corner, bears E. 95 lks., which is a granite rock, 20x14x12 ins. in mound of stone, marked</p> <p>224 on N. face N M on E. " 32° W L on S. " ARIZ on W. "</p> <p>witnessed by 3 bearing trees in good state of preservation.</p> <p>I return to the 225th mile corner. Thence I run</p>

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	N. 0° 41' E. on a true line on the 225th mile, Through pine and oak timber, over W. slope. Difference between measurements of 19.26 chs. by two sets of chainmen is 2 lks.; position of middle point
	By 1st set, 19 27 chs. By 2nd set, 19.25 chs.: the mean of which is
19.26	Set boundary post No. 55, Post, cap, and mound heretofore described. Cap marked No. 55 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
	Descend over steep N. slope from post.
23.25	Ravine, 3.00 chs. wide, 50 ft. deep, course W.
24.00	Top of spur, bears E. and W., descend over N. W. slope.
25.25	Small drain, course W.
36.75	Large dry drain, course S. 20° W. Ascend S. E. slope.
44.25	At this point I set off 20° 28' S. on the decl. arc; and at 11 ^h 46 ^m 35 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 45' N., which is the proper lat.
47.25	Drain, course E. Ascend over broken S. W. slope. Difference between measurements of 79.00 chs. by two sets of chainmen is 8 lks.; position of middle point
	By 1st set, 79.04 chs. By 2nd set, 78.96 chs.; the mean of which is
79.00	The 224th mile corner. Land, rough and broken. Soil, 4th rate. Timber, yellow pine, oak; oak and mahogany brush.
	At the 224th mile corner; at 2 p.m., l.m.t., I set off 33° 45' N. on the lat. arc; 20° 29' S. on the decl. arc; and determine a true meridian with the solar.
	Thence I run
	North on a random line on the 224th mile.
82.07	The 223rd mile corner, bears W. 6 lks., which is a granite stone, 18x12x8 ins. in mound of stone, witnessed by 3 bearing trees in good state of preservation; enlarge mound of stone around cor. to 4 ft. base, 1 ft. high; stone marked 223 on N. face N M on E. " 32° W L on S. " ARIZ on W. "
	I return to the 224th mile corner.
	Thence I run
	N. 0° 03' W. on a true line on the 224th mile.
	Ascend steep S. W. slope, through pine, juniper, and oak timber.
	Difference between measurements of 20.00 chs. by two sets of chainmen is nothing.
20.00	Set boundary post No. 56. Post, cap, and mound heretofore described. Cap marked No. 56 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
20.20	Descend steep N. slope of canyon, bears E. and W.
43.30	Bottom of canyon, a small creek, 2 lks. wide, 1 inch deep, pure water, course E. A waterfall about 3.00 chs. E. of this point; have descended 700 ft. Ascend steep S. slope.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains. 50.75	Change to gradual S. slope. Difference between measurements of 82.07 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 82.04 chs. By 2nd set, 80.10 chs.; the mean of which is
82.07	The 223rd mile corner. Land, mountainous. Soil, 4th rate. Timber, oak, pine, and juniper.. Granite formation. November 24, 1902.
	November 25: At the 223rd mile corner; at 10 a.m., l.m.t., I set off 35° 46' N. on the lat. arc; 20° 39' S. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a random line on the 223rd mile.
25.90	The Closing Cor. to secs. 18 and 19, T. 6 S., R. 21 W., New Mexico survey, which is a granite stone, 10x10x6 ins. above ground, marked C C N W on E., A on the W., with 3 notches on N. and S. faces; witnessed by 4 bearing trees in good state of preservation; bears W. 10 lks.
39.09	The Closing Cor. to 1st Standard Parallel N., Arizona survey, bears W. 23 lks., which is an oak post, 4 ins. square, 12 ins. above ground, marked C C on E. face T. 4 N R 31 E on S. W. " T 5 N R 31 E on N. W. " witnessed by one bearing tree.
80.83	The 222nd mile corner, bears W: 5 lks., which is a basalt rock, 20x12x6 ins. in mound of stone, marked 222 on N. face N M on E. " 32° W L on S. " ARIZ on W. " witness trees in good state of preservation. I return to the 223rd mile corner. Thence I run N. 0° 02' W. on a true line on the 223rd mile, On nearly level land, through heavy yellow pine and juniper. Difference between measurements of 25.90 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 25.91 chs. By 2nd set, 25.89 chs.; the mean of which is
25.90	The Closing Cor. to secs. 18 and 19, T. 6 S. R. 21 W., New Mexico survey, bears W. 8-1/2 lks. Difference between measurements of 39.09 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 39.10 chs. By 2nd set, 39.08 chs.; the mean of which is
39.09	The Closing Cor. to the 1st Standard Parallel N., Arizona survey, bears W. 20-1/2 lks.
44.50	Pack trail, bears N. 80° W; and S. 30° E. Difference between measurements of 44.75 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 44.77 chs. By 2nd set, 44.73 chs.; the mean of which is
44.75	Set boundary post No. 57. Post, cap, and mound heretofore described. Cap marked

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains:	No. 57	on S. side of cap.
	1902	on S. side of rim.
	RESERVE	in S. W. and N. W. quadrants.
49.75	At this point I set off 20° 40' S. on the decl. arc; and at 11 ^h 45 ^m 53 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 47' N., which is about 10" less than the proper lat.	
55.50	Top of ridge, bears E. and W., thence over nearly level land.	
66.75	Change to gradual N. E. slope. Difference between measurements of 80.83 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 80.80 chs. By 2nd set, 80.86 chs.; the mean of which is	
80.83	The 222nd mile corner. Land, rolling and level. Soil, 2nd and 3rd rate. Timber, yellow pine, juniper, and oak. Granite formation.	
	At the 222nd mile corner; at 2 p.m., l.m.t., I set off 33° 47' N. on the lat. arc; 20° 41' S. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a random line on the 222nd mile.	
25.93	The Closing Cor. to secs. 7 and 18, T. 6 S., R. 21 W., New Mexico survey, bears W. 23 lks., which is a granite stone, 8x10x6 ins. above ground, marked C C N M on E., with 4 notches on S. and 2 notches on N. faces; witnessed by 3 bearing trees.	
81.08	The 221st mile corner, bears E. 25 lks. dist., which is a basalt rock, 16x12x8 ins. in mound of stone, marked 221 on N. face N M on E. " 32° W L on S. " ARIZ on W. " Witnessed by 3 bearing trees in good state of preservation. I return to the 222nd mile corner. Thence I run N. 0° 11' E. on a true line on the 222nd mile, Over nearly level land, through pine timber. Difference between measurements of 25.93 chs. by two sets of chainmen is nothing.	
25.93	The Closing Cor. to secs. 7 and 18, T. 6 S., R. 21 W., New Mexico survey, bears W. 30 lks.	
48.00	Pace ranch (deserted), bears S. 40° W. about 30.00 chs.	
55.50	Top of hill. Difference between measurements of 55.74 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 55.72 chs. By 2nd set, 55.76 chs.; the mean of which is	
55.74	Set boundary post No. 58. Post, cap, and mound heretofore described. Cap marked No. 58 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.	
56.00	Descend over N. slope.	
59.00	Side hill drain, course W., thence along W. slope.	
65.00	Change to level land. Difference between measurements of 81.08 chs. by two sets of chainmen is 4 lks.; position of middle point	

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains. By 1st set, 81.10 chs.
By 2nd set, 81.06 chs.; the mean of which is
81.08 The 221st mile corner.
Land, rolling and level.
Soil, 2nd and 3rd rate.
Timber, yellow pine, juniper, and oak.
Granite formation.
November 25, 1902.

December 4: At the 221st mile corner; at 9 a.m.,
1.m.t., I set off 33° 48' N. on the lat. arc;
22° 09' S. on the decl. arc; and determine a true
meridian with the solar.
Magnetic declination 12° 20' E.
Thence I run
North on a random line on the 221st mile.
26.08 The Closing Cor. to secs. 6 and 7, T. 6 S., R.21 W.,
New Mexico survey, bears E. 5 lks., which is a
granite stone, 19x14x6 ins. above ground, marked
C C N M on E., with 5 notches on S. and 1 notch on
N. faces; witnessed by 4 bearing trees.
36.17 The Closing Cor. to secs. 23 and 26, T. 5 N., R.31 E.,
bears E. 3 lks., which is a granite rock, 14x12x8
ins., in mound of stone, marked C C A on W. face,
with 2 notches on S. and 4 notches on N. faces;
witnessed by 2 bearing trees in good state of pres-
ervation. Arizona survey.
80.36 The 220th mile corner, bears E. 5 lks., which is a
granite stone, 18x16x6 ins. in mound of stone,
marked
220 on N. face
N M on E. "
32° W L on S. "
ARIZ on W. "
witnessed by 3 bearing trees; S. W. tree destroyed.
I mark new one as follows:
A yellow pine, 36 ins. in diam., bears N. 10° 35' E.,
73 lks. dist., marked N M 220 W 32° W L B T
I return to the 221st mile corner.
Thence I run
N. 0° 02' E. on a true line on the 221st mile.
Ascend gradual S. W. slope, through yellow pine,
juniper, and oak timber.
Difference between measurements of 26.08 chs. by two
sets of chainmen is 2 lks.; position of middle
point
By 1st set, 26.07 chs.
By 2nd set, 26.09 chs.; the mean of which is
26.08 The Closing Cor. to secs. 6 and 7, T. 6 S., R.21 W.,
New Mexico survey, bears E. 3-1/2 lks.
Difference between measurements of 36 17 chs. by two
sets of chainmen is 2 lks.; position of middle
point
By 1st set, 36 18 chs.
By 2nd set, 36.16 chs.; the mean of which is
36.17 The Closing Cor. to secs. 23 and 26, T. 5 N., R.31 E.,
Arizona survey, bears E. 1 lk.
44.50 Top of ridge, bears E. and W., thence over nearly
level land.
59 15 Springerville and Luna Valley road, bears N. 80° E.
and S. 80° W.
Difference between measurements of 59 37 chs. by two
sets of chainmen is 2 lks.; position of middle
point
By 1st set, 59.38 chs.
By 2nd set, 59.36 chs.; the mean of which is

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	
59.37	Set boundary post No. 59. Post, cap, and mound here- tofore described. Cap marked No. 59 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants. Descend gradual N. slope from post. Difference between measurements of 80.36 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 80.37 chs. By 2nd set, 80.35 chs.; the mean of which is
80.36	The 220th mile corner. Land, rolling and level. Soil, 2nd and 3rd rate. Timber, good quality of yellow pine, juniper, and oak.
28.25	North on a random line on the 220th mile. The Closing Cor. to the 1st Standard Parallel S., New Mexico survey, bears E. 6 lks., which is a granite stone, 16x8x4 ins. in mound of stone, marked C C N M 6 notches on E. face, 6 notches on N. and S. faces, A on W. face; witnessed by 4 bearing trees in good state of preservation. Find no trace of Closing Cor. to secs. 14 and 23, T. 5 N., R. 31 E., Arizona survey.
79.46	The 219th mile corner, bears E. 18 lks., which is a granite rock, 20x12x6 ins., in mound of rock, marked 219 on N. face N M on E. " 32° W L on S. " ARIZ on W. " No witness trees. I mark trees as follows: A juniper, 16 ins. diam., bears S. 1° 30' E., 59 lks. dist., marked N M 32° W L B T A yellow pine, 10 ins. diam., bears N. 3° 00' W., 35 lks. dist., marked ARIZ 219 M B T I return to the 220th mile corner. Thence I run N. 0° 08' E. on a true line on the 220th mile, Over nearly level land, through heavy yellow pine.
4.37	Small drain, course N. E.
15.50	Edge of San Francisco Canyon, bears E. and W., de- scend over steep N. slope.
16.90	Ledge 75 ft. high, bears E. and W., thence over gradual N. slope.
25.23	Descend over steep N. slope. Difference between measurements of 28.25 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 28.26 chs. By 2nd set, 28.24 chs.; the mean of which is
28.25	The Closing Cor. to the 1st Standard Parallel South, New Mexico survey. Intersect the cor.
29.50	Change to gradual N. slope.
36.00	At this point I set off 22° 11' S. on the decl. arc; and at 11 ^h 50 ^m 03 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 49' N. which is about 20" less than the proper lat.
50.00	Foot of descent, bears E. and W., 550-ft. descent.
52.00	San Francisco River, river bed 50 lks. wide; a small stream 5 lks. wide, 2 ins. deep, pure water, course N. 80° E. Ascend steep S. E. slope, through scattering pine and juniper timber, dense growth of live oak and mahogany brush.

Chains.	
63.40	Change to steep E. slope.
69.75	Side hill drain, course S. E., ascend steep S. E. slope.
76.00	Top of ascent, bears E. and W., 600 ft. above river bed, thence over gradual N. slope. Difference between measurements of 79.46 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 79.50 chs. By 2nd set, 79.42 chs.; the mean of which is
79.46	The 219th mile corner. Land, mountainous. Soil, 2nd and 4th rate. Timber, yellow pine, red fir, juniper, oak, and aspen.
26.00	North on a random line on the 219th mile. Find no trace of Closing Cor. to the New Mexico survey.
36.00	Find no trace of the Closing Cor. to secs. 11 and 14, Arizona survey.
80.66	The 218th mile corner, bears W. 20 lks., which is a granite stone, 34x12x8 ins. in small mound of stone. I enlarge mound to 5 ft. base, 2 ft. high, around cor. Stone marked 218 on N. face N M on E. " 32° W L on S. " ARIZ on W. " No witness trees given in original notes. I mark trees as follows: A white pine, 24 ins.diam., bears N. 55° 50' E., 192 lks. dist., marked 1902 N M B T A yellow pine, 24 ins.diam., bears S. 40° 00' E., 84 lks. dist., marked N M 218 M 32° W L B T A yellow pine, 24 ins.diam., bears N. 49° 55' W., 136 lks. dist., marked ARIZ 218 M B T I return to the 219th mile corner. Thence I run N. 0° 09' W. on a true line on the 219th mile. Ascend gradual S. slope, through yellow pine and juniper timber.
10	Set boundary post No. 60 Post, cap, and mound here- tofore described. Cap marked No. 60 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
31.00	Top of ascent, bears E. and W.; descend into canyon, over steep N. slope.
56.75	Side hill drain, course N. E. Difference between measurements of 80.66 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 80.60 chs. By 2nd set, 80.72 chs.; the mean of which is
80.66	The 218th mile corner. Land, mountainous. Soil, 2nd and 3rd rate. Timber, yellow pine, red fir, juniper, oak, white pine, aspen, and pinon. Granite formation.
	December 4, 1902.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	December 5: At the 218th mile corner; at 10 a.m., 1.m.t., I set off 33° 50' N. on the lat. arc; 22° 18' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 12° 00' E.
	Thence I run North on a random line on the 218th mile.
77.33	The 217th mile corner, bears W. 9 lks., which is a granite stone, 24x24x11 ins. in mound of stone, marked 217 on N. face N M on E. " 32° W L on S. " ARIZ on W. " I enlarge mound of stone to 4 ft. base, 1-1/2 ft. high, around stone. Witnessed by 3 bearing trees. I return to the 218th mile corner. Thence I run N. 0° 04' W. on a true line on the 218th mile, Ascend gradual N. slope, through timber.
3.00	Leave timber, enter prairie, bears N. 70° W. and S. 70° E.
3 50	Foot of 700-ft. descent, thence over level land.
3.75	Stone Creek, 5 lks. wide, 2 ins. deep, pure water, course S. 70° E.
7.00	Pack trail, bears N. 70° W. and S. 70° E. Difference between measurements of 7.27 chs. by two sets of chainmen is nothing.
7.27	Set boundary post No. 61 Post, cap, and mound here- tofore described. Cap marked No. 61 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
8 50	Ascend S. W. slope, through timber and live oak brush, bears N. 70° W. and S. 70° E.
13.25	Small spur, bears N. E. and S. W.
28.22	Ledge, 40 ft. high, bears S. E. and N. W.
32.25	Top of spur, bears E. and W., descend steep N. W. slope.
36.00	Foot of 100-ft. descent; ascend steep S. W. slope.
46.00	Top of spur, bears E. and W., descend steep N. W. slope.
50.00	Side hill drain, course S. W., ascend steep S. W. slope.
56 50	Change to gradual S. W. slope.
57.00	At this point I set off 22° 19' S. on the decl. arc; and at 11 ^h 50 ^m 27 ^s a.m., 1.m.t., observe the sun on the meridian; the resulting lat. is 33° 51' N., which is the proper lat.
61.75	Top of spur, bears E. and W., descend steep N. slope.
72.35	Side hill drain, course W., 150-ft. descent; ascend steep S. W. slope.
75.70	Top of spur, bears S. E. and N. 20° E., thence along W. slope. Difference between measurements of 77.33 chs. by two sets of chainmen is 14 lks.; position of middle point By 1st set, 77.40 chs. By 2nd set, 77.26 chs.; the mean of which is
77.33	The 217th mile corner, Land, mountainous, rough and broken. Soil, 2nd and 4th rate. Timber, yellow pine, pinon pine, juniper, oak, and red fir. Granite formation.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains. North on a random line on the 217th mile.

35.65 The Closing Cor. to Tps. 5 and 6 N., R. 31 E., Arizona survey, which is a granite stone, 16x14x14 ins. in mound of stone, marked C. C. on W. face, with 6 notches on N. and S. faces; witnessed by one bearing tree, bears W. 4 lks.

79.81 The 216th mile corner, bears E. 25 lks., which is a granite rock, 24x14x6 ins. in mound of stone, marked
 216 on N. face
 N M on E. "
 32° W L on S. "
 ARIZ on W "

Witnessed by 3 bearing trees in good state of preservation.

I return to the 217th mile corner.
 Thence I run
 N. 0° 11' E. on a true line on the 217th mile,
 Over steep W. slope, through timber.

3.75 Change to steep N. slope.

11.45 Side hill drain, course W., foot of 100-ft. descent; ascend S. slope.

14.00 Top of spur, bears E. and W.
 Difference between measurements of 16.56 chs. by two sets of chainmen is 4 lks.; position of middle point
 By 1st set, 16.54 chs.
 By 2nd set, 16.58 chs.; the mean of which is

16.56 Set boundary post No. 62. Post, cap, and mound here-
 tofore described. Cap marked
 No. 62 on S. side of cap.
 1902 on S. side of rim.
 RESERVE in S. W. and N. W. quadrants.

17 00 Descend N. slope.

21.25 A dry creek, 10 lks. wide, course S. W., 200-ft. descent; ascend gradual S. slope.

28.90 Small drain, course S. W.
 Difference between measurements of 35.65 chs. by two sets of chainmen is 6 lks.; position of middle point
 By 1st set, 35.62 chs.
 By 2nd set, 35.68 chs.; the mean of which is

35.65 The Closing Cor. to Tps. 5 and 6 N., R. 31 E., Arizona survey, bears W. 15 lks.

75.00 Rock ledge, 20 ft. high, bears E. and W., thence over gradual N. slope.
 Difference between measurements of 79.81 chs. by two sets of chainmen is 10 lks.; position of middle point
 By 1st set, 79.76 chs.
 By 2nd set, 79.86 chs.; the mean of which is

79.81 The 216th mile corner.
 Land, mountainous.
 Soil, 3rd and 4th rate.
 Timber, yellow pine, red fir, juniper, oak, and red cedar.
 Granite formation.

December 5, 1902

Note: Extract from original notes as follows:
 "From the 214th mile to the 216th mile was run on an offset line 30.00 E. of the true boundary."
 This portion of the line is reported in the original notes as impassable.
 December 10: At the 216th mile corner; at 9 a.m., l.m.t., I set off 33° 52' N. on the lat. arc; 22° 50' S. on the decl. arc; and determine a true meridian with the solar.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	Magnetic declination 12° 12' E.
	Thence I run
	North on a random line on the 216th mile.
80.00	Set temp. cor. for 215th mile corner.
	Continue random line N. on 215th mile.
159 38	The 214th mile corner, bears W. 84 lks., which is a lava stone, 6x10x8 ins. above ground, firmly set and marked
	214 on N. face
	N M on E. "
	32° W L on S. "
	ARIZ on W. "
	Witnessed by 3 bearing trees in good state of preservation.
	I return to the 216th mile corner.
	Thence I run
	N. 0° 18' W. on a true line on the 216th mile.
	Ascend gradual S. slope, through heavy yellow pine and juniper timber.
5.00	Change to steep N. E. slope.
10.00	Head of drain, course S. E., ascend S. E. slope.
30.00	Top of spur, bears E. and W.
	Difference between measurements of 30.15 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 30.17 chs.
	By 2nd set, 30 13 chs.; the mean of which is
30.15	Set boundary post No. 63. Post, cap, and mound heretofore described. Cap marked
	No. 63 on S. side of cap.
	1902 on S. side of rim.
	RESERVE in S. W. and N. W. quadrants.
31.00	Descend N. E. slope.
43.45	Head of drain, course S. E., ascend S. E. slope.
45.50	Top of spur, bears E. and W.; descend.
47 60	Dry drain, course S. E.
59.00	Drain, course S. E., ascend steep S. W. slope of mountain.
77 00	A granite rock, 20 ft. high, 20 ft. sq., on line.
	Difference between measurements of 79.69 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 79.71 chs.
	By 2nd set, 79.67 chs.; the mean of which is
79.69	Set a granite rock, 20x20x14 ins. in mound of stone, 4 ft. base, 16 ins. high, for the 215th mile corner, marked
	215 on N. face
	N M on E. "
	32° W L on S. "
	ARIZ on W. "
	from which
	A yellow pine, 40 ins.diam., bears N. 71° 30' W., 108 lks. dist., marked ARIZ 215 M B T
	A yellow pine, 14 ins.diam., bears N. 21° 00' E., 125 lks.dist., marked N M 1902 B T
	A yellow pine, 30 ins.diam., bears S. 28° 30' E., 96 lks. dist., marked N M 32° W L 215 M B T
	Land, mountainous.
	Soil, 3rd and 4th rate.
	Timber, yellow pine, red fir, balsam fir, white pine, juniper, oak, and aspen.
	Granite formation.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	N. $0^{\circ} 18'$ W. on a true line on the 215th mile. Ascend steep S. W. slope of mountain, through pine and fir timber.
30.50	Change to gradual S. W. slope.
32.50	Top of ascent, bears N. 70° W. and S. 70° E. Top of peak bears S. 70° E. about 15.00 chs. dist., which is about 10,000 ft. above sea level. Have ascended about 900 ft. above 216th mile corner. Difference between measurements of 32.74 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 32.76 chs. By 2nd set, 32.72 chs.; the mean of which is
32.74	Set boundary post No. 64. Post, cap, and mound heretofore described. Cap marked No. 64 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
34.00	Descend gradual N. W. slope of peak.
34.50	At this point I set off $22^{\circ} 52'$ S. on the decl. arc; and at $11^h 52^m 36^s$ a.m., l.m.t., observe the sun on the meridian; the resulting lat. is $33^{\circ} 52'$ N., which is $15''$ greater than the proper lat.
62.50	Top of spur, bears N. and S., descend steep N. slope.
70.00	Change to gradual N. slope. Difference between measurements of 79.69 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 79 73 chs. By 2nd set, 79.65 chs.; the mean of which is
79.69	The 214th mile corner. Land, mountainous. Soil, 2nd and 3rd rate. Timber, yellow pine, red fir, white pine, oak, aspen, balsam fir. Granite formation.
	At the 214th mile corner; at 3 p.m., l.m.t., I set off $33^{\circ} 54'$ N. on the lat. arc; $22^{\circ} 52'$ S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination $14^{\circ} 00'$ E. Thence I run North on a random line on the 214th mile.
44.58	The Closing Cor. to secs. 13 and 24, bears W. 1 lk., which is a granite stone, $12 \times 12 \times 8$ ins. in mound of stone, marked C C on W., with 3 notches on N. and S. faces; witnessed by one bearing tree on S. W. quadrant.
80.21	The 213th mile corner, bears E. 7 lks., which is a granite stone, $12 \times 12 \times 8$ ins. above ground, marked 213 on N. face N M on E. " 32° W L on S. " ARIZ on W. " witnessed by mound and pits. I return to the 214th mile corner. Thence I run N. $0^{\circ} 03'$ E. on a true line on the 214th mile, Over gradual N. slope, through timber.
10.50	Leave timber, enter prairie, bears E. and W.
20 00	Small drain, course E.
37.50	Leave prairie, enter timber, bears E. and W. Difference between measurements of 44.58 chs. by two sets of chainmen is 2 lks.; position of middle point

Black Mesa Forest Reserve Boundary,
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Chains.	By 1st set, 44 59 chs. By 2nd set, 44.57 chs.; the mean of which is
44.58	The Closing Cor. to secs. 13 and 24, T. 6 N., R. 31 E., Arizona survey, bears W., 4-1/2 lks. Descend over gradual N. slope.
54.30	Leave timber, enter prairie, bears E. and W. Difference between measurements of 57.31 chs. by two sets of chainmen is nothing.
57 31	Set boundary post No. 65. Post, cap, and mound here- tofore described. Cap marked No. 65 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
70.80	A dry branch, 5 lks. wide, course N. 70° E. Ascend gradual S. slope.
75.50	Top of low ridge, bears E. and W. Descend gradual N. slope. Difference between measurements of 80 21 chs. by two sets of chainmen is nothing.
80.21	The 213th mile corner. Land, rolling and level. Soil, 2nd and 3rd rate. Timber, scattering yellow pine and red fir.
43.21	North on the 213th mile. The Closing Cor. to secs. 12 and 13, T. 6 N., R. 31 E., Arizona survey, bears E. 1 lk., which is a sandstone, 14x8x6 ins. in mound of stone, marked C C on W., with 4 notches on S. and 2 notches on N. faces; witnessed by one bearing tree.
80.12	The 212th mile corner, bears E. 5 lks., which is a granite stone, 24x20x4 ins. in mound of stone, marked 212 on N. face N M on E. " 32 W L on S. " ARIZ on W. " witnessed by 3 bearing trees. I return to the 213th mile corner. Thence I run N. 0° 02' E. on a true line on the 213th mile, Over level land, through prairie.
1.00	A log house (deserted) bears E. 8.00 chs.
3.27	A rail fence, bears E. and N.
36.00	Leave level land, ascend gradual S. W. slope; enter timber, bears E. and W. Difference between measurements of 43.21 chs. by two sets of chainmen is nothing.
43 21	The Closing Cor. to secs. 12 and 13, T. 6 N., R. 31 E., Arizona survey, bears W. 1-1/2 lks. Difference between measurements of 43.35 chs. by two sets of chainmen is nothing.
48 35	Set boundary post No. 66. Post, cap, and mound here- tofore described. Cap marked No. 66 on S. side of cap. 1902 on S. side of rim RESERVE in S. W. and N. W. quadrants.
48.50	Top of ridge, bears N. W and S. E., thence over level land, through heavy pine timber.
65.00	Ascend gradual S. slope. Difference between measurements of 80.12 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 80.11 chs. By 2nd set, 80.13 chs.; the mean of which is
80.12	The 212th mile corner. Land, level and rolling. Soil, 2nd and 3rd rate. Timber, yellow pine and oak.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	December 11: At the 212th mile corner; at 8.15 a.m., l.m.t., I set off 33° 55' N. on the lat. arc; 22° 55' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 12° 15' E. Thence I run North on a random line, on the 212th mile
43.21	The Closing Cor. to secs. 1 and 12, bears W. 30 lks., which is a granite stone, 10x8x6 ins. in mound of stone, marked C C on W., with 5 notches on S. and 1 notch on N. faces.
80.51	The 211th mile corner, bears E. 7 lks., which is a granite stone, 30x24x18 ins. in mound of stone. I enlarge mound of stone to 4 ft. base, 2 ft. high, around cor., marked 211 on N. face N M on E. " 32° W L on S. " ARIZ on W. " witnessed by 3 bearing trees in good state of preser- vation. I return to the 212th mile corner. Thence I run N. 0° 03' E. on a true line on the 212th mile, Ascend gradual S. slope, through heavy yellow pine timber.
11.75	Top of ridge, bears E. and W. Descend N. slope.
23.00	Foot of descent, bears E. and W.
25.00	Dim road, bears E. and W.
31.00	Leave timber, bears N. W. and S. E.
41.60	Small drain, course S. 60° E.
42.30	Luna Valley and Springerville road, bears N. 50° W. and S. 50° E. Difference between measurements of 42.75 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 42.77 chs. By 2nd set, 42.73 chs.; the mean of which is
42.75	Set boundary post No. 67. Post, cap, and mound here- tofore described. Cap marked No. 67 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
43.00	L C ranch house, bears S. 57° E., about 20.00 chs. (deserted.) Difference between measurements of 43.21 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 42.23 chs. By 2nd set, 42.18 chs.; the mean of which is
43.21	The Closing Cor. to secs. 1 and 12, T. 6 N., R. 31 E., Arizona survey, bears W. 33-1/2 lks. Ascend S. slope from cor.
44.00	Enter timber, bears N. W. and S. E.
57.00	Top of ridge, bears E. and W., 200 ft. above bdy. post, thence over nearly level land. Difference between measurements of 80.51 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 80.54 chs. By 2nd set, 80.48 chs.; the mean of which is
80.51	The 211th mile corner. Land, rolling. Soil, 2nd and 3rd rate. Timber, yellow pine and oak. Granite formation.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	North on a random line on the 211th mile.
42 27	The Closing Cor. to Tps. 6 and 7 N., R. 31 E., Arizona survey, bears E. 15 lks., which is a granite stone, 15x10x3 ins. in mound of stone, marked C C on W., with 6 notches on N. and S. faces; witnessed by 2 bearing trees.
80.40	The 210th mile corner, bears E. 11 lks., which is a granite stone, 12x12x10 ins. above ground, firmly set, marked 210 on N. face N M on E. " 32° W L on S. " ARIZ on W. " witnessed by 3 bearing trees in good state of preservation. I return to the 211th mile corner. Thence I run N. 0° 05' E. on a true line on the 211th mile, Over gradual N. E. slope, through heavy yellow pine timber.
10.00	Change to gradual S. E. slope.
20.00	Top of low ridge, bears E. and W. Difference between measurements of 37.40 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 37.41 chs. By 2nd set, 37.39 chs.; the mean of which is
37.40	Set boundary post No. 68. Post, cap, and mound here- tofore described. Cap marked No. 68 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants. Difference between measurements of 42.27 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 42.28 chs. By 2nd set, 42.26 chs.; the mean of which is
42.27	The Closing Cor. to Tps. 6 and 7 N., R. 31 E., Arizona survey, bears E. 9-1/2 lks.
49.50	Top of ridge, bears E. and W., thence over level land.
59 00	Descend gradual N. slope.
77 00	Change to level land, bears E. and W. Difference between measurements of 80 40 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.42 chs. By 2nd set, 80 38 chs.; the mean of which is
80.40	The 210th mile corner. Land, rolling and level. Soil, 3rd rate. Timber, yellow pine, red fir, oak, and aspen. Granite formation.
	At the 210th mile corner, I set off 22° 57' S. on the decl. arc; and at 11 ^h 53 ^m 38 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 33° 57' N., which is 20" greater than the proper lat. Thence I run North on a random line on the 210th mile.
39.56	The Closing Cor. to secs. 26 and 35, T. 7 N., R. 31 E., Arizona survey, bears E. 18 lks., which is a granite stone, 20x8x6 ins. in mound of stone, marked C C on W. face, with 1 notch on S. and 5 notches on N. faces; witnessed by 2 bearing trees in good state of preservation.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains. 79.93	<p>The 209th mile corner, bears W. 3 lks., which is a granite stone, 8x14x8 ins. above ground, firmly set, marked</p> <p>209 on N. face N M on E. " 32° W L on S. " ARIZ on W. "</p> <p>The S. E. bearing tree destroyed; I mark a new one as follows: A yellow pine, 16 ins. diam., bears N. 59° 10' E., 87 lks. dist., marked N M 209 M 32° W L B T <i>Note: There is no tree in S.E. quadrant.</i> I return to the 210th mile corner. Thence I run N. 0° 01' W. on a true line on the 210th mile, Over level land, through heavy yellow pine and fir timber.</p>
17.82	<p>Shallow drain, course W. Little Colorado River drainage. Ascend gradual S. slope. Difference between measurements of 35.08 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 35.09 chs. By 2nd set, 35.07 chs.; the mean of which is</p>
35.08	<p>Set boundary post No. 69. Post, cap, and mound heretofore described. Cap marked No. 69 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.</p>
35 50	<p>Top of ridge, bears E. and W.; descend gradual N. slope. Difference between measurements of 39.56 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 39.57 chs. By 2nd set, 39.55 chs.; the mean of which is</p>
39.56	<p>The Closing Cor. to secs. 26 and 35, T. 7 N., R. 31 E., Arizona survey, bears E. 19-1/2 lks.</p>
73.50	<p>Descend steep N. slope. Difference between measurements of 79.93 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 79.95 chs. By 2nd set, 79.91 chs.; the mean of which is</p>
79.93	<p>The 209th mile corner. Land, rolling. Soil, 2nd rate. Timber, yellow pine, red fir, white pine, oak, and aspen.</p>
39.56	<p>North on a random line on the 209th mile. Find no trace of the Closing Cor. to secs. 25 and 26, T. 7 N., R. 31 E., Arizona survey.</p>
79.93	<p>Intersect the 208th mile corner, which is a granite stone, 6x10x4 ins. above ground, firmly set, marked</p> <p>208 on N face N M on E. " 32° W L on S. " ARIZ on W. "</p> <p>Witnessed by 3 bearing trees in good state of preservation. I return to the 209th mile corner. Thence I run North on a true line on the 209th mile, Descend steep N. slope, through heavy pine timber.</p>
3.40	<p>Small branch, 5 lks. wide, 1 inch deep, course W., foot of 200-ft. descent.</p>

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	
7.50	Ascend steep S. slope of mountain
27.50	Top of ascent, bears E. and W., 250 ft. above branch. Magnetic declination 8° 00' E.
40.42	This is the highest point reached by line; elevation about 10,000 ft. Difference between measurements of 40.42 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.46 chs. By 2nd set, 40.38 chs.; the mean of which is
40.42	Set boundary post No. 70 Post, cap, and mound heretofore described. Cap marked No. 70 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
	Descend steep N. W. slope from post.
51.00	Change to W. slope.
59.00	Change to gradual W. slope.
79.00	Small drain, course W. Difference between measurements of 79.93 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 79.99 chs. By 2nd set, 79.87 chs.; the mean of which is
79.93	The 208th mile corner. Land, mountainous. Soil, 2nd and 4th rate. Timber, yellow pine, red fir, and oak; live oak brush on S. slope of mountain. Granite formation.
	December 11, 1902.
	December 12: At the 208th mile corner; at 10 a.m., 1.m.t., I set off 33° 58' N. on the lat. arc; 23° 01' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 12° 00' E.
	Thence I run North on a random line on the 208th mile.
79.80	The 207th mile corner, bears E. 4 lks., which is a granite stone, 2x16x12 ins. above ground, firmly set, marked 207 on N. face N M on E. " 32° W L on S. " ARIZ on W. "
	Witnessed by 3 bearing trees in good state of preservation. I return to the 208th mile corner. Thence I run N. 0° 02' E. on a true line on the 208th mile, Over W. slope, through heavy pine timber.
.90	Wire fence, bears E. and W.
25.00	Change to S. W. slope. Difference between measurements of 32.24 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 32.22 chs. By 2nd set, 32.26 chs.; the mean of which is
32.24	Set boundary post No. 71 Post, cap, and mound heretofore described. Cap marked No. 71 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants.
32.55	Descend steep N. slope of mountain.
44.00	Granite ledge, 20 ft. high, bears S. 20° E. and N. 40° W.

Chains.	
55.20	Side hill drain, course E., foot of 400-ft. descent; ascend gradual S. slope.
63.00	Change to gradual N. slope.
65.30	At this point I set off 23° 02' S. on the decl. arc; and at 11 ^h 53 ^m 31 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 00' N., which is the proper lat.
76 80	Granite ledge, 10 ft. high, bears N. W. and S. E. Difference between measurements of 79.80 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 79.83 chs. By 2nd set, 79.77 chs.; the mean of which is
79.80	The 207th mile corner. Land, mountainous. Soil, 3rd and 4th rate. Timber, yellow pine, pinon, juniper, oak, and red fir. Granite formation.
	At the 207th mile corner; at 2 p.m., l.m.t., I set off 34.00' N. on the lat. arc; 23° 02' S. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a random line on the 207th mile.
80.32	The 206th mile corner, bears E. 12 lks., which is a lava stone, 12x12x6 ins. above ground, firmly set, marked 206 on N. face; N M on E. " 32° W L on S. " ARIZ on W. " I mark bearing trees as follows: An oak, 10 ins.diam., bears N. 23° 15' E., 99 lks. dist., marked N M 1902 B T A pine, 10 ins.diam., bears S. 9° 50' E., 89 lks. dist., marked N M 206 M 32° W L B T A pine, 14 ins.diam., bears S. 98° 10' W., 95 lks. dist., marked ARIZ 206 M B T Thence I run N. 0° 05' E. on a true line on the 207th mile, Over gradual N. E. slope, through pine and juniper timber.
40.00	Change to level land, bears N. W. and S. E. Enter prairie, bears N. W. and S. E.
46.60	Pack trail, bears N. W. and S. E. Difference between measurements of 46.74 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 46.73 chs. By 2nd set, 46.75 chs.; the mean of which is
46.74	Set boundary post No. 72 Post, cap, and mound here- tofore described. Cap marked No. 72 on S. side of cap. 1902 on S. side of rim. RESERVE IN S. W. and N. W. quadrants. Enter scattering timber at post, bears N. W. and S. E. Difference between measurements of 80.32 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.30 chs. By 2nd set, 80.34 chs.; the mean of which is
80.32	The 206th mile corner.

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.	<p>Land, rolling and level. Soil, 2nd and 3rd rate. Timber, yellow pine, pinon, juniper, oak. Lava stone formation.</p>
80.29	<p>North on a random line on the 206th mile. The 205th mile corner, bears E. 13 lks., which is a lava stone, 6x8x6 ins. above ground, firmly set, marked 205 on N. face N M on E. " 32° W L on S. " ARIZ on W. " witnessed by 2 pits. I return to the 206th mile corner. Thence I run N. 0° 06' E. on a true line on the 206th mile, Over level land, through scattering timber. 26.40 A dry branch, 10 lks. wide, 1 ft. banks, course N. 30° W. 44.77 Wire fence, bears N. 30° W. and S. 30° E. 50.50 Pack trail, bears N. W. and S. E. Difference between measurements of 50.84 chs. by two sets of chainmen is nothing. 50.84 Set boundary post No. 73. Post, cap, and mound here- tofore described. Cap marked No. 75 on S. side of cap. 1902 on S. side of rim. RESERVE in S. W. and N. W. quadrants. Enter valley land, bears N. W. and N. E., leave timber, same bearing. Difference between measurements of 80.29 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 80.30 chs. By 2nd set, 80.29 chs.; the mean of which is 80.29 The 205th mile corner. Land, level and gently rolling. Soil, 2nd rate. Timber, pine, oak, and juniper.</p>
39.94	<p>North on a random line on the 205th mile. The Closing Corner to Tps. 7 and 8 N., R. 31 E., Arizona survey, bears E. 51 lks. This is a cedar stick, 2 ins. sq., 3 ft. long, marked C C 1/4 on one side; lying on ground; no indications of pits or mound; There being an uncertainty about the position of this corner. I continue line north. 80.30 The 204th mile corner, bears E. 12 lks., which is a lava stone, 4x12x8 ins. above ground, firmly set, marked 204 on N. face N M on E. " 32° W L on S. " ARIZ on W. " Witnessed by 2 pits. I return to the 205th mile corner. Thence I run N. 0° 05' E. on a true line on the 205th mile, Over level land. No grass. 25 50 Dim road, bears N. W. and S. E. 46.50 Road, bears N. 70° W. and S. 70° E. Difference between measurements of 80.30 chs. by two sets of chainmen is nothing.</p>

Black Mesa Forest Reserve Boundary,
Between New Mexico and Arizona.

Chains.
80.30

The 204th mile corner.
Land, level.
Soil, 2nd rate.
No timber.

December 12, 1902.

Note: Work prevented on December 13, by a snow storm.
December 14: At 9 a.m., l.m.t., I set off 34° 02' N. on the lat. arc; 23° 09' S. on the decl. arc; and determine a true meridian with the solar.
At the Cor. to Secs. 2, 3, 34, and 35, N. Bdy. of T. 7 N., R. 31 E., Arizona survey, which is an oak post, 2 ft. long, 3 ins. sq., in small mound of stone, marked
T. 8 N S 35 on N. E. face
R 31 E S 2 on S. E. "
T 7 N S 3 on S. W. "
S 34 on N. W. "

Witnessed by one bearing tree in good state of preservation.

Thence I run

39 57

East on a random line between frac'l secs. 2 and 35. Intersect the New Mexico and Arizona boundary line, 38.85 chs. N. 0° 05' E. of the 205th mile corner. The cedar stick heretofore mentioned bears N. 109 lks. and E. 45 lks.

At the intersection of the E. and W. line I set boundary post No. 74, for the Closing Corner to frac'l Tps. 7 and 8 N., R. 31 E. Post, cap, and mound heretofore described. Cap marked

No. 74 on S. side of cap.
1902 on S. side of rim.
RESERVE in S. W. quadrant. Also marked
C C on W. side of rim.
T. 7 N R 31 E S 2 in S. W. quadrant on rim.
T 8 N S 35 in N. W. " " "

with 6 notches on N. and S. edges of rim.

From this corner I run

West on a true line between frac'l secs. 2 and 35, Over level land.

6.75

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

25.00

Small drain, course N., ascend gradual E. slope.

29.00

Top of low ridge, bears E. and W. At this point there is a small clump of trees.

31.90

Small drain, course N.

35.25

Road, bears N. 10° W. and S. 10° E.

Difference between measurements of 37.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 37.01 chs.

By 2nd set, 36.99 chs.; the mean of which is

37.00

Set boundary post No. 75. Post, cap, and mound heretofore described. Cap marked

No. 75 on S. side of cap.
1902 on S. side of rim.
RESERVE in S. E. and S. W. quadrants.

Difference between measurements of 39.57 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 39.58 chs.

By 2nd set, 39.56 chs.; the mean of which is

39.57

The cor. to secs. 2, 3, 34, and 35. I enlarge mound of stone around cor. to 4 ft. base, 1 ft. high.

Land, rolling and level.

Soil, 2nd and 3rd rate.

Timber, a few scattering pine.

December 14, 1902.
W. H. Thorn,
U. S. Surveyor.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 10 E.

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Note: Numbers 69 to 73 inclusive omitted in page numbering.

A. F. D.

January 21, 1903. At the cor. to Tps. 11 and 12 N., Rgs. 9 and 10 E., which I established January 17, 1903, and which is described as follows:

Boundary post No. 43. Post, cap, and mound heretofore described. Cap marked

No. 43 on S. side of cap.

1903 on S. side of rim.

RESERVE in N. E. and N. W. quadrants.

also marked

T 12 N S 31 in N. E. quadrant on rim

R 10 E S 6 in S. E. " " "

T 11 N S 1 in S. W. " " "

R 9 E S 36 in N. W. " " "

with 6 notches on N., S., E., and W. edges of rim; from which

An oak, 8 ins.diam., bears N. 34° 10' E., 24 lks. dist., marked T 12 N R 10 E S 31 B T

An oak, 10 ins.diam., bears S. 23° E., 22 lks. dist., marked T 11 N R 10 E S 6 B T

An oak, 14 ins.diam., bears S. 12° 00' W., 34 lks. dist., marked T 11 N R 9 E S 1 B T

A yellow pine 24 ins.diam., bears N. 15° 30' W., 65 lks. dist., marked T 12 N R 9 E S 36 B T

Land, rolling; surface stony.

Soil, 4th rate.

Timber, yellow pine, oak, juniper; live oak brush.

Sandstone formation.

At 8 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 20° 01' S. on the decl. arc; and determine a true meridian with the solar.

Magnetic declination 14° 10' E.

Thence I run

East on a true line between secs. 6 and 31, (deducting 147 lks. for convergency.)

Ascend gradual S. W. slope, through yellow pine, juniper, and oak timber, dense growth of live oak and manzanita brush.

3.00 Change to gradual N. E. slope.

18.15 A dry branch, 10 lks. wide, course N. 70° W., ascend steep S. W. slope.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 10 E.

Chains. 32.50	<p>Top of spur, bears N. and S., 200 ft. above branch, thence over gradual S. slope.</p> <p>Difference between measurements of 38 53 chs. by two sets of chainmen is 8 lks.; position of middle point</p> <p>By 1st set, 38.57 chs.</p> <p>By 2nd set, 38.49 chs.; the mean of which is</p>
38.53	<p>Set a limestone, 26x12x6 ins., 19 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which</p> <p>A juniper, 20 ins.diam., bears N. 80° 35' E., 99 lks. dist., marked 1/4 S B T</p> <p>A juniper, 16 ins.diam., bears S. 27° 00' W., 128 lks.dist., marked 1/4 S B T</p>
54.50	<p>Small dry drain, course S. 70° W. Ascend gradual W. slope.</p>
67.00	<p>Top of ridge, bears N. and S., descend gradual E. slope.</p>
68.25	<p>Side hill drain, course S. W.</p>
72.50	<p>Top of low ridge, bears N. and S., descend gradual E. slope.</p>
78.35	<p>Dry drain, course N. Ascend gradual W. slope.</p> <p>Difference between measurements of 78.53 chs. by two sets of chainmen is 10 lks.; position of middle point</p> <p>By 1st set, 78.58 chs.</p> <p>By 2nd set, 78.48 chs.; the mean of which is</p>
78.53	<p>Set boundary post No. 42, for the cor. to secs. 5, 6, 31, and 32. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 42 on S. side of cap.</p> <p>1903 on S. side of rim.</p> <p>RESERVE in N. E. and N. W. quadrants. also marked</p> <p>T 12 N R 10 E S 32 in N. E. quadrant on rim</p> <p>T 11 N S 5 in S. E. " " "</p> <p>S 6 in S. W. " " "</p> <p>S 31 in N. W. " " "</p> <p>with 5 notches on E. and 1 notch on W. edges on rim; from which</p> <p>A juniper, 16 ins.diam., bears N. 44° 30' E., 190 lks.dist., marked T 12 N R 10 E S 32 B T</p> <p>A juniper, 8 ins.diam., bears S. 18° 25' E., 80 lks. dist., marked T 11 N R 10 E S 5 B T</p> <p>An oak, 10 ins.diam., bears S. 50° 20' W., 38 lks. dist., marked T 11 N R 10 E S 6 B T</p> <p>An oak, 14 ins.diam., bears N. 27° 50' W., 37 lks. dist., marked T 12 N R 10 E S 31 B T</p> <p>Land, rolling; surface stony.</p> <p>Soil, 3rd and 4th rate.</p> <p>Timber, juniper, oak, and scattering yellow pine; dense growth of live oak and manzanita brush.</p> <p>Limestone formation.</p>
12 50	<p>East on a true line between secs. 5 and 32, Ascend gradual W. slope, through oak and juniper timber, dense growth of live oak and manzanita brush.</p> <p>Top of ridge, bears N. and S., thence over gradual N. E. slope.</p>
26 50	<p>Change to gradual E. slope.</p> <p>Difference between measurements of 40 00 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p>By 1st set, 39.98 chs.</p> <p>By 2nd set, 40.02 chs.; the mean of which is</p>

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 10 E.

Chains.	<p>40.00 Set a limestone, 24x8x8 ins., 18 ins. in the ground for the 1/4 sec. cor., marked 1/4 on N. face; from which</p> <p style="padding-left: 2em;">A juniper, 20 ins.diam., bears N. 58° 30' W., 76 lks. dist., marked 1/4 S B T</p> <p style="padding-left: 2em;">An oak, 14 ins. diam., bears S. 65° 10' W., 72 lks. dist., marked 1/4 S B T</p> <p>At this 1/4 sec. cor. I set off 20° 00' S. on the decl. arc; and at 12^h 11^m 13^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is 28" greater than the proper lat.</p>														
42.95	Dry drain, course N.														
60.10	Dry drain, course N.														
67.00	<p>Top of ridge, bears N. 30° W. and S. 30° E., descend gradual E. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point</p> <p style="padding-left: 2em;">By 1st set, 79.97 chs.</p> <p style="padding-left: 2em;">By 2nd set, 80.03 chs.; the mean of which is</p>														
80.00	<p>Set boundary post No. 41, for the cor. to secs. 4, 5, 32, and 33. Post, cap, and mound heretofore described. Cap marked</p> <table style="margin-left: 2em; border: none;"> <tr> <td>No. 41</td> <td>on S. side of cap.</td> </tr> <tr> <td>1903</td> <td>on S. side of rim.</td> </tr> <tr> <td>RESERVE</td> <td>in N. E. and N. W. quadrants.</td> </tr> </table> <p style="padding-left: 4em;">also marked</p> <table style="margin-left: 2em; border: none;"> <tr> <td>T 12 N S 33</td> <td>in N. E. quadrant on rim.</td> </tr> <tr> <td>R 10 E S 4</td> <td>in S. E. " " "</td> </tr> <tr> <td>T 11 N S 5</td> <td>in S. W. " " "</td> </tr> <tr> <td>S 32</td> <td>in N. W. " " "</td> </tr> </table> <p>with 4 notches on E. and 2 notches on W. edges of rim; from which</p> <p style="padding-left: 2em;">A yellow pine, 20 ins.diam., bears N. 31° 10' E., 146 lks. dist., marked T 12 N R 10 E S 33 B T</p> <p style="padding-left: 2em;">A yellow pine, 24 ins.diam., bears S. 25° 15' E., 143 lks. dist., marked T 11 N R 10 E S 4 B T</p> <p style="padding-left: 2em;">A yellow pine, 36 ins.diam., bears S. 55° 45' W., 102 lks. dist., marked T 11 N R 10 E S 5 B T</p> <p style="padding-left: 2em;">A yellow pine, 16 ins.diam., bears N. 16° 25' W., 93 lks. dist., marked T 12 N R 10 E S 32 B T</p> <p>Land, rolling; surface stony. Soil, 3rd and 4th rate. Timber, pine, oak, and juniper. Sand and limestone formation.</p>	No. 41	on S. side of cap.	1903	on S. side of rim.	RESERVE	in N. E. and N. W. quadrants.	T 12 N S 33	in N. E. quadrant on rim.	R 10 E S 4	in S. E. " " "	T 11 N S 5	in S. W. " " "	S 32	in N. W. " " "
No. 41	on S. side of cap.														
1903	on S. side of rim.														
RESERVE	in N. E. and N. W. quadrants.														
T 12 N S 33	in N. E. quadrant on rim.														
R 10 E S 4	in S. E. " " "														
T 11 N S 5	in S. W. " " "														
S 32	in N. W. " " "														
	<p>East on a true line between secs. 4 and 33, Over gradual E. slope, through heavy yellow pine and juniper timber.</p>														
4.25	Small drain, course N.														
13.00	<p>Top of low ridge, bears N. and S., descend gradual E. slope.</p>														
24.20	Drain, course N.														
35.75	<p>Top of low ridge, bears N. and S.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p style="padding-left: 2em;">By 1st set, 40.02 chs.</p> <p style="padding-left: 2em;">By 2nd set, 39.98 chs.; the mean of which is</p>														
40.00	<p>Set a limestone, 24x12x8 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which</p>														

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N , R. 10 E.

Chains.	<p>A yellow pine, 18 ins.diam., bears N. 77° 33' W., 110 lks. dist., marked 1/4 S B T An oak, 10 ins.diam., bears S. 43° 10' W., 52 lks. dist., marked 1/4 S B T</p>
52.75	Change to steep E. slope.
65.00	Ravine, 100 lks. wide, 20 ft. deep, course N. E., thence along N. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is
80.00	Set boundary post No. 40, for the cor. to secs. 3, 4, 33, and 34. Post, cap, and mound heretofore described. Cap marked No. 40 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 12 N S 34 in N. E. quadrant on rim R 10 E S 3 in S. E. " " " T 11 N S 4 in S. W. " " " S 33 in S. W. " " " with 3 notches on E. and W. edges on rim; from which A yellow pine, 30 ins.diam., bears N. 77° 00' E., 35 lks. dist., marked T 12 N R 10 E S 34 B T A yellow pine, 24 ins.diam., bears S. 62° 10' E., 82 lks. dist., marked T 11 N R 10 E S 3 B T A yellow pine, 20 ins.diam., bears S. 12° 15' W., 80 lks. dist., marked T 11 N R 10 E S 4 B T A yellow pine, 12 ins diam., bears N. 38° 00' W., 218 lks.dist., marked T 12 N R 10 E S 33 B T Land, rolling; surface stony. Soil, 3rd rate. Timber, yellow pine, juniper, and oak. Lime and sandstone formation.
12.00	At the cor. to secs. 3, 4, 33, and 34, S. Bdy. of T. 12 N., R. 10 E., at 3 p.m., l.m.t., I set off 34° 23' N. on the lat. arc; 19° 58' S. on the decl. arc; and determine a true meridian with the solar. Thence I run East on a true line between secs. 3 and 34, Over gradual N. slope, through heavy pine timber.
19.00	Change to gradual N. E. slope.
30.00	Drain, course S. E., ascend gradual S. W. slope. Top of ridge, bears N. and S. From this point Hendershott's house bears S. 15.00 chs. dist. Descend gradual E. slope. Difference between measurements of 38.24 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 38.22 chs. By 2nd set, 38.26 chs.; the mean of which is
38.24	Set boundary post No. 39. Post, cap, and mound heretofore described. Cap marked No. 39 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants.
38.40	Payson and Tunnel road, bears N. 10° E. and S. 10° W.
38.70	Rail fence, bears N. 10° E. and S. 10° W. Leave tim- ber, enter cultivated land; also foot of descent, same bearing. True point for 1/4 sec. cor, falls in East Verde River.
40.00	East Verde River, 30 lks. wide, 6 ins. deep, pure

Chains. water, rapid current, low banks, course S. 10° W.
Difference between measurements of 40.92 chs. by two
sets of chainmen is 4 lks.; position of middle
point
By 1st set, 40.90 chs.
By 2nd set, 40.94 chs.; the mean of which is
40 92 Set a limestone, 24x10x8 ins. in mound of stone,
3-1/2 ft. base, 1-1/2 ft. high, for W. C. 1/4 sec.
cor., marked W C 1/4 on N. face; from which
A yellow pine, 18 ins.diam., bears N. 56° 30' W.,
199 lks. dist., marked W C 1/4 S B T
A yellow pine, 24 ins.diam., bears S. 40° 35' E.,
219 lks. dist., marked W C 1/4 S B T
44 25 Rail fence, bears N. W. and S. E., leave cultivated
land, enter timber, also river bottom, bears
N. and S. Ascend gradual W. slope.
51 86 Rail fence, bears N. W. and S. E.
62 50 Top of ridge, bears N. and S., 200 ft. above Verde
River.
Difference between measurements of 80.00 chs. by two
sets of chainmen is 6 lks.; position of middle
point
By 1st set, 80.05 chs.
By 2nd set, 79.97 chs.; the mean of which is
80.00 Set boundary post No. 38, for the cor. to secs.
2, 3, 34, and 35. Post, cap, and mound heretofore
described. Cap marked
No. 38 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
Also marked
T 12 N S 35 in N. E. quadrant on rim.
R 10 E S 2 in S. E. " " "
T 11 N S 3 in S. W. " " "
S 34 in N. W. " " "
with 4 notches on W. and 2 notches on E. edges of
rim; from which
A juniper, 8 ins.diam., bears N. 65° 00' E.,
88 lks. dist., marked T 12 N R 10 E S 35 B T
A juniper, 30 ins.diam., bears S. 88° 35' E.,
112 lks. dist., marked T 11 N R 10 E S 2 B T
A juniper, 12 ins.diam., bears S. 66° 00' W.,
37 lks. dist., marked T 11 N R 10 E S 3 B T
A juniper, 12 ins.diam., bears N. 73° 50' W.,
135 lks. dist., marked T 12 N R 10 E S 34 B T
Land, rolling; surface stony.
Soil, 2nd and 3rd rate.
Timber, yellow pine, juniper, and oak; live oak and
manzanita brush.
Sandstone formation.

January 21, 1903.

January 22:

At the cor. to secs. 2, 3, 34, and 35, S. bdy. of
T. 12 N., R. 10 E., G. and S. R. Base and Meridian,
At 10 a.m., l.m.t., I set off 34° 23' N. on the lat.
arc; 19° 48' S. on the decl. arc; and determine a
true meridian with the solar

Thence I run

East on a true line between secs. 2 and 35.

Ascend gradual S. W. slope, through dense growth of
live oak and manzanita brush, scattering yellow
pine and juniper.

4.00 Top of ridge, bears N. and S., descend gradual S. E.
slope.

10.00 Side hill drain, course S. W., ascend gradual W.
slope.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 10 E.

<p>Chains. 18.50 40.00 58.50 72.50 80.00</p>	<p>Top of ridge, bears N. W. and S. E., 400 ft. above East Verde River, descend over gradual S. E. Slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is</p> <p>Set a limestone, 24x14x10 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which A yellow pine, 24 ins.diam., bears N. 79° 20' E., 160 lks. dist., marked 1/4 S B T A juniper, 30 ins.diam., bears S. 69° 30' E., 121 lks. dist., marked 1/4 S B T At this 1/4 sec. cor. I set off 19° 46' S. on the decl. arc; and at 12^h 11^m 30^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is 28" greater than the proper lat.</p> <p>Change to gradual S. E. slope.</p> <p>Drain, course S., thence over gradual S. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 79.96 chs. By 2nd set, 80.04 chs.; the mean of which is</p> <p>Set boundary post No. 37, for the cor. to secs. 1, 2, 35, and 36. Post, cap, and mound heretofore described. Cap marked No. 37 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 12 N S 36 in N. E. quadrant on rim. R 10 E S 1 in S. E. " " " T 11 N S 2 in S. W. " " " S 35 in N. W. " " "</p> <p>with 5 notches on W. and 1 notch on E. edges of rim; from which An oak, 10 ins.diam., bears N. 60° 00' E., 58 lks. dist., marked T 12 N R 10 E S 36 B T A yellow pine, 24 ins.diam., bears S. 69° 10' E. 121 lks.dist., marked T 11 N R 10 E S 1 B T A juniper, 40 ins.diam., bears S. 87° 00' W., 89 lks. dist., marked T 11 N R 10 E S 2 B T An oak, 8 ins. diam., bears N. 85° 45' W., 85 lks. dist., marked T 12 N R 10 E S 35 B T</p> <p>Land, rolling; surface stony. Soil, 3rd and 4th rate. Timber, yellow pine, juniper, and oak; dense growth of live oak, manzanita, and mahogany brush. Limestone formation.</p>
<p>7.25 12.00 19.50 34.35</p>	<p>East on a true line between secs. 1 and 36. Over gradual E. slope, through juniper and yellow pine; dense growth of live oak, mahogany, and manzanita brush.</p> <p>Drain, course S., ascend gradual S. W. slope.</p> <p>Change to gradual S. E. slope.</p> <p>Drain, course S., ascend gradual W. slope.</p> <p>Drain, course S., thence over gradual S. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 39.97 chs. By 2nd set, 40.03 chs.; the mean of which is</p>

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 10 E.

Chains.	<p>40.00 Set a limestone, 20x12x10 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which</p> <p style="padding-left: 2em;">A black oak, 10 ins.diam., bears S. 46° 25' W., 26 lks. dist., marked 1/4 S B T</p> <p style="padding-left: 2em;">A yellow pine, 12 ins.diam., bears N. 53° 30' W., 71 lks. dist., marked 1/4 S B T</p> <p>44.50 A dry branch, 15 lks. wide, course S. 70° W., change to gradual N. W. slope.</p> <p>50.10 Small drain, course N. W.</p> <p>55.30 Road, bears S. E. and N. W.</p> <p style="padding-left: 2em;">Difference between measurements of 55.51 chs. by two sets of chainmen is 6 lks.; position of middle point</p> <p style="padding-left: 4em;">By 1st set, 55.48 chs.</p> <p style="padding-left: 4em;">By 2nd set, 55.54 chs.; the mean of which is</p> <p>55.51 Set boundary post No. 36. Post, cap, and mound heretofore described. Cap marked</p> <p style="padding-left: 2em;">No. 36 on S. side of cap.</p> <p style="padding-left: 2em;">1903 on S. side of rim.</p> <p style="padding-left: 2em;">RESERVE in N. W. and N. E. quadrants.</p> <p>66.25 Top of ridge, bears N. and S., descend gradual E. slope.</p> <p>76.40 Drain, course S. E.</p> <p style="padding-left: 2em;">Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p style="padding-left: 4em;">By 1st set, 79.99 chs.</p> <p style="padding-left: 4em;">By 2nd set, 80.01 chs.; the mean of which is</p> <p>80.00 Set boundary post No. 35, for the cor. to Tps. 11 and 12 N., Rs. 10 and 11 E. Post, cap, and mound heretofore described. Cap marked</p> <p style="padding-left: 2em;">No. 35 on S. side of cap.</p> <p style="padding-left: 2em;">1903 on S. side of rim.</p> <p style="padding-left: 2em;">RESERVE in N. W. and N. E. quadrants.</p> <p style="padding-left: 4em;">also marked</p> <p style="padding-left: 2em;">T 12 N S 31 in N. E. quadrant on rim.</p> <p style="padding-left: 2em;">R 11 E S 6 in S. E. " " "</p> <p style="padding-left: 2em;">T 11 N S 1 in S. W. " " "</p> <p style="padding-left: 2em;">R 10 E S 36 in N. W. " " "</p> <p>with 6 notches on N., E., S., and W. edges; of rim; from which</p> <p style="padding-left: 2em;">A yellow pine, 14 ins.diam., bears N. 70° 20' E., 111 lks. dist., marked T 12 N R 11 E S 31 B T</p> <p style="padding-left: 2em;">A juniper, 30 ins.diam., bears S. 85° 35' E., 126 lks. dist., marked T 11 N R 11 E S 6 B T</p> <p style="padding-left: 2em;">A juniper, 12 ins.diam., bears S. 41° 30' W., 51 lks. dist., marked T 11 N R 10 E S 1 B T</p> <p style="padding-left: 2em;">A juniper, 40 ins.diam., bears N. 13° 10' W., 138 lks. dist., marked T 12 N R 10 E S 36 B T</p> <p>Land, rolling.</p> <p>Soil, 3rd rate.</p> <p>Timber, yellow pine, juniper, oak, live oak, manzanita and mahogany brush.</p> <p style="text-align: right;">January 22, 1903.</p>
	<p>January 24: At the cor. to Tps. 11 and 12 N., Rs. 10 and 11 E. of Gila and Salt River Base and Meridian, at 10 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 19° 20' S. on the decl. arc; and determine a true meridian with the solar.</p> <p>Thence I run</p> <p>East on a true line between secs. 6 and 31 (deducting 147 lks. for convergency.)</p> <p>Descend gradual S. E. slope, thence through yellow pine and juniper timber.</p>

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 11 E.

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Chains.	
2.25	A dry branch, 15 lks. wide, course S. 15° E. Ascend gradual S. W. slope.
15.18	Juniper tree, 5 ft. diam., bears N. 1 lk.
17.75	Small drain, course S. 10° E. Ascend gradual W. slope.
20.50	Top of ridge, bears N. and S. Descend steep E. slope.
25.00	Dry branch, 10 lks. wide, course S.
30.00	At this point I set off 19° 19' S. on the decl. arc; and at 12 ^h 12 ^m 02 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is 28" greater than the proper lat.
32.25	Ascend steep W. slope.
37.00	Top of ridge, bears N. and S., 100 ft. above branch. Difference between measurements of 38.53 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 38.55 chs. By 2nd set, 38.51 chs.; the mean of which is
38.53	Set a sandstone, 20x12x6 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which A yellow pine, 16 ins.diam., bears S. 40° 00' E., 44 lks. dist., marked 1/4 S B T A yellow pine, 14 ins.diam., bears N. 17° 35' W., 42 lks. dist., marked 1/4 S B T Descend gradual E. slope from cor.
44 95	Bonito Creek, 10 lks. wide, 6 ins. deep, pure water, course S. (flows the year around), ascend gradual W. slope.
48.05	Dim road, bears N. and S.
49.00	L. Pyle's house, bears N. 20° E., 15.00 chs.
50.75	Low ridge, bears N. and S., thence along gradual S. slope.
61.00	Small drain, course S.
66.75	Small drain, course S.
76.60	Small drain, course S. W. Difference between measurements of 78.53 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 78.57 chs. By 2nd set, 78.49 chs.; the mean of which is
78.53	Set boundary post No. 34, for the cor. to secs. 5, 6, 31, and 32. Post, cap, and mound heretofore described. Cap marked No. 34 on S. side of cap. 1903 on S. side of rim. RESERVE in N. W. and N. E. quadrants. also marked T 12 N S 32 in N. E. quadrant on rim. T 11 N S 5 in S. E. " " " R 11 E S 6 in S. W. " " " S 31 in N. W. " " " with 5 notches on E. and 1 notch on W. edges of rim; from which A yellow pine, 16 ins.diam., bears N. 85° 50' E., 63 lks. dist., marked T 12 N R 11 E S 32 B T A juniper, 14 ins.diam., bears S. 80° 15' E., 40 lks. dist., marked T 11 N R 11 E S 5 B T A black oak, 8 ins.diam., bears S. 66° 00' W., 12 lks. dist., marked T 11 N R 11 E S 6 B T A yellow pine, 20 ins.diam., bears N. 11° 15' W., 42 lks. dist., marked T 12 N R 11 E S 31 B T Land, rolling; surface stony. Soil, 3rd and 4th rate. Timber, yellow pine, juniper, and oak; dense growth of live oak and manzanita brush. Sandstone formation:
	January 24, 1903.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 11 E.

Chains. January 26: At the cor. to secs. 5, 6, 31, and 32, S. bdy. T. 12 N., R. 11 E., at 9 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 18° 51' S. on the decl. arc; and determine a true meridian with the solar.
Magnetic declination 14° 00' E.
Thence I run East on a true line between secs. 5 and 32. Ascend gradual W. slope, through heavy yellow pine, juniper, and oak timber; dense growth of live oak and manzanita brush.

6.50 Top of ridge, bears N. and S., thence over nearly level land.

18.50 Change to gradual E. slope.

23.00 At this point I set off 18° 50' S. on the decl. arc; and at 12^h 12^m 31^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is 28" greater than the proper lat.

30.25 Pearly Creek, 10 lks. wide, 5 ins. deep, pure water, course S. 20° W., foot of 50-ft. descent; ascend gradual W. slope.
Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
By 1st set, 40.02 chs.
By 2nd set, 39.98 chs.; the mean of which is

40.00 Set a sandstone, 22x12x10 ins., 16 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which
A yellow pine, 14 ins.diam., bears S. 23° 35' E., 18 lks. dist., marked 1/4 S B T
A juniper, 18 ins.diam., bears N. 47° E., 67 lks. dist., marked 1/4 S B T

50.00 Top of ridge, bears N. and S., 150 ft. above last creek.

63.50 Change to gradual E. slope.

68.36 A juniper tree, 14 ins.diam., cut down, leave stump 4 ft. high, cut 2 notches on E. and W. faces of stump.

68.75 Small drain, course S.

74.00 A dry branch, 20 lks. wide, course S. 30° W., ascend steep W. slope.

77.25 Top of ascent, bears N. and S.
Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point
By 1st set, 80.04 chs.
By 2nd set, 79.96 chs.; the mean of which is

80.00 Set boundary post No. 33, for the cor. to secs. 4, 5, 32, and 33. Post, cap, and mound heretofore described. Cap marked
No. 33 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. W. and N. E. quadrants.
also marked
T 12 N S 33 in N. E. quadrant on rim.
T 11 N S 4 in S. E. " " "
R 11 E S 5 in S. W. " " "
S 32 in N. W. " " "
with 4 notches on E. and 2 notches on W. edges of rim; from which
A yellow pine, 18 ins.diam., bears N. 58° 50' E., 31 lks. dist., marked T 12 N R 11 E S 33 B T
A juniper, 20 ins.diam., bears S. 26° 00' E., 47 lks. dist., marked T 11 N R 11 E S 4 B T
An oak, 6 ins.diam., bears S. 84° 10' W., 35 lks. dist., marked T 11 N R 11 E S 5 B T

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 11 E.

Chains.

A yellow pine, 20 ins.diam., bears N. 30° 35' W.,
103 lks. dist., marked T 12 N R 11 E S 32 B T
Timber, yellow pine, juniper, and oak; dense growth
of live oak and manzanita brush.
Sandstone formation.
Land, rolling; surface stony.
Soil, 3rd rate.

January 26, 1903

January 27: At the cor. to secs. 4, 5, 32, and 33,
S. Bdy. T. 12 N., R. 11 E., at 9 a.m., l.m.t.,
I set off 34° 23' N. on the lat. arc; 18° 36' S.
on the decl. arc; and determine a true meridian
with the solar.

Thence I run

East on a true line between secs. 4 and 33,
Over level land, through pine, juniper, and oak
timber; dense growth of live oak and manzanita
brush.

11.50 Descend gradual E. slope.

17.65 A dry branch, 15 lks. wide, course S. 10° W. Ascend
steep W. slope.

20.50 Top of ridge, bears N. and S., thence over gradual
S. slope.

Difference between measurements of 40 00 chs. by two
sets of chainmen is 2 lks.; position of middle
point

By 1st set, 40.01 chs.

By 2nd set, 39.99 chs.; the mean of which is

40.00 Set a sandstone, 24x16x6 ins., 18 ins. in the ground
for 1/4 sec. cor., marked 1/4 on N. face; from
which

A yellow pine, 12 ins.diam., bears S. 17° 00' E.,
31 lks. dist., marked 1/4 S B T

A yellow pine, 14 ins.diam., bears N. 52° 25' W.,
38 lks. dist., marked 1/4 S B T

71.50 Change to E. slope.

At this point I set off 18° 35' S. on the decl. arc;
and at 12^h 12^m 45^s p.m., l.m.t., observe the sun
on the meridian; the resulting lat. is 34° 23' N.,
which is 28" greater than the proper lat.

73.00 Descend steep E. slope.

76.65 A dry branch, 10 lks. wide, course S. Ascend
gradual W. slope.

Difference between measurements of 80.00 chs. by two
sets of chainmen is 2 lks.; position of middle
point

By 1st set, 79.99 chs.

By 2nd set, 80.01 chs.; the mean of which is

80.00 Set boundary post No. 32, for the cor. to secs.
3, 4, 33, and 34. Post, cap, and mound heretofore
described. Post marked

No. 32 on S. side of cap.

1903 on S. side of rim.

RESERVE in N. W. and N. E. quadrants.

also marked

T 12 N S 34 in N. E. quadrant on rim.

T 11 N S 3 in S. E. " " "

R 11 E S 4 in S. W. " " "

S 33 in N. W. " " "

with 3 notches on E. and W. edges of rim; from which

An oak, 12 ins.diam., bears N. 14° 30' E.,
44 lks. dist., marked T 12 N R 11 E S 34 B T

An oak, 10 ins.diam., bears S. 85° 00' E.,
43 lks. dist., marked T 11 N R 11 E S 3 B T

An oak, 12 ins.diam., bears S. 85° 50' W.,
65 lks. dist., marked T 11 N R 11 E S 4 B T

An oak, 10 ins.diam., bears N. 19° 00' W.,
29 lks. dist., marked T 12 N R 11 E S 33 B T

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 11 E.

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Chains.	Land, rolling and level. Soil, 3rd rate. Timber, yellow pine, juniper, and oak; dense growth of live oak and manzanita brush. Sandstone formation.
	East on a true line between secs. 3 and 34, Ascend gradual W. slope, through yellow pine, juniper and oak, dense growth of live oak and manzanita brush.
3.65	Top of ridge, bears N. and S., thence over gradual S. slope.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 39.97 chs. By 2nd set, 40.03 chs.; the mean of which is
40.00	Set a sandstone, 20x12x8 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which A yellow pine, 24 ins.diam., bears N. 2° 00' E., 99 lks. dist., marked 1/4 S B T A yellow pine, 24 ins.diam., bears S. 65° 10' E., 28 lks. dist., marked 1/4 S B T
44.75	Change to gradual E. slope.
50.08	Elliston Creek, 15 lks. wide, 6 ins. deep, course S., foot of 100-ft. descent, thence over level land.
54.45	Rail fence, bears S. 10° W. and N. 10° E. Leave timber, enter cultivated land.
59.33	Rail fence, bears N. W. and S. E. Leave cultivated land, enter timber.
61.50	Ascend steep W. slope.
70.25	Change to gradual W. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is
80.00	Set boundary post No. 31, for the cor. to secs. 2, 3, 34, and 35. Post, cap, and mound heretofore described. Cap marked No. 31 on S. side of cap. 1903 on S. side of rim. RESERVE in N. W. and N. E. quadrants. also marked T 12 N S 35 in N. E. quadrant on rim. T 11 N S 2 in S. E. " " " R 11 E S 3 in S. W. " " " S 34 in N. W. " " " with 4 notches on W. and 2 notches on E. edges of rim; from which A yellow pine, 12 ins.diam., bears N. 81° 30' E., 99 lks. dist., marked T 12 N R 11 E S 35 B T A yellow pine, 12 ins.diam., bears S. 59° 30' E., 67 lks. dist., marked T 11 N R 11 E S 2 B T A yellow pine, 14 ins.diam., bears S. 39° 10' W., 87 lks. dist., marked T 11 N R 11 E S 3 B T An oak, 10 ins. diam., bears N. 85° 05' W., 59 lks. dist., marked T 12 N R 11 E S 34 B T Land, rolling and level. Soil, 2nd and 4th rate. Timber, yellow pine, juniper, oak, walnut, sycamore, ash along creek; dense growth of live oak and manzanita brush on upland. Sandstone formation.
	January 27, 1903.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 11 E.

Chains.	<p>January 28: At the cor. to secs. 2, 3, 34, and 35, At 9 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 18° 21' S. on the decl. arc; and determine a true meridian with the solar.</p> <p style="text-align: center;">Magnetic declination 14° 00' E.</p> <p>Thence I run East on a true line between secs. 2 and 35. Ascend gradual W. slope, through dense thicket of live oak and other brush; pine and juniper timber.</p> <p>9.50 Top of spur, bears S. 20° W. and N. 20° E., 300 ft. above last creek. Descend gradual S. E. slope into Red Rock Canyon.</p> <p>19.90 Bottom of canyon, a dry drain, course S. 20° W. Ascend gradual W. slope.</p> <p>32.05 Ravine, 100 lks. wide, 30 ft. deep, course S. W. Ascend steep N. W. slope.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 39.95 chs. By 2nd set, 40.05 chs.; the mean of which is</p> <p>40.00 Set a sandstone, 24x12x6 ins., in mound of stone, 4 ft. base, 1-1/2 ft. high, for 1/4 sec. cor., marked 1/4 on N. face; from which A yellow pine, 12 ins.diam., bears S. 83° 35' E., 26 lks. dist., marked 1/4 S B T An oak, 8 ins.diam. bears N. 48° 10' E., 44 lks. dist., marked 1/4 S B T</p> <p>52.00 Change to steep S. W. slope of mountain.</p> <p>60.50 Head of canyon, course S. 20° W.</p> <p>61.60 Limestone ledge, 20 ft. high, bears N. 20° E. and S. 20° W. Change to steep W. slope.</p> <p>72.74 Change to steep S. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point By 1st set, 79.94 chs. By 2nd set, 80.06 chs.; the mean of which is</p> <p>80.00 Set boundary post No. 30, for the cor. to secs. 1, 2, 35, and 36. Post, cap, and mound heretofore described. Cap marked No. 30 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 12 N S 36 in N. E. quadrant on rim. T 11 N S 1 in S. E. " " " R 11 E S 2 in S. W. " " " S 35 in N. W. " " "</p> <p>with 5 notches on W. and 1 notch on E. edges of rim; from which A yellow pine, 20 ins.diam., bears N. 52° 00' E., 171 lks. dist., marked T 12 N R 11 E S 36 B T An oak, 8 ins.diam., bears S. 52° 15' E., 29 lks. dist., marked T 11 N R 11 E S 1 B T</p> <p>No other trees large enough in limits. Land, mountainous; surface stony. Soil, 4th rate. Timber, yellow pine, juniper, oak, and red fir; dense growth of live oak and manzanita brush.</p>
1.25 10.00	<p>East on a true line between secs. 1 and 36, Over steep S. slope, through live oak brush.</p> <p>Ravine, 100 lks. wide, 20 ft. deep, course S.</p> <p>Side hill drain, course S. W. Ascend steep W. slope of mountain over rock ledge, through scattering yellow pine and juniper timber.</p>

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 11 E.

Chains.

- 12.00 Sandstone ledge, 20 ft. high, bears N. and S.
- 18.00 At this point I set off 18° 19' S. on the decl. arc; and at 12ⁿ 12^m 57^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is 28" greater than the proper lat.
- 23.15 Top of rim rock, bears N. 20° W. and S. 80° E., 660 ft. above sec. cor., thence along rim rock.
- 40.00 The true point for the 1/4 sec. cor. falls on steep slide rock.
- Difference between measurements of 41.05 chs. by two sets of chainmen is 10 lks.; position of middle point
 - By 1st set, 41.00 chs.
 - By 2nd set, 41.10 chs.; the mean of which is
- 41.05 Set sandstone, 36x8x6 ins. in mound of stone, 4 ft. base, 2 ft. high, for Witness 1/4 sec. cor., marked W C 1/4 on N. face; from which
 - A yellow pine, 6 ins.diam., bears S. 56° 00' E., 24 lks. dist., marked W C 1/4 S B T
 - A pine, 12 ins. diam., bears N. 21° 15' W., 11 lks. dist., marked W C 1/4 S B T
- 41.55 Descend steep S. E. slope of mountain, bears N. 70° E. and S. 70° W.
- 57.50 Change to steep E. slope.
- 59.50 Sandstone ledge, 20 ft. high, bears N. and S.
- 67.00 Side hill drain, course S. 70° E.
- Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point
 - By 1st set, 79.94 chs.
 - By 2nd set, 80.06 chs.; the mean of which is
- 80.00 Set boundary post No. 29, for the cor. to Tps. 11 and 12 N., Rs. 11 and 12 E. Post, cap, and mound heretofore described. Cap marked
 - No. 29 on S. side of cap.
 - 1903 on S. side of rim.
 - RESERVE in N.W., N.E., and S.E. quadrants.
 - also marked
 - T 12 N S 31 in N. E. quadrant on rim.
 - R 12 E S 6 in S. E. " " "
 - T 11 N S 1 in S. W. " " "
 - R 11 E S 36 in N. W. " " "
- with 6 notches on N., S., E., and W. edges of rim; from which
 - A yellow pine, 14 ins.diam., bears N. 85° 50' E., 130 lks. dist., marked T 12 N R 12 E S 31 B T
 - A yellow pine, 16 ins.diam., bears S. 17° 50' E., 43 lks. dist., marked T 11 N R 12 E S 6 B T
 - A yellow pine, 30 ins.diam., bears S. 64° 45' W., 104 lks. dist., marked T 11 N R 11 E S 1 B T
 - A yellow pine, 30 ins.diam., bears N. 70° 00' W., 112 lks. dist., marked T 12 N R 11 E S 36 B T
- Land, mountainous; surface stony.
- Soil, 4th rate.
- Timber, yellow pine, juniper, oak, red fir, live oak brush; mesal.
- Sandstone formation.

January 28, 1903.

January 30: At the cor. to Tps. 11 and 12 N., Rs. 11 and 12 E., at 9 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 17° 49' S. on the decl. arc; and determine a true meridian with the solar.

Magnetic declination 14° 10' E.

Thence I run

Black Mesa Forest Reserve Boundary,
West Boundary T. 11 N., R. 12 E.

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Chains.	South on a true line between secs. 1 and 6, Over steep E. slope, through heavy yellow pine and juniper timber.
1.75	Side hill drain, course S. 70° E.
10.50	Top of spur, bears N. 70° W. and S. 70° E., descend S. E. slope.
15.90	Small drain, course S. 10° E.
16.40	Same drain, course S. 20° W.
30.00	Same drain, course S. 30° E., ascend steep N. slope.
35.00	Top of ridge, bears N. W. and S. E., descend S. W. slope.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 39.95 chs. By 2nd set, 40.05 chs.; the mean of which is
40.00	Set sandstone, 24x14x3 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on W. face; from which A yellow pine, 14 ins.diam., bears S. 53° E., 13 lks. dist., marked 1/4 S B T A yellow pine, 10 ins.diam., bears N. 77° 30' W., 23 lks. dist., marked 1/4 S B T
40.50	Small drain, course S. E.
48.95	Ravine, 150 lks. wide, 30 ft. deep, course E. Ascend gradual N. slope.
60.00	Top of ridge, bears E. and W., descend gradual S. slope.
68.70	Drain, course S. W., thence over W. slope. Difference between measurements of 30.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 79.97 chs. By 2nd set, 80.03 chs.; the mean of which is
80.00	Set boundary post No. 28, for the cor. to secs. 1, 6, 7, and 12. Post, cap, and mound heretofore described. Cap marked No. 28 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and, S. E. quadrants. also marked T 11 N S 6 in N. E. quadrant on rim. R 12 E S 7 in S. E. " " " R 11 E S 12 in S. W. " " " S 1 in N. W. " " " with 5 notches on S. and 1 notch on N. edges of rim; from which A white oak, 12 ins.diam., bears N. 50° 10' E., 27 lks. dist., marked T 11 N R 12 E S 6 B T A white oak, 8 ins.diam., bears S. 22° E., 75 lks. dist., marked T 11 N R 12 E S 7 B T A yellow pine, 14 ins.diam., bears S. 82° 25' W., 47 lks.dist., marked T 11 N R 11 E S 12 B T A black oak, 6 ins.diam., bears N. 51° 45' W., 55 lks. dist., marked T 11 N R 11 E S 1 B T Land, mountainous; surface stony. Soil, 3rd rate. Timber, yellow pine, juniper, oak, red fir, and live oak brush.
	South on a true line between secs. 7 and 12. Descend gradual S. W. slope, through oak and scatter- ing pine; dense growth of live oak, manzanita, and mahogany brush.
1.11	Sandstone ledge, 10 ft. high, bears E. and W. Descend into canyon.

Black Mesa Forest Reserve Boundary,
West Boundary T 11 N., R. 12 E.

Chains.	
6.40	Bottom of canyon, a dry branch, 10 lks. wide, course E., 300-ft. descent; ascend steep N. slope, through young pine.
26.75	Top of ridge, bears E. and W., 400 ft. above bottom of canyon. At this point I set off 17° 47' S. on the decl. arc; and at 12 ^h 13 ^m 20 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 21' N., which is about 27" less than the proper lat.
27:00	Descend steep S. slope, through dense growth of live oak brush.
38.50	Small drain, course S. E. Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 39.95 chs. By 2nd set, 40.05 chs.; the mean of which is
40.00	Set a sandstone, 20x14x3 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on W. face; from which A yellow pine, 8 ins.diam., bears N. 28° E., 15 lks. dist., marked 1/4 S B T A white oak, 10 ins.diam., bears S. 18° 30' E., 40 lks. dist., marked 1/4 S B T
41:00	Same drain, course S. 10° W.
42 80	Same drain, course S. 20° E.
46 60	Drain, course S. 20° E., foot of 300-ft. descent, thence over gradual E. slope.
78 50	Private road, bears N. 70° E. and S. 70° W. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 79.98 chs. By 2nd set, 80.02 chs.; the mean of which is
80.00	Set boundary post No. 27, for the cor. to secs. 7, 12, 13, and 18. Post, cap, and mound heretofore described. Cap marked No. 27 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. also marked T 11 N S 7 in N. E. quadrant on rim R 12 E S 18 in S. E. " " " R 11 E S 13 in S. W. " " " S 12 in N. W. " " " with 4 notches on S. and 2 notches on N. edges of rim; from which A juniper, 30 ins.diam., bears N. 25° E., 60 lks. dist., marked T 11 N R 12 E S 7 B T A yellow pine, 20 ins.diam., bears S. 40° E., 153 lks.dist., marked T 11 N R 12 E S 18 B T A juniper, 6 ins.diam., bears S. 2° 00' W., 175 lks.dist., marked T 11 N R 11 E S 13 B T A juniper, 20 ins.diam., bears N. 86° 00' W., 92 lks. dist., marked T 11 N R 11 E S 12 B T Land; rolling. Soil, 3rd rate. Timber, yellow pine, juniper and oak; live oak and manzanita brush.

Black Mesa Forest Reserve Boundary,
West Boundary T.11 N., R. 12 E.

<p>Chains.</p> <p>9.90</p> <p>20.00</p> <p>24.50</p> <p>40.00</p> <p>47.00</p> <p>47.50</p> <p>61.00</p> <p>78.00</p> <p>80.00</p>	<p>South on a true line between secs. 13 and 18, Over nearly level land, through heavy yellow pine timber.</p> <p>Small drain, course E.</p> <p>Change to steep S. slope. Leave sandstone, enter limestone, bears E. and W.</p> <p>A dry branch, 15 lks. wide, course E., 150-ft. descent. Ascend gradual N. slope.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p>By 1st set, 39.99 chs.</p> <p>By 2nd set, 40.01 chs.; the mean of which is</p> <p>Set a limestone, 22x12x10 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on W. face; from which</p> <p>A yellow pine, 24 ins.diam., bears N. 6° 50' E., 149 lks. dist., marked 1/4 S B T</p> <p>A white oak, 8 ins.diam., bears S. 42° W., 13 lks. dist., marked 1/4 S B T</p> <p>Top of ridge, bears N. 70° E. and S. 70° W.</p> <p>January 30, 1903.</p> <p>January 31: At 9 a.m., l.m.t., I set off 34° 20' N. on the lat. arc; 17° 53' S. on the decl. arc; and determine a true meridian with the solar.</p> <p>Continue line south.</p> <p>Descend gradual S. slope.</p> <p>Small drain, course E. Ascend gradual N. slope.</p> <p>Top of ridge, bears E. and W., thence over gradual S. E. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point</p> <p>By 1st set, 79.96 chs.</p> <p>By 2nd set, 80.04 chs.; the mean of which is</p> <p>Set boundary post No. 26, for the cor. to secs. 13, 18, 19, and 24. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 26 on S. side of cap.</p> <p>1903 on S. side of rim.</p> <p>RESERVE in N. E. and S. E. quadrants.</p> <p>also marked</p> <table border="0"> <tr> <td>T 11 N S 18</td> <td>in N. E. quadrant</td> <td>on rim</td> <td></td> <td></td> </tr> <tr> <td>R. 12 E S 19</td> <td>in S. E.</td> <td>"</td> <td>"</td> <td>"</td> </tr> <tr> <td>R 11 E S 24</td> <td>in S. W.</td> <td>"</td> <td>"</td> <td>"</td> </tr> <tr> <td>S 13</td> <td>in N. W.</td> <td>"</td> <td>"</td> <td>"</td> </tr> </table> <p>with 3 notches on N. and S. edges of rim; from which</p> <p>A black oak, 10 ins.diam., bears N. 11° E., 40 lks. dist., marked T 11 N R 12 E S 18 B T</p> <p>A white oak, 12 ins.diam., bears S. 33° E., 23 lks. dist., marked T 11 N R 12 E S 19 B T</p> <p>A white oak, 8 ins. diam., bears S. 5° 15' W., 46 lks. dist., marked T 11 N R 11 E S 24 B T</p> <p>A white oak, 8 ins. diam., bears N. 28° 25' W., 42 lks. dist., marked T 11 N R 11 E S 13 B T</p> <p>Land, rolling and broken.</p> <p>Soil, 3rd rate.</p> <p>Timber, yellow pine, oak, juniper; dense growth of manzanita and live oak brush.</p> <p>Lime and sandstone formation.</p>	T 11 N S 18	in N. E. quadrant	on rim			R. 12 E S 19	in S. E.	"	"	"	R 11 E S 24	in S. W.	"	"	"	S 13	in N. W.	"	"	"
T 11 N S 18	in N. E. quadrant	on rim																			
R. 12 E S 19	in S. E.	"	"	"																	
R 11 E S 24	in S. W.	"	"	"																	
S 13	in N. W.	"	"	"																	

Black Mesa Forest Reserve Boundary,
West Boundary T. 11 N., R. 12 E.

Chains.	South on a true line between secs. 19 and 24. Over gradual S. E. slope, through yellow pine, juniper, and oak timber, and live oak brush.
.90	A small drain, course N. E.
9.00	Small drain, course N. E. Ascend gradual N. E. slope.
16.50	Top of low ridge, bears E. and W. Descend gradual S. slope.
17.60	Dim road, bears N. 10° W. and S. 10° E.
24.80	Same dim road, bears N. 10° E. and S. 20° W.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39.97 chs.; the mean of which is
40.00	Set a sandstone, 22x14x10 ins., 16 ins. in the ground for 1/4 sec. cor., marked 1/4 on W. face; from which A white oak, 16 ins.diam., bears N. 19° E., 50 lks. dist., marked 1/4 S B T A white oak, 16 ins.diam., bears S. 30° 10' W., 60 lks. dist., marked 1/4 S B T
58.90	Same dim road, bears N. 20° W. and S. 20° E.
72.50	Dim road, bears E. and W. Enter old field.
78.00	Corrall, bears E. 5.00 chs.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is
80.00	Set a limestone, 24x16x6 ins., 18 ins. in the ground for the cor. to secs. 19, 24, 25, and 30, marked with 4 notches on N. and 2 notches on S. edges; from which A yellow pine, 16 ins.diam., bears N. 18° 50' E., 450 lks. dist., marked T 11 N R 12 E S 19 B T A yellow pine, 14 ins.diam., bears S. 86° 10' E., 63 lks. dist., marked T 11 N R 12 E S 30 B T A yellow pine, 18 ins.diam., bears S. 24° 30' W., 302 lks. dist., marked T 11 N R 11 E S 25 B T A yellow pine, 6 ins. diam., bears N. 11° 35' W., 218 lks. dist., marked T 11 N R 11 E S 24 B T
	Land, rolling. Soil, 3rd rate. Timber, yellow pine, juniper, oak, live oak, manzanita brush. Lime and sandstone formation.
	South on a true line between secs. 25 and 30, Over nearly level land, through scattering yellow pine.
.10	Drain, course S. E.
5.50	Old log fence, bears E. and W.
5.70	Payson and Holbrook road, bears E. and W. From this point deserted cabin bears N. 70° E. about 10.00 chs.
	Difference between measurements of 5.92 chs. by two sets of chainmen is nothing.
5.92	Set boundary post No. 25. Post, cap, and mound heretofore described. Cap marked No. 25 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants.
	At this point I set off 17° 31' S. on the decl. arc; and at 12 ^h 13 ^m 30 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 19' N., which is about 4" less than the proper lat.

Black Mesa Forest Reserve Boundary,
West Boundary T. 11 N., R. 12 E.

Chains.	
9.20	Small drain, course N. E. Ascend gradual N. slope, through heavy yellow pine timber.
19.00	Small drain, course N. E.
32.50	Top of ridge, bears E. and W. Descend gradual S. slope.
36.90	Drain, course N. E. Ascend gradual N. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 39.99 chs. By 2nd set, 40.01 chs.; the mean of which is
40.00	Set a limestone, 26x8x8 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, for 1/4 sec. cor., marked 1/4 on W. face; from which A juniper, 40 ins.diam., bears N. 32° 50' E., 135 lks. dist., marked 1/4 S B T A pine, 5 ins.diam., bears N. 82° W., 20 lks. dist., marked 1/4 S B T
52.00	Top of spur, bears N. E. and S. W., thence over E. slope.
56.75	Drain, course E., enter granite formation, ascend steep N. slope.
62.25	Drain, course N. E. change to S. E. slope
66.25	Drain, course N. E.
74.00	Top of ridge, bears E. and W., 500 ft. above sec. cor. Descend steep S. slope, through dense growth of live oak and manzanita brush; scattering juniper. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 79.95 chs. By 2nd set, 80.05 chs.; the mean of which is
80.00	Set boundary post No. 24, for the cor. to secs. 25; 30, 31, and 36. Post, cap, and mound heretofore described. Cap marked No. 24 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. also marked T 11 N S 30 in N. E. quadrant on rim. R 12 E S 31 in S. E. " " " R 11 E S 36 in S. W. " " " S 25 in N. W. " " " with 5 notches on N. and 1 notch on S. edges of rim; from which A juniper, 20 ins.diam., bears N. 41° 15' E. 125 lks. dist., marked T 11 N R 12 E S 30 B T A juniper, 12 ins.diam., bears S. 1° E., 38 lks. dist., marked T 11 N R 12 E S 31 B T A juniper, 10 ins. diam., bears S. 4° 45' W., 37 lks. dist., marked T 11 N R 11 E S 36 B T A juniper, 15 ins.diam., bears N. 35° 35' W., 216 lks. dist., marked T 11 N R 11 E S 25 B T Land, mountainous and rolling. Soil, 3rd and 4th rate. Timber, yellow pine, juniper. and oak; dense growth of live oak and manzanita brush on S. slope. Limestone and granite formation.
	January 31, 1903.

Black Mesa Forest Reserve Boundary,
West Boundary T. 11 N., R. 12 E.

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Chains. February 10, 1903. At the cor. to secs. 25, 30, 31, and 36. W. bdy. T. 11 N., R. 12 E., at 9 a.m., l.m.t., I set off $34^{\circ} 18'$ N. on the lat. arc; $14^{\circ} 33'$ S. on the decl. arc; and determine a true meridian with the solar.

Magnetic declination $14^{\circ} 10'$ E.

Thence I run
South on a true line between secs. 31 and 36,
Over steep S. slope, through dense growth of live oak and manzanita brush; scattering pinon, pine, and juniper.

15.00 Change to gradual N. W. slope.
18.40 Change to S. slope over top of spur.
23.00 Head of small drain, course S. E.
30.00 Change to steep S. slope.
35.75 Head of small drain, course W., ascend.
38.00 Change to steep S. slope.
Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 39.97 chs.
By 2nd set, 40.03 chs.; the mean of which is

40.00 Set a granite stone, 22x18x12 ins., 15 ins. in the ground for $1/4$ sec. cor., marked $1/4$ on W. face; from which
A juniper, 6 ins.diam., bears N. 78° W., 34 lks. dist., marked $1/4$ S B T
A juniper, 20 ins.dist., bears S. $41^{\circ} 35'$ E., 81 lks. dist., marked $1/4$ S B T

40.80 Head of small drain, course W.
42.00 Change to gradual S. slope.
45.00 At this point I set off $14^{\circ} 31'$ S. on the decl. arc; and at $12^h 14^m 24^s$ p.m., l.m.t., observe the sun on the meridian; the resulting lat. is $34^{\circ} 18'$ N., which is the proper lat.

48.75 Drain, course S. W., thence along W. slope.
54.00 Change to level land.
59.60 Drain, course S. W. Ascend gradual N. W. slope.
72.50 Top of ridge, bears E. and W. Old ruins along top of ridge. Descend gradual S. slope.
76.50 Small drain, course W. Ascend gradual N. slope.
78.50 Top of ascent, bears E. and W.
Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point
By 1st set, 79.95 chs.
By 2nd set, 80.05 chs.; the mean of which is

80.00 Set boundary post No. 23, for the cor. to Tps. 10 and 11 N., Rs. 11 and 12 E. Post, cap, and mound heretofore described. Cap marked
No. 23 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. quadrant.
also marked
T 11 N S 31 in N. E. quadrant on rim.
R 12 E S 6 in S. E. " " "
T 10 N S 1 in S. W. " " "
R 11 E S 36 in N. W. " " "
with 6 notches on N., S., E., and W. edges of rim; from which
An oak, 8 ins.diam., bears N. 81° E., 118 lks. dist., marked T 11 N R 12 E S 31 B T
A juniper, 8 ins.diam., bears S. $71^{\circ} 50'$ E., 60 lks. dist., marked T 10 N R 12 E S 6 B T
A juniper, 6 ins.diam., bears S. $6^{\circ} 30'$ W., 23 lks. dist., marked T 10 N R 11 E S 1 B T
A yellow pine, 16 ins.diam., bears N. 62° W., 83 lks. dist., marked T 11 N R 11 E S 36 B T

Chains. Land, mountainous and broken.
Soil; 4th rate.
Timber, juniper, scattering oak and yellow pine;
dense growth of live oak, manzanita, and mahogany
brush; mesal.
Granite formation.

February 10, 1903.

~~February 11:~~

At the cor. of Tps. 10 and 11 N., Rs. 11 and 12 E.
At 2 p.m., l.m.t., I set off $34^{\circ} 17'$ N. on the lat.
arc; and $14^{\circ} 10'$ S. on the decl. arc; and deter-
mine a true meridian with the solar.

Magnetic declination $14^{\circ} 00'$ E.

Thence I run

East on a true line between secs. 6 and 31 (deduct-
ing 98 lks. for convergency.)

Ascend W. slope, through dense growth of live oak
and manzanita brush.

- 5.80 Small drain, course S. W.
7.70 Spur bears S. W. and N. E.
9.00 Small drain, course S. W.
14.00 Top of ridge, bears N. and S. Old Indian ruins on
the ridge. From this point a round-top hill bears
N. 10.00 chs. On top of this hill there are old
ruins; some of the walls are 5 or 6 ft. high.
Descend steep E. slope.
19.03 Drain, course S., 100-ft. descent. Ascend steep
S. W. slope.
24.00 Top of spur, bears N. and S. Descend steep S. E.
slope.
27.35 Drain, course S. W. Ascend steep S. W. slope.
32.00 Top of ridge, bears N. and S. Descend gradual S. E.
slope.
34.80 Side hill drain, course S. E.
38.90 Small drain, course S.
Difference between measurements of 39.02 chs. by two
sets of chainmen is 4 lks.; position of middle
point
By 1st set, 39.00 chs.
By 2nd set, 39.04 chs.; the mean of which is
39.02 Set a granite rock, 36x10x6 ins. in mound of stone,
5 ft. base, 2 ft. high, for $1/4$ sec. cor., marked
 $1/4$ on N. face; from which
A juniper, 14 ins.diam., bears N. $8^{\circ} 05'$ E.,
141 lks. dist., marked $1/4$ S B T
A pinon pine, 12 ins.diam., bears S. $9^{\circ} 50'$ W.,
229 lks. dist., marked $1/4$ S B T
Ascend gradual S. W. slope from $1/4$ cor.
46.16 Change to E. slope.
55.70 Drain, course S. W., foot of 100-ft. descent. Ascend
steep W. slope.
61.30 Top of ridge, bears N. and S., 100 ft. above drain,
white quartz lead 50 lks. wide, bears N. 10° E.
and S. 10° W. Descend steep E. slope.
67.50 Small drain, course S. W.
71.15 Small drain, course S. W. Ascend gradual S. W.
slope.
Difference between measurements of 79.02 chs. by two
sets of chainmen is 4 lks.; position of middle
point
By 1st set, 79.00 chs.
By 2nd set, 79.04 chs.; the mean of which is
79.02 Set boundary post No. 22, for the cor. to secs.
5, 6, 31, and 32. Post, cap, and mound heretofore
described. Cap marked

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N. R. 12 E.

Chains. No. 22 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. W. and N. E. quadrants.
also marked
T 11 N S 32 in N. E. quadrant on rim.
R 12 E S 5 in S. E. " " "
T 10 N S 6 in S. W. " " "
S 31 in N. W. " " "
with 5 notches on E. and 1 notch on W. edges of rim;
from which
A juniper, 12 ins. diam., bears N. 18° 10' E.,
90 lks. dist., marked T 11 N R 12 E S 32 B T
A juniper, 36 ins. diam., bears S. 77° 30' E.,
102 lks. dist., marked T 10 N R 12 E S 5 B T
A juniper, 24 ins. diam., bears S. 69° 30' W.,
27 lks. dist., marked T 10 N R 12 E S 6 B T
A yellow pine, 24 ins. diam., bears N. 74° W.,
28 lks. dist., marked T 11 N R 12 E S 31 B T
Land, mountainous.
Soil, 4th rate.
Timber, yellow pine, juniper, oak, pinon pine; dense
growth of live oak, manzanita, and mahogany brush;
mescal.
Granite formation.

February 11, 1903.

February 12: At the cor. to secs. 5, 6, 31, and 32.
At 10 a.m., l.m.t., I set off 34° 17' N. on the
lat. arc; 13° 53' S. on the decl. arc; and deter-
mine a true meridian with the solar.

Thence I run

East on a true line between secs. 5 and 32,
Over gradual S. W. slope, through pine and juniper
timber; dense growth of live oak and manzanita
brush.

- 3.50 Change to gradual S. E. slope.
- 6.55 Small drain, course S. W.
- 9 05 Dim road, bears N. E. and S. W.
- 11.35 Small drain, course S. W. Ascend gradual S. W.
slope.
- 16.50 Top of spur, bears N. and S., descend N. E. slope.
- 21.25 Drain, course N. W. Ascend N. W. slope.
- 33.50 Top of spur, bears N. and S.
- 35.00 At this point I set off 13° 50' S. on the decl. arc;
and at 12^h 14^m 25^s p.m., l.m.t., observe the sun
on the meridian; the resulting lat. is 34° 17' N.,
which is 20" less than the proper lat.
Difference between measurements of 40.00 chs. by two
sets of chainmen is 6 lks.; position of middle
point
By 1st set, 40.03 chs.
By 2nd set, 39.97 chs.; the mean of which is
- 40.00 Set a granite stone, 22x18x8 ins., 16 ins. in the
ground for 1/4 sec. cor., marked 1/4 on N. face;
from which
A yellow pine, 20 ins. diam., bears N. 33° 30' E.,
22 lks. dist., marked 1/4 S B T
A yellow pine, 20 ins. diam., bears S. 36° E.,
46 lks. dist., marked 1/4 S B T
- 40.60 Drain, course N. 10° W. Continue over N. slope.
- 63.90 Drain, course N. E., change to E. slope.
- 77.50 Foot of 50-ft. descent, bears N. and S.
- 78.40 At Thompson wash (dry), 20 lks. wide, course S. 20° E.
Difference between measurements of 80.00 chs. by two
sets of chainmen is 8 lks.; position of middle
point

Chains.	<p>By 1st set, 80.04 chs. By 2nd set, 79.96 chs.; the mean of which is 80.00 Set boundary post No. 21, for the cor. to secs. 4, 5, 32, and 33. Post, cap, and mound heretofore described. Cap marked No. 21 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 11 N S 33 in N. E. quadrant on rim. T 10 N S 4 in S. E. " " " R 12 E S 5 in S. W. " " " S 32 in N. W. " " " with 4 notches on E. and 2 notches on W. edges of rim; from which A yellow pine, 12 ins.diam., bears N. 78° 25' E., 123 lks. dist., marked T 11 N R 12 E S 33 B T An oak, 10 ins.diam., bears S. 66° 40' E., 47 lks. dist., marked T 10 N R 12 E S 4 B T A walnut, 6 ins.diam., bears S. 86° 00' W., 112 lks. dist., marked T 10 N R 12 E S 5 B T A yellow pine, 14 ins.diam., bears N. 79° 50' W., 136 lks. dist., marked T 11 N R 12 E S 33 B T Land, mountainous and broken. Soil, 4th rate. Timber, yellow pine, juniper, oak, walnut, sycamore, ash, and box elder; live oak and manzanita brush. Granite formation. February 12, 1903.</p>
2.00	<p>February 13: At the cor. to secs. 4, 5, 32, and 33, S. bdy. T. 11 N., R. 12 E., at 2 p.m., 1.m.t., I set off 34° 17' N. on the lat. arc; 13° 30' S. on the decl. arc; and determine a true meridian with the solar. Thence I run East on a true line between secs. 4 and 33, through scattering timber, over level land.</p>
7.00	<p>Leave level land, ascend steep W. slope, through dense growth of live oak and mahogany brush.</p>
17.60	<p>Top of 100-ft. ascent, thence along gradual S. slope. Side hill drain, course S.</p>
40.00	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 39.96 chs. By 2nd set, 40.04 chs.; the mean of which is Set a granite stone, 24x10x8 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, for 1/4 sec. cor., marked 1/4 on N. face; from which A juniper, 10 ins.diam., bears N. 76° E., 9 lks. dist., marked 1/4 S B T A yellow pine, 6 ins.diam., bears S. 16° 50' E., 47 lks. dist., marked 1/4 S B T</p>
54.75	<p>Descend gradual E. slope from 1/4 sec. cor. Small drain, course S., ascend gradual W. slope.</p>
70.80	<p>Top of ridge, bears N. and S. Descend steep E. slope.</p>
80.00	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 79.95 chs. By 2nd set, 80.05 chs.; the mean of which is Set boundary post No. 20, for the cor. to secs. 3, 4, 33, and 34. Post, cap, and mound heretofore</p>

Black Mesa Forest Reserve Boundary,
South Boundary T.11 N., R. 12 E.

Chains. described. Cap marked
 No. 20 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. and N. W. quadrants.
 also marked
 T 11 N S 34 in N. E. quadrant on rim.
 T 10 N S 3 in S. E. " " "
 R 12 E S 4 in S. W. " " "
 S 33 in N. W. " " "
 with 3 notches on E. and W. edges of rim; from which
 A yellow pine, 14 ins.diam., bears N. 29° 50' E.,
 78 lks. dist., marked T 11 N R 12 E S 34 B T
 A yellow pine, 24 ins.diam., bears S. 37° 10' E.,
 114 lks. dist., marked T 10 N R 12 E S 3 B T
 A yellow pine, 20 ins.diam., bears S. 67° 00' W.,
 48 lks. dist., marked T 10 N R 12 E S 4 B T
 A yellow pine, 24 ins.diam., bears N. 29° 55' W.,
 100 lks. dist., marked T 11 N R 12 E S 33 B T
 Land, mountainous and rolling.
 Soil, 4th rate.
 Timber, yellow pine, juniper, oak, pinon pine; dense
 growth of live oak and manzanita brush.
 Granite formation.
 February 13, 1903.

February 14: At the cor. to secs. 3, 4, 33, and 34,
 S. bdy. T. 11 N., R. 12 E., at 9 a.m., l.m.t., I
 set off 34° 17' N. on the lat. arc; 13° 14' S. on
 the decl. arc; and determine a true meridian with
 the solar.
 Thence I run
 East on a true line between secs. 3 and 34,
 Over N. E. slope, through yellow pine, juniper, and
 oak timber: live oak brush.
 4.28 Change to steep E. slope.
 13.20 A dry branch, 10 lks. wide, course S., foot of
 400-ft. descent. Ascend steep W. slope.
 16.90 Change to N. slope.
 28.00 Top of ridge, bears N. and S., 350 ft. above last
 branch; descend gradual S. E. slope.
 37.00 Ascend gradual W. slope.
 Difference between measurements of 40.00 chs. by two
 sets of chainmen is 8 lks.; position of middle
 point
 By 1st set, 40.04 chs.
 By 2nd set, 39.96 chs.; the mean of which is
 40.00 Set a quartz rock, 22x12x8 ins., 16 ins. in the
 ground, for 1/4 sec. cor., marked 1/4 on N. face;
 from which
 A juniper, 16 ins.diam., bears N. 78° 05' E.,
 23 lks. dist., marked 1/4 S B T
 An oak, 8 ins.diam., bears S. 10° 05' E.,
 31 lks. dist., marked 1/4 S B T
 43.00 Top of ridge, bears N. and S.
 At this point I set off 13° 11' S. on the decl. arc;
 and at 12^h 14^m 23^s p.m., l.m.t., observe the sun
 on the meridian; the resulting lat. is 34° 17' N.,
 which is 20" less than the proper lat.
 Descend steep E. slope.
 70.00 Foot of 1000-ft. descent, bears N. and S.
 71.30 Tonto Creek, 40 lks. wide, 1 ft. deep, rapid current,
 course S.
 71.75 Ascend E. slope.
 78.00 Pack trail, bears N. and S.

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 12 E.

Chains. Difference between measurements of 80.00 chs. by two sets of chainmen is 16 lks.; position of middle point

80.00 By 1st set, 80.08 chs.
By 2nd set, 79.92 chs.; the mean of which is Set boundary post No. 19, for the cor. to secs. 2, 3, 34, and 35. Post, cap, and mound heretofore described. Cap marked

No. 19 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked

T 11 N S 35 in N. E. quadrant on rim.
T 10 N S 2 in S. E. " " "
R 12 E S 3 in S. W. " " "
S 34 in N. W. " " "

with 4 notches on W. and 2 notches on E. edges of rim; from which

An oak, 8 ins.diam., bears N. 85° E., 28 lks. dist., marked T 11 N R 12 E S 35 B T
An oak, 10 ins.diam., bears S. 14° 30' E., 40 lks. dist., marked T 10 N R 12 E S 2 B T
An oak, 10 ins.diam., bears S. 87° 50' W., 70 lks. dist., marked T 10 N R 12 E S 3 B T
An oak, 14 ins.diam., bears N. 83° 45' W., 83 lks. dist., marked T 11 N R 12 E S 34 B T

Land, mountainous.
Soil, 4th rate.
Timber, yellow pine, pinon pine, juniper, and oak on upland; cottonwood, alder, box elder, ash, sycamore, black walnut along Tonto Creek; dense growth of live oak brush on upland.
Granite formation.

February 14, 1903.

February 19: At the cor. to secs. 2, 3, 34, and 35, S. bdy. T. 11 N., R. 12 E., at 9 a.m., l.m.t., I set off 34° 17' N. on the lat. arc; 11° 30' S. on the decl. arc; and determine a true meridian with the solar.

Thence I run

East on a true line between secs. 2 and 35,
Ascend N. W. slope, through scattering oak and pine timber; through dense growth of live oak brush.

4.75 Drain, course N. W., change to steep S. W. slope of mountain.

22.15 Same drain, course S. 70° W. Change to steep W. slope.

31.15 Top of granite spur, bears N. E. and S. W. Change to steep S. slope.

35.00 Side hill drain, course S. 60° W. Change to steep W. slope.

40.00 True point for 1/4 sec. cor. falls on bare granite rock.

Difference between measurements of 42.68 chs. by two sets of chainmen is 3 lks.; position of middle point

By 1st set, 42.72 chs.
By 2nd set, 42.64 chs.; the mean of which is Set granite rock, 26x14x6 ins. in mound of stone, 4 ft. base, 20 ins. high, for Witness 1/4 sec. cor., marked W C 1/4 on N. face; from which

A juniper, 16 ins.diam., bears N. 46° E., 73 lks. dist., marked W C 1/4 S B T
A pinon pine, 6 ins.diam., bears S. 63° 10' E., 81 lks. dist., marked W C 1/4 S B T

Chains.	
45.00	Top of rock spur, bears N. 60° E. and S. 60° W., thence along steep S. slope.
48.00	Change to steep W. slope.
56.75	Top of steep ascent, bears N. and S., 1900 ft. above Tonto Creek, thence over nearly level land; enter heavy yellow pine timber. Leave granite rock, enter hard sandstone.
57.00	At this point I set off 11° 28' S. on the decl. arc; and at 12 ⁿ 14 ^m 05 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 17' N., which is 20" greater than the proper lat.
64.00	Change to gradual S. W. slope.
71.50	Change to gradual S. E. slope.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 14 lks.; position of middle point
	By 1st set, 80.07 chs.
	By 2nd set, 79.93 chs.; the mean of which is
80.00	Set boundary post No. 18, for the cor. to secs. 1, 2, 35, and 36. Post, cap, and mound heretofore described. Cap marked
	No. 18 on S. side of cap.
	1903 on S. side of rim.
	RESERVE in N. E. and N. W. quadrants.
	also marked
	T 11 N S 36 in N. E. quadrant on rim
	R 12 E S 2 in S. W. " " "
	T 10 N S 1 in S. E. " " "
	S 35 in N. W. " " "
	with 5 notches on W. and 1 notch on E. edges of rim; from which
	A yellow pine, 14 ins.diam., bears N. 45° 10' E., 146 lks. dist., marked T 11 N R 12 E S 36 B T
	A juniper, 36 ins.diam., bears S. 22° 30' E., 16 lks. dist., marked T 10 N R 12 E S 1 B T
	A yellow pine, 24 ins.diam., bears S. 89° 30' W., 103 lks. dist., marked T 10 N R 12 E S 2 B T
	An oak, 8 ins.diam., bears N. 52° 00' W., 38 lks. dist., marked T 11 N R 12 E S 35 B T
	Land, mountainous and rolling.
	Soil, 4th rate.
	Timber, yellow pine, juniper, and oak; dense growth of live oak and mahogany brush on W. slope.
	Granite and hard sandstone formation.
	February 19, 1903.
	February 20: At the cor. to secs. 1, 2, 35, and 36, S. bdy. T. 11 N., R. 12 E., at 8 a.m., l.m.t., I set off 34° 17' N. on the lat. arc; 11° 08' S. on the decl. arc; and determine a true meridian with the solar.
	Magnetic declination 14° 00' E.
	Thence I run
	East on a true line between secs. 1 and 36,
	Over gradual S. E. slope, through yellow pine timber; dense growth of live oak and manzanita brush.
2.65	Change to S. W. slope
10.00	Change to steep S. slope.
30.50	Change to steep S. W. slope.
39.75	Top of ascent, bears N. W. and S. E., thence over nearly level land, through heavy yellow pine and juniper timber.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point

Chains.	By 1st set, 39.97 chs. By 2nd set, 40.03 chs.; the mean of which is
40.00	Set hard sandstone, 26x14x8 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, for 1/4 sec. cor., marked 1/4 on N. face; from which A yellow pine, 12 ins.diam., bears S. 68° 35' E., 56 lks. dist., marked 1/4 S B T A yellow pine, 12 ins.diam., bears N. 29° 30' E., 23 lks. dist., marked 1/4 S B T
48.00	Change to gradual N. E. slope.
53.40	Head of small drain, course N. 10° E. Ascend gradual N. W. slope
60.50	Change to gradual S. E. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 79.96 chs. By 2nd set, 80.04 chs.; the mean of which is
80.00	Set boundary post No. 17, for the cor. to Tps..10 and 11 N., Rs. 12 and 13 E. Post, cap, and mound heretofore described. Cap marked No. 17 on S. side of cap. 1903 on S. side of rim. RESERVE in N. W. and N. E. quadrants. also marked T 11 N S 31 in N. E. quadrant on rim. R 13 E S 6 in S. E. " " " T 10 N S 1 in S. W. " " " R 12 E S 36 in N. W. " " " with 6 notches on N., S., E., and W. edges of rim; from which A yellow pine, 24 ins.diam., bears N. 9° 50' E., 56 lks. dist., marked T 11 N R 13 E S 31 B T A juniper, 44 ins. diam., bears S 89° 30' E., 59 lks. dist., marked T 10 N R 13 E S 6 B T A juniper, 24 ins.diam., bears S. 57° 20' W., 144 lks. dist., marked T 10 N R 12 E S 1 B T A juniper, 40 ins.diam., bears N. 68° 00' W., 58 lks. dist., marked T 11 N R 12 E S 36 B T Land, level, rough, and broken. Soil, 3rd and 4th rate. Timber, yellow pine, juniper, oak, and pinon pine; Live oak and manzanita brush on S. W. slope. Hard sandstone formation.
	At the cor. to Tps. 10 and 11 N., Rs. 12 and 13 E., at 10 a.m., l.m.t., I set off 34° 17' N. on the lat. arc; 11° 08' S. on the decl. arc; and determine a true meridian with the solar. Thence I run East on a true line between secs. 6 and 31 (deducting 98 lks. for convergency). Over gradual E. slope, through heavy yellow pine and juniper timber.
5.00	Change to gradual N. W. slope.
13.00	Top of spur, bears N. and S., thence over gradual E. slope.
26.00	At this point I set off 11° 06' S. on the decl. arc; and at 12 ^h 14 ^m p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 17' N., which is 20" less than the proper lat.
28.50	Enter manzanita brush, bears N. and S. Difference between measurements of 39.02 chs. by two sets of chainmen is 2 lks.; position of middle point

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 15 E.

Chains. By 1st set, 39.01 chs.
By 2nd set, 39.03 chs.; the mean of which is

39.02 Set a hard sandstone, 20x12x8 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which
A yellow pine, 20 ins.diam., bears N. 83° E., 99 lks. dist., marked 1/4 S B T
A yellow pine, 20 ins.diam., bears S. 79° 30' W., 59 lks. dist., marked 1/4 S B T

51.90 Small drain, course S.
65.00 Descend N. E. slope.
Difference between measurements of 79.02 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 78.99 chs.
By 2nd set, 79.05 chs.; the mean of which is

79.02 Set boundary post No. 16, for the cor. to secs. 5, 6, 31, and 32. Post, cap, and mound heretofore described. Cap marked
No. 16 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked
T 11 N S 32 in N. E. quadrant on rim.
R 13 E S 5 in S. E. " " "
T 10 N S 6 in S. W. " " "
S 31 in N. W. " " "

with 5 notches on E. and 1 notch on W. edges of rim; from which
A yellow pine, 14 ins.diam., bears N. 77° 30' E., 148 lks. dist., marked T 11 N R 13 E S 32 B T
A yellow pine, 12 ins.diam., bears S. 78° 50' E., 65 lks. dist., marked T 10 N R 13 E S 5 B T
A yellow pine, 12 ins.diam., bears S. 49° 15' W., 104 lks. dist., marked T 10 N R 13 E S 6 B T
A yellow pine, 14 ins.diam., bears N. 18° 45' W., 98 lks. dist., marked T 11 N R 13 E S 31 B T

Land, rolling; stony surface.
Soil, 3rd rate.
Timber, yellow pine, juniper, and oak; live oak and manzanita brush.
Hard sandstone formation.

East on a true line between secs. 5 and 32, Over gradual E. slope, through heavy yellow pine and juniper timber.

4.70 Small drain, course N. E.
13.25 Small drain, course N. W. Ascend W. slope.
19.00 Top of ridge, bears N. and S. Descend gradual E. slope.
23.00 Drain, course N. 20° E. Ascend N. W. slope.
30.00 Top of spur, bears N. and S.

February 20, 1903.
February 21: At 8 a.m., l.m.t., I set off 34° 17' N. on the lat. arc; 10° 47' S. on the decl. arc; and determine a true meridian with the solar.
Continue line E. between secs. 5 and 32.
Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
By 1st set, 40.02 chs.
By 2nd set, 39.98 chs.; the mean of which is

40.00 Set hard sandstone, 30x10x6 ins. in mound of stone, 4 ft. base, 2 ft. high, for 1/4 sec. cor., marked 1/4 on N. face; from which

Black Mesa Forest Reserve Boundary,
South Boundary T 11 N., R. 13 E.

Chains.	<p>A yellow pine, 36 ins.diam., bears N. 68° 40' E., 37 lks. dist., marked 1/4 S B T</p> <p>A yellow pine, 30 ins.diam., bears S. 41° 15' W., 107 lks. dist., marked 1/4 S B T</p> <p>41.70 Small drain, course N. 20° E., ascend.</p> <p>44.50 Top of spur, bears N. and S. Descend.</p> <p>49.15 Drain, course N. 10° W. Ascend N. W. slope.</p> <p>52.25 Top of spur, bears N. and S. Descend.</p> <p>56.30 Drain, course N. Ascend.</p> <p>63.50 Top of spur, bears N. and S. Descend.</p> <p>72.50 Small drain, course N. W., thence over N. slope.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 80.01 chs. By 2nd set, 79.99 chs.; the mean of which is</p> <p>80.00 Set boundary post No. 15, for the cor. to secs. 4, 5, 32, and 33. Post, cap, and mound heretofore described. Cap marked No. 15 on S. side of cap. 1903 on S. side of rim. RESERVE in N. W. and N. E. quadrants. also marked T 11 N S 33 in N. E. quadrant on rim. R 13 E S 4 in S. E. " " " T 10 N S 5 in S. W. " " " S 32 in N. W. " " "</p> <p>with 4 notches on E. and 2 notches on W. edges of rim; from which A yellow pine, 12 ins.diam., bears N. 48° 10' E., 130 lks. dist., marked T 11 N R 13 E S 33 B T A yellow pine, 20 ins.diam., bears S. 60° 50' E., 41 lks. dist., marked T 10 N R 13 E S 4 B T An oak, 10 ins.diam., bears S. 66° 00' W., 51 lks. dist., marked T 10 N R 13 E S 5 B T A pine, 24 ins. diam., bears N. 84° 15' W., 61 lks. dist., marked T 11 N R 13 E S 32 B T</p> <p>Land, rolling. Soil, 3rd rate. Timber, yellow pine, juniper, and oak. Sandstone formation.</p>
8.80 11.85 26.00 40.00 40.90 42.75 67.00	<p>East on a true line between secs. 4 and 33, Over N. slope, through heavy yellow pine, juniper, and oak timber.</p> <p>Drain, course N. 10° E.</p> <p>Drain, course N. 10° W. Ascend.</p> <p>Top of spur, bears N. and S. Continue on N. slope.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 40.02 chs. By 2nd set, 39.98 chs.; the mean of which is</p> <p>Set a sandstone, 24x12x8 ins., in mound of stone, 4 ft. base, 1-1/2 ft. high, for 1/4 sec. cor., marked 1/4 on N. face; from which A yellow pine, 18 ins.diam., bears N. 47° 20' E., 81 lks. dist., marked 1/4 S B T A yellow pine, 12 ins.diam., bears S. 10° 10' E., 22 lks. dist., marked 1/4 S B T</p> <p>Small drain, course N.</p> <p>Small drain, course N. 10° W., ascend gradual W. slope.</p> <p>At this point I set off 10° 45' S. on decl. arc; and at 12^h 13^m 53^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 17' N., which is 20" less than the proper lat.</p>

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 13 E.

Chains.
70.50 Top of ridge, bears N. and S. Descend gradual N. E. slope.
76.00 Drain, course N. 10° W. Ascend W. slope.
79.50 Top of spur, bears N. and S.
Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 80.03 chs.
By 2nd set, 79.97 chs.; the mean of which is
80.00 Set boundary post No. 14, for the cor. to secs. 3, 4, 33, and 34. Post, cap, and mound heretofore described. Cap marked
No. 14 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. W. and N. E. quadrants.
also marked
T 11 N S 34 in N. E. quadrant on rim.
R 13 E S 3 in S. E. " " "
T 10 N S 4 in S. W. " " "
S 33 in N. W. " " "
with 3 notches on E. and W. edges of rim; from which
A yellow pine, 16 ins.diam., bears N. 50° 30' E., 127 lks. dist., marked T 11 N R 13 E S 34 B T
A yellow pine, 27 ins.diam., bears S. 52° 20' E., 73 lks. dist., marked T 10 N R 13 E S 3 B T
A yellow pine, 20 ins.diam., bears S. 18° 00' W., 132 lks. dist., marked T 10 N R 13 E S 4 B T
A yellow pine, 14 ins.diam., bears N. 25° 15' W., 185 lks. dist., marked T 11 N R 13 E S 33 B T
Land, rolling and broken.
Soil, 3rd rate.
Timber, yellow pine, juniper, and oak.
Sandstone formation.

East on a true line between secs. 3 and 34,
Over N. slope, through heavy yellow pine, juniper, and oak.
8.80 Small drain, course N. 20° E.
11.85 Small drain, course N. 20° W.
17.60 Small drain, course N.
29.00 J. H. Hunter's house, bears N. about 10.00 chs.dist.
33.50 Rail fence, bears N. 10° W. and S. 10° E.
38.10 Drain, course N. 10° W.
Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point
By 1st set, 39.95 chs.
By 2nd set, 40.05 chs.; the mean of which is
40.00 Set a sandstone, 22x18x8 ins., 16 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which
A white oak, 14 ins.diam., bears N. 29° E., 20 lks. dist., marked 1/4 S B T
A white oak, 8 ins.diam., bears S. 75° 30' W., 32 lks. dist., marked 1/4 S B T
49.25 Drain, course N. W.
58.58 Rail fence, bears N and S. W., thence over gradual W. slope.
76.25 Payson and Heber road, bears N. 80° W. and S. 80° E.
Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 79.97 chs.
By 2nd set, 80.03 chs.; the mean of which is
80.00 Set boundary post No. 13, for the cor. to secs.

Chains. 2, 3, 34, and 35. Post, cap, and mound heretofore described. Cap marked
 No. 13 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. W. and N. E. quadrants.
 also marked
 T 11 N S 35 in N. E. quadrant on rim
 R 13 E S 2 in S. E. " " "
 T 10 N S 3 in S. W. " " "
 S 34 in N. W. " " "
 with 4 notches on W. and 2 notches on E. edges of rim; from which
 A yellow pine, 18 ins.diam., bears N. 66° 05' E., 112 lks. dist., marked T 11 N R 13 E S 35 B T
 A yellow pine, 14 ins.diam., bears S. 55° 00' E., 63 lks. dist., marked T 10 N R 13 E S 2 B T
 A yellow pine, 20 ins.diam., bears S. 38° 15' W., 79 lks. dist., marked T 10 N R 13 E S 3 B T
 A yellow pine, 20 ins.diam., bears N. 57° 25' W., 77 lks. dist., marked T 11 N R 13 E S 34 B T
 Land, rolling.
 Soil, 3rd rate.
 Timber, yellow pine, juniper, and oak.
 Sandstone formation.
 February 21, 1903.

February 22: At the cor. to secs. 2, 3, 34, and 35, S. Bdy. T. 11 N., R. 13 E., at 8 a.m., l.m.t., I set off 34° 17' N. on the lat. arc; 10° 24' S. on the decl. arc; and determine a true meridian with the solar.
 Thence I run
 East on a true line between secs. 2 and 35,
 Over nearly level land, through heavy yellow pine, juniper, and oak timber.
 8.50 Small drain, course N. W.
 12.25 Small drain, course N. W.
 14.20 Same drain, course S. W.
 19.40 Small drain, course S. W.
 27.00 Top of low ridge, bears N. and S., descend gradual E. slope.
 Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point
 By 1st set, 40.01 chs.
 By 2nd set, 39.99 chs.; the mean of which is
 40.00 Set a limestone, 30x10x6 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; raise a mound of stone, 3 ft. base, 1 ft. high, around stone; from which
 A yellow pine, 12 ins.diam., bears S. 41° 40' E., 47 lks. dist., marked 1/4 S B T
 A yellow pine, 12 ins.diam., bears N. 19° 50' W., 29 lks. dist., marked 1/4 S B T
 44.90 Drain, course S. E.
 49.25 Small drain, course S. E.
 Difference between measurements of 58.88 chs. by two sets of chainmen is 2 lks.; position of middle point
 By 1st set, 58.89 chs.
 By 2nd set, 58.87 chs.; the mean of which is
 58.88 Set boundary post No. 12. Post, cap, and mound heretofore described. Cap marked
 No. 12 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. W. and N. E. quadrants.

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 13 E.

Chains.	
59.15	Payson and Heber road, bears N. E. and S. W.
61.50	H. Larsen's house, bears S. 30° E., 15.00 chs. dist.
63.40	Drain, course S.
65.76	Rail fence, bears N. 10° E. and S. 10° W.
69.50	Top of low spur, bears N. and S. Descend gradual E. slope.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point
	By 1st set, 80.03 chs.
	By 2nd set, 79.97 chs.; the mean of which is
80.00	Set boundary post No. 11, for the cor. to secs. 1, 2, 35, and 36. Post, cap, and mound heretofore described. Cap marked
	No. 11 on S. side of cap.
	1903 on S. side of rim.
	RESERVE in N. W. and N. E. quadrants.
	also marked
	T 11 N S 36 in N. E. quadrant on rim.
	R 13 E S 1 in S. E. " " "
	T 10 N S 2 in S. W. " " "
	S 35 in N. W. " " "
	with 5 notches on W. and 1 notch on E. edges of rim; from which
	A yellow pine, 18 ins.diam., bears N. 66° 50' E., 124 lks. dist., marked T 11 N R 13 E S 36 B T
	A yellow pine, 24 ins.diam., bears S. 67° 30' E., 110 lks. dist., marked T 10 N R 13 E S 1 B T
	A yellow pine, 20 ins.diam., bears S. 29° 10' W., 90 lks. dist., marked T 10 N R 13 E S 2 B T
	A yellow pine, 30 ins.diam., bears N. 44° 15' W., 104 lks. dist., marked T 11 N.R 13 E S 35 B T
	Land, rolling.
	Soil, 3rd rate.
	Timber, yellow pine, juniper, oak, and scattering walnut
	East on a true line between secs. 1 and 36, Over nearly level land, through yellow pine timber.
3.50	Head of rocky drain, course S.
14.60	Rail fence, bears N. 20° W. and S. 20° E. Leave timber, enter cultivated land.
26.70	Drain, course S. 10° E.
30.00	Log cabin, bears S.; 15.00 chs. dist.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 40.02 chs.
	By 2nd set, 39.98 chs.; the mean of which is
40.00	Set a sandstone, 30x12x8 ins., 18 ins. in the ground for 1/4 sec. cor., raise a mound of stone, 3 ft. base, 8 ins. high, around cor., marked 1/4 on N. face; from which
	A yellow pine, 12 ins.diam., bears S. 69° 40' E., 107 lks. dist., marked 1/4 S B T
	A yellow pine, 6 ins.diam., bears N. 10° 10' W., 131 lks. dist., marked 1/4 S B T
40.50	Leave cultivated land, enter timber, bears N. W. and S. E. Ascend gradual S. W. slope from 1/4 sec.cor.
45.68	Rail fence, bears N. 80° W. and S. 80° E.
47.10	Change to gradual E. slope.
52.15	Drain, course S. W.
56.50	At this point I set off 10° 22' S. on the decl. arc; and at 12 ^h 13 ^m 47 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 17' N., which is 20" less than the proper lat.

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 13 E.

Chains.	
59.65	Drain, course S. W.
61.30	Drain, course S. W., thence over nearly level land.
74.75	Small drain, course S. E.
78.00	Pack trail, bears N. 80° W. and S. 80° E.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 80.02 chs.
	By 2nd set, 79.98 chs.; the mean of which is
80.00	Set boundary post No. 10, for the cor. to Tps. 10 and 11 N., Rgs. 13 and 14 E. Post, cap, and mound heretofore described. Cap marked
	No. 10 on S. side of cap.
	1903 on S. side of rim.
	RESERVE in N. W. and N. E. quadrants.
	also marked
	T 11 N S 31 in N. E. quadrant on rim.
	R 14 E S 6 in S. E. " " "
	T 10 N S 1 in S. W. " " "
	R 13 E S 36 in N. W. " " "
	with 6 notches on N., S., E., and W. edges of rim; from which
	A yellow pine, 24 ins.diam., bears N. 27° 50' E., 49 lks. dist., marked T 11 N R 14 E S 31 B T
	A yellow pine, 12 ins.diam., bears S. 49° 10' E., 52 lks. dist., marked T 10 N R 14 E S 6 B T
	A yellow pine, 14 ins.diam., bears S. 43° 40' W., 143 lks. dist., marked T 10 N R 13 E S 1 B T
	A juniper, 30 ins.diam., bears N. 82° 50' W., 97 lks. dist., marked T 11 N R 13 E S 36 B T
	Land, rolling and level.
	Soil, 3rd rate.
	Timber, yellow pine, juniper, and oak.
	Sandstone formation.
	At the cor. to Tps. 10 and 11 N., Rs. 13 and 14 E., at 2 p.m., l.m.t., I set off 34° 17' N. on the lat. arc; 10° 20' S. on the decl. arc; and determine a true meridian with the solar.
	Thence I run
	East on a true line between secs. 6 and 31 (deducting 98 lks. for convergency),
	Over rolling land, through heavy yellow pine, juniper, and oak timber.
4.25	Drain, course S. 10° W.
4.75	Small drain, course S. W.
15.50	Top of spur, bears S. W. and N. E. Descend gradual S. E. slope.
17.50	Small drain, course S. W. Ascend gradual S. W. slope.
	Difference between measurements of 39.02 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 39.00 chs.
	By 2nd set, 39.04 chs.; the mean of which is
39.02	Set a sandstone, 22x12x8 ins., 16 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which
	A yellow pine, 30 ins.diam., bears N. 52° E., 130 lks. dist., marked 1/4 S B T
	A yellow pine, 12 ins.diam., bears S. 13° 05' E., 76 lks. dist., marked 1/4 S B T
47.25	Drain, course S. W.
61.90	Drain, course S.
76.40	Drain, course S

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 14 E.

Chains.	Difference between measurements of 79.02 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 79.01 chs. By 2nd set, 79.03 chs.; the mean of which is
79.02	Set boundary post No. 9, for the cor. to secs. 5, 6, 31, and 32. Post, cap, and mound heretofore described. Cap marked No. 9 on S. side of cap. 1903 on S. side of rim. RESERVE in N. W. and N. E. quadrants. also marked T 11 N S 32 in N. E. quadrant on rim. R 14 E S 5 in S. E. " " " T 10 N S 6 in S. W. " " " S 31 in N. W. " " "
	with 5 notches on E. and 1 notch on W. edges of rim; from which A yellow pine, 30 ins.diam., bears N. 57° 40' E., 110 lks. dist., marked T 11 N R 14 E S 32 B T A juniper, 40 ins.diam., bears S. 45° 00' E., 82 lks. dist., marked T 10 N R 14 E S 5 B T An oak, 14 ins.diam., bears S. 97° 15' W., 180 lks. dist., marked T 10 N R 14 E S 6 B T A yellow pine, 24 ins.diam., bears N. 2° 30' W., 89 lks. dist., marked T 11 N R 14 E S 31 B T Land, rolling. Soil, 3rd rate. Timber, yellow pine, juniper, and oak. Sandstone formation. February 22, 1903.
	February 26: At the cor. to secs. 5, 6, 31, and 32, S. Bdy. T. 11 N., R. 14 E., at 8 a.m., l.m.t., I set off 34° 17' N. on the lat. arc; 9° 57' S. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 14° 00' E. Thence I run East on a true line between secs. 5 and 32, Over S. slope, through pine and juniper timber-
3.00	Log cabin, bears N. 3.00 chs.
3.75	Spring drain, 3 lks. wide, 2 ins. deep, course S.
17.50	West Fork Colcord Creek, 10 lks. wide, 4 ins. deep, course S. 70° W. Ascend N. W. slope.
20.00	Top of ascent, bears N. 70° E. and S. 70° W., thence over gradual S. W. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is
40.00	Set a sandstone, 24x12x6 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which A juniper, 16 ins.diam., bears N. 57° 50' E., 67 lks. dist., marked 1/4 S B T A yellow pine, 14 ins.diam., bears S. 46° 50' E., 111 lks. dist., marked 1/4 S B T
62.65	East Fork Colcord Creek, 10 lks. wide, 3 ins. deep, course S. 70° W., ascend steep N. W. slope of mountain.
74.40	Side hill drain, course N. W. The true point for cor. to secs. 4, 5, 32, and 33 falls on steep rock.

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 14 E.

Chains.	<p>Difference between measurements of 80.50 chs. by two sets of chainmen is 6 lks.; position of middle point</p> <p>By 1st set, 80.47 chs. By 2nd set, 80.53 chs.; the mean of which is</p> <p>80.50 Set boundary post No. 8, for the Witness Cor. to secs. 4, 5, 32, and 33. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 8 on S. side of cap. 1903 on S. side of rim. RESERVE in N. W. and N. E. quadrants. also marked</p> <p>W C in N. E. quadrant on rim. T 11 N S 33 in N. E. " " " R 14 E S 4 in S. E. " " " T 10 N S 5 in S. W. " " " S 32 in N. W. " " "</p> <p>with 2 notches on W. and 4 notches on E. edges of rim; from which</p> <p>A white oak, 16 ins.diam., bears N. 74° 30' E., 47 lks. dist., marked T 11 N R 14 E S 33 W C B T</p> <p>A white oak, 8 ins.diam., bears S. 45° E., 16 lks.dist., marked T 10 N R 14 E S 4 W C B T</p> <p>A white oak, 6 ins.diam., bears S. 15° 30' W., 36 lks. dist., marked T 10 N R 14 E S 5 W C B T</p> <p>A white oak, 10 ins.diam., bears N. 3° 30' W., 40 lks. dist., marked T 11 N R 14 E S 32 W C B T</p> <p>Land, rolling and mountainous. Soil, 3rd rate. Timber, yellow pine, juniper, oak, red fir, alder, sycamore, box elder, and black locust. Sandstone formation.</p>
10.00	<p>East on a true line between secs. 4 and 33. Ascend steep N. W. slope of mountain, through oak and black locust timber. Counting from true point for sec. cor.</p>
21.10	<p>Side hill drain, course N. W. Rim rock of mountain, bears S. W. and N. 10° E., 500 ft. above sec. cor.</p>
23.00	<p>At this point I set off 8° 55' S. on the decl. arc; and at 12^h 13^m 13^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 17' N., which is 20" less than the proper lat. Thence over nearly level land, through heavy yellow pine timber.</p>
40.00	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point</p> <p>By 1st set, 40.05 chs. By 2nd set, 39.95 chs.; the mean of which is</p> <p>40.00 Set a sandstone, 24x14x6 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which</p> <p>A yellow pine, 14 ins.diam., bears S. 52° 05' E., 36 lks. dist., marked 1/4 S B T</p> <p>A yellow pine, 20 ins.diam., bears N. 66° 25' W., 47 lks. dist., marked 1/4 S B T</p>
42.65	<p>Colcord Canyon, 3.00 chs. wide, 50 ft. deep, with stream in bottom 10 lks. wide, 3 ins. deep, course N. 70° W. Continue over nearly level land.</p>
63.00	<p>Shallow drain, course N. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p>

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 14 E.

Chains. By 1st set, 79.99 chs.
By 2nd set, 80.01 chs.; the mean of which is
80.00 Set boundary post No. 7, for the cor. to secs. 3, 4,
33, and 34. Post, cap, and mound heretofore de-
scribed. Cap marked
No. 7 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. W. and N. E. quadrants.
also marked
T 11 N S 34 in N. E. quadrant on rim.
R 14 E S 3 in S. E. " " "
T 10 N S 4 in S. W. " " "
S 33 in N. W. " " "
with 3 notches on E. and W. edges of rim; from
which
A yellow pine, 14 ins.diam., bears N. 37° 50' E.,
26 lks. dist., marked T 11 N R 14 E S 34 B T
A yellow pine, 12 ins.diam., bears S. 42° 50' E.,
70 lks. dist., marked T 10 N R 14 E S 3 B T
A yellow pine, 30 ins.diam., bears S. 45° 30' W.,
120 lks.dist., marked T 10 N R 14 E S 4 B T
A yellow pine, 14 ins.diam., bears N. 79° 20' W.,
69 lks. dist., marked T 11 N R 14 E S 33 B T
Land, mountainous.and level.
Soil, 3rd rate.
Timber, yellow pine, black locust, oak, and red fir.
February 26, 1903.

February 27: At the cor. to secs. 3, 4, 33, and 34,
S. bdy. T. 11 N., R. 14 E., at 8 a.m., l.m.t., I
set off 34° 17' N. on the lat. arc; 8° 45' S. on
the decl. arc; and determine a true meridian with
the solar.
Magnetic declination 14° 00' E.
Thence I run
East on a true line between secs. 3 and 34,
Over nearly level land, through heavy yellow pine
timber.
27.20 Shallow drain, course N.
Difference between measurements of 40.00 chs. by two
sets of chainmen is 2 lks.; position of middle
point
By 1st set, 40.01 chs.
By 2nd set, 39.99 chs.; the mean of which is
40.00 Set a sandstone, 30x8x6 ins., 12 ins. in the ground
for 1/4 sec. cor., marked 1/4 on N. face; raise a
mound of stone, 3 ft. base, 1 ft. high, around
stone; from which
A yellow pine, 24 ins.diam., bears N. 21° 30' E.,
27 lks. dist., marked 1/4 S B T
A yellow pine, 10 ins.diam., bears S. 77° W.,
35 lks. dist., marked 1/4 S B T
44.00 Shallow drain, course N.
71.75 Shallow drain, course N.
73 40 Pleasant Valley and Heber road, bears N. 10° E. and
S. 20° W.
Difference between measurements of 80.00 chs. by two
sets of chainmen is 4 lks.; position of middle
point
By 1st set, 79.98 chs.
By 2nd set, 80.02 chs.; the mean of which is
80.00 Set boundary post No. 6, for the cor. to secs. 2, 3,
34, and 35. Post, cap, and mound heretofore de-
scribed. Cap marked

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 14 E.

Chains.

No. 6 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked
T 11 N S 35 in N. E. quadrant on rim.
R 14 E S 2 in S. E. " " "
T 10 N S 3 in S. W. " " "
S 34 in N. W. " " "

with 4 notches on W. and 2 notches on E. edges of rim; from which

- A yellow pine, 12 ins.diam., bears N. 32° 40' E., 12 lks. dist., marked T 11 N R 14 E S 35 B T
- A yellow pine, 30 ins.diam., bears S. 61° 45' E., 50 lks. dist., marked T 10 N R 14 E S 2 B T
- A yellow pine, 10 ins.diam., bears S. 66° W., 58 lks. dist., marked T 10 N R 14 E S 3 B T
- A yellow pine, 14 ins.diam., bears N. 37° 10' W., 84 lks. dist., marked T 11 N R 14 E S 34 B T

Land, nearly level.

Soil, 2nd and 3rd rate.

Timber, yellow pine, oak, and aspen.

Sandstone formation.

East on a true line between secs. 2 and 35, Over nearly level land, through heavy yellow pine timber.

21.30 Small drain, course N.

33.10 Small drain, course N.

Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point

By 1st set, 40.01 chs.

By 2nd set, 39.99 chs.; the mean of which is

40.00 Set a sandstone, 36x24x6 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; raise a mound of stone, 3 ft. base, 1 ft. high, around stone; from which

- A yellow pine, 14 ins.diam., bears S. 71° 15' E., 41 lks. dist., marked 1/4 S B T
- A yellow pine, 20 ins.diam., bears N. 25° 25' W., 17 lks. dist., marked 1/4 S B T

55.50 Sink hole, 20 ft. deep, 3.00 chs. in diam.

79.50 North edge of sink hole, 2.00 chs. diam., 30 ft. deep.

Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 80.02 chs.

By 2nd set, 79.98 chs.; the mean of which is

80.00 Set boundary post No. 5, for the cor. to secs. 1, 2, 35, and 36. Post, cap, and mound heretofore described. Cap marked

No. 5 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked
T 11 N S 36 in N. E. quadrant on rim.
R 14 E S 1 in S. E. " " "
T 10 N S 2 in S. W. " " "
S 35 in N. W. " " "

with 5 notches on W. and 1 notch on E. edges of rim; from which

- A yellow pine, 8 ins.diam., bears N. 31° 15' E., 30 lks. dist., marked T 11 N R 14 E S 36 B T
- A yellow pine, 8 ins.diam., bears S. 64° 50' E., 24 lks. dist., marked T 10 N R 14 E S 1 B T
- A yellow pine, 14 ins.diam., bears S. 67° W., 27 lks. dist., marked T 10 N R 14 E S 2 B T

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 14 E.

Chains.	<p>A yellow pine, 12 ins.diam., bears N. 26° 50' W., 57 lks. dist., marked T 11 N R 14 E S 35 B T Land, nearly level. Soil, 2nd and 3rd rate. Timber, yellow pine and oak. Sandstone formation.</p>
	<p>At the cor. to secs. 1, 2, 35, and 36, S. bdy. T.11 N., R. 14 E., I set off 8° 42' S. on the decl. arc; and at 12^h 13^m 03^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 17' N., which is 20" less than the proper lat. Thence I run East on a true line between secs. 1 and 36, Over level land, through heavy yellow pine and oak timber.</p>
7.00	South edge of sink hole, 20 ft. deep, 150 lks. diam.
30.00	Descend gradual S. E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is
40.00	Set a sandstone, 24x12x10 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which A yellow pine, 18 ins.diam., bears S. 41° W., 67 lks. dist., marked 1/4 S B T A yellow pine, 20 ins.diam., bears N. 32° 30' W., 43 lks. dist., marked 1/4 S B T
60.00	Change to gradual S. slope.
78.00	Change to E. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 79.97 chs. By 2nd set, 80.03 chs.; the mean of which is
80.00	Set boundary post No. 4, for the cor. to Tps. 10 and 11 N., Rs. 14 and 15 E. Post, cap, and mound heretofore described. Cap marked No. 4 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 11 N S 31 in N. E. quadrant on rim. R 15 E S 6 in S. E. " " " T 10 N S 1 in S. W. " " " R 14 E S 36 in N. W. " " "
	<p>with 6 notches on N., S., E., and W. edges of rim; from which A yellow pine, 16 ins.diam., bears N. 83° E., 51 lks. dist., marked T 11 N R 15 E S 31 B T A yellow pine, 20 ins.diam., bears S. 48° 15' E., 41 lks. dist., marked T 10 N R 15 E S 3 B T A yellow pine, 14 ins.diam., bears S. 36° 50' W., 93 lks. dist., marked T 10 N R 14 E S 1 B T A yellow pine, 16 ins.diam., bears N. 21° 50' W., 68 lks. diam., marked T 11 N R 14 E S 36 B T Land, level and rolling. Soil, 3rd rate. Timber, yellow pine, oak, timber on the mesa good quality. Snow over the last three miles 2 or 3 ft. deep.</p>

Black Mesa Forest Reserve Boundary.
 South Boundary T. 11 N., R. 15 E.

///

Chains. At the cor. to Tps. 10 and 11 N., Rs. 14 and 15 E.
 At 2 p.m., l.m.t., I set off 34° 17' N. on lat.
 arc; 8° 40' S. on the decl. arc; and determine a
 true meridian with the solar.
 Magnetic declination 14° 10' E.

Thence I run
 East on a true line between secs. 6 and 31 (deduct-
 ing 98 lks. for convergency.)

9.00 Descend E. slope, through heavy yellow pine timber.
 Change to steep E. slope into canyon.

36.75 Head of drain, course S. 10° E., foot of 500-ft.
 descent; ascend gradual S. W. slope.
 Difference between measurements of 39.02 chs. by two
 sets of chainmen is 8 lks.; position of middle
 point
 By 1st set, 38.98 chs.
 By 2nd set, 39.06 chs.; the mean of which is

39.02 Set a sandstone, 24x12x12 ins. in mound of stone,
 4 ft. base, 1-1/2 ft. high, for 1/4 sec. cor.,
 marked 1/4 on N. face; from which
 A yellow pine, 8 ins.diam., bears S. 76° E.,
 28 lks. dist., marked 1/4 S B T
 A yellow pine, 12 ins.diam., bears N. 61° 50' W.,
 36 lks. dist., marked 1/4 S B T

46.00 Top of spur, bears N. W. and S. E. Descend N. E.
 slope.

63.00 Foot of descent, bears N. W. and S. E.

63.36 Canyon Creek, 20 lks. wide, 6 ins. deep, course
 S. 30° E.

65.07 Wire fence, bears N. 10° W. and S. 10° E.

71.50 Leave creek bottom, bears N. 30° W. and S. 30° E.
 Ascend gradual S. W. slope.

77.00 Drain, course S. W.

78.58 Pack trail, bears S. 20° W. and N. 20° E.
 Difference between measurements of 79.02 chs. by two
 sets of chainmen is 6 lks.; position of middle
 point
 By 1st set, 79.05 chs.
 By 2nd set, 78.99 chs.; the mean of which is

79.02 Set boundary post No. 3, for the cor. to secs. 5, 6,
 31, and 32. Post, cap, and mound heretofore de-
 scribed. Cap marked
 No. 3 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. and N. W. quadrants.
 also marked
 T 11 N S 32 in N. E. quadrant on rim.
 R 15 E S 5 in S. E. " " "
 T 10 N S 6 in S. W. " " "
 S 31 in N. W. " " "

with 1 notch on W. and 5 notches on E. edges of rim;
 from which
 A yellow pine, 14 ins.diam., bears N. 42° 05' E.,
 19 lks. dist., marked T 11 N R 15 E S 32 B T
 A yellow pine, 20 ins.diam., bears S. 41° 10' E.,
 62 lks. dist., marked T 10 N R 15 E S 5 B T
 A yellow pine, 18 ins.diam., bears S. 72° 30' E.,
 99 lks. dist., marked T 10 N R 15 E S 6 B T
 A yellow pine, 20 ins.diam., bears N. 67° 45' W.,
 98 lks. dist., marked T 11 N R 15 E S 31 B T

Land, mountainous.
 Soil, 3rd and 4th rate.
 Timber, yellow pine, oak, juniper, red fir on upland;
 cottonwood, sycamore, ash, box elder along Canyon
 Creek.
 Sandstone formation.

February 27, 1903.

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 15 E.

Chains. February 28: At the cor. to secs. 5, 6, 31, and 32, S. bdy. T. 11 N., R. 15 E., at 8 a.m., l.m.t., I set off 34° 17' N. on the lat. arc; 8° 12' S. on the decl. arc; and determine a true meridian with the solar.

Magnetic declination 14° 15' E.

Thence I run
East on a true line between secs. 5 and 32,
Over gradual S. W. slope, through yellow pine timber.
From this cor. Raymer's ranch house bears S. 10° E.
about 50.00 chs.

.25 A small drain, course S. W.
17.75 A small drain, course S. 20° W.
28.00 Top of spur, bears N. 20° E. and S. 20° W. Descend gradual S. E. slope.
Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
By 1st set, 40.02 chs.
By 2nd set, 39.98 chs.; the mean of which is

40.00 Set a sandstone, 22x12x8 ins., 16 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which
A yellow pine, 20 ins.diam., bears N. 27° 25' E., 207 lks. dist., marked 1/4 S B T
A white oak, 16 ins.diam., bears S. 41° 35' W., 101 lks. dist., marked 1/4 S B T

43.16 Rail fence, bears N. and S.
43.90 Drain, course S.
45.25 Drain, course S. W.
76.10 Drain, course S. W. Ascend gradual N. W. slope.
Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point
By 1st set, 80.04 chs.
By 2nd set, 79.96 chs.; the mean of which is

80.00 Set boundary post No. 2, for the cor. to secs. 4, 5, 32, and 33. Post, cap, and mound heretofore described. Cap marked
No. 2 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked
T 11 N S 33 in N. E. quadrant on rim.
R 15 E S 4 in S. E. " " "
T 10 N S 5 in S. W. " " "
S 32 in N. W. " " "

with 4 notches on E. and 2 notches on W. edges of rim; from which
A yellow pine, 40 ins.diam., bears N. 23° 55' E., 91 lks. dist., marked T 11 N R 15 E S 33 B T
A yellow pine, 18 ins.diam., bears S. 43° 10' E., 111 lks. dist., marked T 10 N T 15 E S 4 B T
A yellow pine, 27 ins.diam., bears S. 2° 20' W., 104 lks. dist., marked T 10 N R 15 E S 5 B T
A white oak, 14 ins.diam., bears N. 66° 15' W., 208 lks. dist., marked T 11 N R 15 E S 32 B T

Land, rolling and broken.
Soil, 3rd and 4th rate.
Timber, yellow pine, oak, and juniper.
Sandstone formation.

Black Mesa Forest Reserve Boundary,
South Boundary T. 11 N., R. 15 E.

<p>Chains.</p> <p>1.30</p> <p>3.70</p> <p>4.65</p> <p>14.59</p>	<p>East on a true line between fractional secs. 4 and 33, Ascend gradual N. W. slope.</p> <p>Small drain, course N. W.</p> <p>Same drain, course S. W.</p> <p>Change to gradual S. W. slope.</p> <p>Difference between measurements of 14.59 chs. by two sets of chainmen is nothing.</p> <p>Intersect the W. Bdy. of the White Mountain Indian Reservation, 16.26 chs. N. 0° 03' E. of mile corner No. 1, which is a red sandstone, 6x8x6 ins. above ground, firmly set, marked W M I R W B 1 M on E. face; witnessed by four bearing trees in good state of preservation.</p> <p>Set boundary post No. 1, for Closing Cor. to frac'l secs. 4 and 33. Post, cap, and mound heretofore described. Cap marked</p> <p style="padding-left: 2em;">No. 1 on S. side of cap.</p> <p style="padding-left: 2em;">1903 on S. side of rim.</p> <p style="padding-left: 2em;">RESERVE in N. W. quadrant.</p> <p style="padding-left: 2em;">C C on W. side of rim.</p> <p style="padding-left: 2em;">T 11 N S 33 in N. W. quadrant on rim.</p> <p style="padding-left: 2em;">T 10 N R 15 E S 4 in S. W. " " "</p> <p>with 6 notches on N. and S. edges of rim; from which</p> <p style="padding-left: 2em;">A yellow pine, 20 ins. diam., bears S. 31° 35' W., 107 lks. dist., marked T 10 N R 15 E S 4 C C B T</p> <p style="padding-left: 2em;">A yellow pine, 18 ins. diam., bears N. 28° 30' W., 38 lks. dist., marked T 11 N R 15 E S 33 C C B T</p> <p>Land, rolling.</p> <p>Soil, 3rd rate.</p> <p>Timber, yellow pine, juniper, and oak.</p>
<p>39.56</p> <p>2.65</p> <p>8 00</p> <p>15 00</p> <p>39.56</p>	<p>Retracement of a portion of the West Boundary of the White Mountain Indian Reservation.</p> <p>At the 1st mile corner, which is a red sandstone, witnessed and marked, I run</p> <p>North on a random line from Mile Corner No. 1.</p> <p>The 1/2 mile cor., bears east 4 lks. dist., which is a red sandstone, 14x18x4 ins. above ground, marked W M I R W B 1/2 M on E. face; witnessed by two bearing trees in good state of preservation, also mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, W. of cor.</p> <p>Thence I run</p> <p>S. 0° 03' W. on a true line on 1st mile, over W. slope, through pine and oak timber.</p> <p>Descend steep S. slope.</p> <p>Drain, course S. W., foot of 150-ft. descent, ascend steep N. W. slope.</p> <p>Top of spur, bears E. and W. Descend S. W. slope.</p> <p>Difference between measurements of 39 56 chs. by two sets of chainmen is 6 lks.; position of middle point</p> <p style="padding-left: 2em;">By 1st set, 39.59 chs.</p> <p style="padding-left: 2em;">By 2nd set, 39.53 chs.; the mean of which is</p> <p>The 1st mile corner heretofore described.</p> <p>Land, broken.</p> <p>Soil, 4th rate.</p> <p>Timber, yellow pine, oak, and juniper.</p> <p style="text-align: right;">February 28, 1903.</p>
	<p>Note: This line was retraced before the C. C. was set. Boundary Post No. 11.</p>

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 9 E.

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Chains. March 18, 1903. At the cor. to Tps. 11 and 12 N., Rgs. 9 and 10 E., Latitude 34° 22' 32" N., Longitude 111° 20' W., which I established January 17, 1903; at 9 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 1° 13' S. on the decl. arc; and determine a true meridian with the solar.
Magnetic declination 14° 10' E.

Thence I run
West on a true line between secs. 1 and 36.
Over gradual W. slope, through yellow pine, juniper, and oak timber; dense growth of live oak brush.

9.50 Ravine, 4.00 chs. wide, 50 ft. deep, course N. W.
11.80 Webber Creek, 20 lks. wide, 6 ins. deep, pure water, course S. 30' W., foot of 200-ft. descent.
14.00 Irrigation ditch, course S. 30° W.
15.00 Dim road, bears S. 30° W. and N. 30° E.
15.75 Ascend steep S. E. slope.
25.00 Change to S. W. slope.
31.25 Drain, course S. E., ascend S. E. slope.

Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
By 1st set, 40.04 chs.
By 2nd set, 39.96 chs.; the mean of which is

40.00 Set a limestone, 26x14x12 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone, for 1/4 sec. cor., marked 1/4 on N. face; from which
A juniper, 20 ins.diam., bears N. 4° 50' E., 47 lks. dist., marked 1/4 S B T
A yellow pine, 8 ins.diam., bears S. 74° 30' E., 38 lks.dist., marked 1/4 S B T

53.25 Change to gradual W. slope.
56.15 Drain, course S. 20° W., 100-ft. descent; ascend gradual S. E. slope.
69.40 Drain, course S., thence over gradual S. E. slope.

Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 80.03 chs.
By 2nd set, 79.97 chs.; the mean of which is

80.00 Set boundary post No. 44, for the cor. to secs. 1, 2, 35, and 36. Post, cap, and mound heretofore described. Cap marked
No. 44 on S. side of cap.
1903 on S. side of rim.
RESERVE in N.E.and N.W, quadrants.

also marked
T 12 N S 36 in N. E. quadrant on rim
R 9 E S 1 in S. E. " " "
T 11 N S 2 in S. W. " " "
S 35 in N. W. " " "

5 notches on W. and 1 on E. edges of rim; from which
A yellow pine, 18 ins.diam., bears N. 65° 30' E., 86 lks. dist., marked T 12 N R 9 E S 36 B T
A yellow pine, 24 ins.diam., bears S. 47° 35' E., 12 lks. dist., marked T 11 N R 9 E S 1 B T
A juniper, 24 ins.diam., bears S. 43° 10' W., 133 lks.dist., marked T 11 N R 9 E S 2 B T
An oak, 8 ins.diam., bears N. 71° W., 44 lks. dist., marked T 12 N R 9 E S 35, B T

Land, mountainous,
Surface stony.
Soil, 3rd and 4th rate.
Timber, yellow pine, juniper, oak, and red cedar;
dense growth of live oak, manzanita, and mahogany brush.
Lime and sandstone formation.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 9 E.

Chains. At the cor. to secs. 1, 2, 35, and 36, S. Bdy. of T. 12 N., R. 9 E., I set off 1° 10' S. on the decl. arc; and at 12^h 03^m 28^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34°23' N., which is about 28" greater than the proper lat. Thence I run West on a true line between secs. 2 and 35, Over gradual S. E. slope, through oak, pine, and juniper; dense growth of live oak brush.

7.50 Pine and Myrtle mail trail, bears S. 20° W. and N. 80° E.
Note: This trail passes within 100 lks. of the sec. cor.

14.25 Top of ridge, bears N. and S., thence over gradual S. slope.

20.30 Head of small drain, course S.

23.50 Change to S. E. slope.

28.30 Drain, course S.
Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 39.97 chs.
By 2nd set, 40.03 chs.; the mean of which is

40.00 Set a sandstone, 26x20x10 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high around stone, for 1/4 sec. cor., marked 1/4 on N. face; from which
A juniper, 8 ins.diam., bears N. 83° 35' W., 23 lks. dist., marked 1/4 S B T
No other trees in limits. Raise a mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.

43.00 Descend steep S. W. slope.

46.25 Drain, course S. 10° W., 100-ft. descent; ascend steep E. slope.

54.25 Top of spur, bears N. 20° W. and S. 20° E.

56.25 Drain, course S. 10° E. Ascend steep E. slope.

66.50 Top of ridge, bears N. and S., 100 ft. above last drain, thence over gradual S. W. slope.

70.00 Head of drain, course S. W.

72.50 Change to steep W. slope.

77.25 A dry branch, 10 lks. wide, course S., 100-ft. descent; ascend gradual E. slope.
Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point
By 1st set, 79.94 chs.
By 2nd set, 80.06 chs.; the mean of which is

80.00 Set boundary post No. 45, for the cor. to secs. 2, 3, 34, and 35. Post, cap, and mound heretofore described. Cap marked
No. 45 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N.W. quadrants.

Also marked
T 12 N S 35 in N. E. quadrant on rim.
R 9 E S 2 in S. E. " " "
T 11 N S 3 in S. W. " " "
S 34 in N. W. " " "

with 4 notches in W. and 2 notches in E. edges of rim; from which
A pine, 20 ins.diam., bears N. 80° 50' E., 249 lks. dist., marked T 12 N R 9 E S 35 B T
An oak, 14 ins.diam., bears S. 56° 25' E., 42 lks. dist., marked T 11 N R 9 E S 2 B T
An oak, 12 ins.diam., bears S. 50° 20' W., 11 lks. dist., marked T 11 N R 9 E S 3 B T
An oak, 12 ins.diam., bears N. 32° 15' W., 26 lks. dist., marked T 12 N R 9 E S 34 B T

Black Mesa Forest Reserve Boundary,
South boundary T. 12 N., R. 9 E.

Chains. Land, mountainous.
Soil, 4th rate.
Timber, scattering yellow pine, juniper, and oak;
live oak brush.
March 18, 1903.

X
March 19, 1903. At the cor. to secs. 2, 3, 34, and 35, S. Bdy. T. 12 N., R. 9 E., at 9 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 0° 49' S. on the decl. arc; and determine a true meridian with the solar.
Thence I run
West on a true line between secs. 3 and 34,
Ascend E. slope, through scattering pine, juniper, and oak timber, dense growth of live oak and manzanita brush.
7.15 Small drain, course S. 20° E.
24.85 Drain, course S. E.
29.40 Drain, course S. E.
37.70 At this point I set off 0° 46' S. on the decl. arc; and at 12^h 08^m 10^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is about 28" greater than the proper lat.
Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point
By 1st set, 39.96 chs.
By 2nd set, 40.04 chs.; the mean of which is
40.00 Set a volcanic rock, 26x16x12 ins. in mound of stone 4 ft. base, 1-1/2 ft. high around stone, for 1/4 sec. cor., marked 1/4 on N. face; from which
A juniper, 34 ins.diam., bears S. 34° 20' E., 125 lks. dist., marked 1/4 S B T
An oak, 4 ins.diam., bears N. 32° 10' W., 31 lks. dist., marked 1/4 S B T
45.75 Ravine, 150 lks. wide, 20 ft. deep, spring drain, 3 lks. wide, 2 ins. deep, course S.
52.75 Drain, course S. E., ascend N. E. slope.
56.50 Change to S. E. slope.
57.65 Ravine, 75 lks. wide, 10 ft. deep, course S.
75.00 Drain, course S. 10° E., ascend steep S. E. slope.
79.00 Change to S. slope.
Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point
By 1st set, 79.94 chs.
By 2nd set, 80.06 chs.; the mean of which is
80.00 Set boundary post No. 46, for the cor. to secs. 3, 4, 33, and 34. Post, cap, and mound heretofore described. Cap marked
No. 46 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N.W. quadrants.
also marked
T 12 N S 34 in N. E. quadrant on rim.
R 9 E S 3 in S. E. " " "
T 11 N S 4 in S. W. " " "
S 33 in N. W. " " "
with 3 notches in E. and W. edges of rim. No trees within limits. Dig pits, 18x18x12 ins. in each sec. 5-1/2 ft. dist.
Land, mountainous.
Soil, 4th rate.
Timber, scattering yellow pine, oak, and juniper; dense growth of live oak, manzanita, mahogany, and other brush.
Volcanic rock.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 9 E.

Chains.	West on a true line between secs. 4 and 33. Ascend S. E. slope, through dense growth of live oak brush; scattering timber, oak, juniper, and yellow pine.
3.00	Change to S. slope.
3.90	Drain, course S.
16.50	Spring drain, course S., 2 lks. wide, 1 inch deep.
18.00	Quit work. March 19, 1903.
	March 20: At this point, at 8 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 0° 26' S. on the decl. arc; and determine a true meridian with the solar. Continue line west.
30.50	Top of spur, bears N. and S. From this point the rim rock bears N., about 15.00 chs. dist.
34.00	A ravine, 5.00 chs. wide, 100ft. deep, course S. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 39.97 chs. By 2nd set, 40.03 chs.; the mean of which is
40.00	Set a volcanic rock, 20x20x16 ins., in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone, for 1/4 sec. cor., marked 1/4 on N. face; No trees large enough within limits. Raise a mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor. Ascend steep S. E. slope from cor.
57.75	Change to steep S. W. slope.
77.25	Branch, 10 lks. wide, 2 ins. deep, pure water, course S., foot of 300-ft. descent; ascend gradual E. slope of mountains. Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks.; position of middle point By 1st set, 79.95 chs. By 2nd set, 80.05 chs.; the mean of which is
80.00	Set boundary post No. 47, for the cor. to secs. 4, 5, 32, and 33. Post, cap, and mound heretofore described. Cap marked No. 47 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 12 N S 33 in N. E. quadrant on rim. R 9 E S 4 in S. E. " " " T 11 N S 5 in S. W. " " " S 32 in N. W. " " " with 4 notches on E. and 2 notches on W. edges of rim; from which An oak, 8 ins. diam., bears N. 28° 35' E., 31 lks. dist., marked T 12 N R 9 E S 33 B T A yellow pine, 8 ins. diam., bears S. 34° 50' E., 64 lks. dist., marked T 11 N R 9 E S 4 B T A juniper, 18 ins. diam., bears S. 81° 50' W., 15 lks. dist., marked T 11 N R 9 E S 5 B T A juniper, 36 ins. diam., bears N. 84° 20' W., 48 lks. dist., marked T 12 N R 9 E S 32 B T Land, mountainous. Soil, 4th rate. Timber, scattering pine, oak, and juniper; dense growth of live oak, manzanita, mahogany, and other brush. Volcanic rock.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 9 E.

BOOK 1811

Chains. At the cor. to secs. 4, 5, 32, and 33, I set off
0° 22' S. on the decl. arc; and at 12^h 07^m 53^s
p.m., l.m.t., observe the sun on the meridian; the
resulting lat. is 34° 23' N., which is about 28"
greater than the proper lat.
Thence I run
West on a true line between secs. 5 and 32,
Ascend steep E. slope of mountain, through scatter-
ing timber, dense growth of live oak brush.

13.52 Rock ledge, 50 ft. high, bears S. 20° W. and N. 20° E.
15.00 Top of spur, bears N. and S., 600 ft. above creek.
15.50 Rock ledge, 20 ft. high, bears N. and S., descend
steep W. slope, through dense growth of live oak
brush.

29.50 Change from steep to gradual S. W. slope.
36.00 Small drain, course S. W.
Difference between measurements of 40.00 chs. by two
sets of chainmen is 8 lks.; position of middle
point
By 1st set, 40.04 chs.
By 2nd set, 39.96 chs.; the mean of which is

40.00 Set a volcanic rock, 26x14x12 ins. in mound of stone,
4 ft. base, 1-1/2 ft. high, around stone, for 1/4
sec. cor., marked 1/4 on N. face; from which
A juniper, 14 ins. diam., bears S. 75° W., 107 lks.
dist., marked 1/4 S B T
A juniper, 13 ins. diam., bears N. 80° 30' W.,
316 lks. dist., marked 1/4 S B T
March 20, 1903.
March 21: At 8 a.m., l.m.t., I set off 34° 23' N. on
the lat. arc; 0° 02' S. on the decl. arc; and de-
termine a true meridian with the solar.
Magnetic declination 14° 10' E.
Continue line W.

52.50 Leave oak brush, enter thicket of cypress cedar,
bears N. W. and S. E.
67.00 Leave cedar, enter live oak brush, bears N. E. and
S. W.
74.15 Small drain, course S. W.
Difference between measurements of 80.00 chs. by two
sets of chainmen is 6 lks.; position of middle
point
By 1st set, 80.03 chs.
By 2nd set, 79.97 chs.; the mean of which is

80.00 Set boundary post No. 48, for the cor. to secs. 5, 6,
31, and 32, Post, cap, and mound heretofore de-
scribed. Cap marked
No. 48 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked
R 9 E S 5 in S. E. quadrant on rim.
T 11 N S 6 in S. W. " " "
S 31 in N. W. " " "
T 12 N S 32 in N. E. " " "
with 5 notches on E. and 1 notch on W. edges of rim;
No trees large enough within limits. Dig pits,
18x18x12 ins. in each sec., 5-1/2 ft. dist.
Land, mountainous.
Soil, 4th rate.
Timber, scattering yellow pine, juniper, cedar, and
oak; dense growth of live oak, manzanita brush.

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 9 E.

<p>Chains.</p> <p>6.40</p> <p>10.00</p> <p>35.00</p> <p>39.50</p> <p>40.00</p> <p>55.15</p> <p>55.50</p> <p>64.50</p> <p>78.53</p>	<p>West on a true line between secs. 6 and 31, through dense growth of live oak and manzanita brush, over gradual S. W. slope.</p> <p>Branch, 5 lks. wide, 2 ins. deep, course S. W., foot of 900-ft. descent; ascend gradual S. E. slope.</p> <p>Change to gradual W. slope.</p> <p>Descend steep W. slope.</p> <p>Change to gradual W. slope.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point</p> <p style="padding-left: 40px;">By 1st set, 40.05 chs.</p> <p style="padding-left: 40px;">By 2nd set, 39.95 chs.; the mean of which is</p> <p>Set a sandstone, 28x16x12 ins. in mound of stone, 5 ft. base, 2 ft. high, around stone, for 1/4 sec. cor., marked 1/4 on N. face; from which</p> <p style="padding-left: 40px;">A juniper, 18 ins.diam., bears S. 62° 50' W., 31 lks. dist., marked 1/4 S B T</p> <p style="padding-left: 40px;">A juniper, 30 ins.diam., bears N. 17° 40' E., 100 lks. dist., marked 1/4 S B T</p> <p>Drain, course S. W., enter yellow pine timber, bears N. E. and S. W.</p> <p>At this point I set the declination arc at zero, and at 12^h 07^m 35^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is about 28" greater than the proper lat.</p> <p>Small drain, course S.</p> <p>Difference between measurements of 78.53 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p style="padding-left: 40px;">By 1st set, 78.51 chs.</p> <p style="padding-left: 40px;">By 2nd set, 78.55 chs.; the mean of which is</p> <p>Set boundary post No. 49, for the cor. to Tps. 11 and 12 N., Rgs. 8 and 9 E. Post, cap, and mound heretofore described. Cap marked</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 40px;">No. 49</td> <td style="padding-left: 40px;">on S. side of cap.</td> </tr> <tr> <td style="padding-left: 40px;">1903</td> <td style="padding-left: 40px;">on S. side of rim.</td> </tr> <tr> <td style="padding-left: 40px;">RESERVE</td> <td style="padding-left: 40px;">in N. E. and N. W. quadrants.</td> </tr> </table> <p style="padding-left: 80px;">also marked</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 40px;">T.12 N S 31</td> <td style="padding-left: 40px;">in N. E. quadrant on rim.</td> </tr> <tr> <td style="padding-left: 40px;">R 9 E S 6</td> <td style="padding-left: 40px;">in S. E. " " "</td> </tr> <tr> <td style="padding-left: 40px;">T 11 N S 1</td> <td style="padding-left: 40px;">in S. W. " " "</td> </tr> <tr> <td style="padding-left: 40px;">R 8 E S 36</td> <td style="padding-left: 40px;">in N. W. " " "</td> </tr> </table> <p>with 6 notches on N., S., E., and W. edges of rim; from which</p> <p style="padding-left: 40px;">A yellow pine, 48 ins.diam., bears N. 58° E., 140 lks. dist., marked T 12 N R 9 E S 31 B T</p> <p style="padding-left: 40px;">A yellow pine, 30 ins.diam., bears S. 21° 30' E., 87 lks. dist., marked T 11 N R 9 E S 6 B T</p> <p style="padding-left: 40px;">A yellow pine, 18 ins.diam., bears S. 45° 25' W., 240 lks. dist., marked T 11 N R 8 E S 1 B T</p> <p style="padding-left: 40px;">A yellow pine, 48 ins.diam., bears N. 85° 10' W., 409 lks. dist., marked T 12 N R 8 E S 36 B T</p> <p>Land, rolling.</p> <p>Soil, 2nd and 4th rate.</p> <p>Timber, yellow pine, oak, and juniper; live oak brush.</p> <p>Sandstone formation.</p>	No. 49	on S. side of cap.	1903	on S. side of rim.	RESERVE	in N. E. and N. W. quadrants.	T.12 N S 31	in N. E. quadrant on rim.	R 9 E S 6	in S. E. " " "	T 11 N S 1	in S. W. " " "	R 8 E S 36	in N. W. " " "
No. 49	on S. side of cap.														
1903	on S. side of rim.														
RESERVE	in N. E. and N. W. quadrants.														
T.12 N S 31	in N. E. quadrant on rim.														
R 9 E S 6	in S. E. " " "														
T 11 N S 1	in S. W. " " "														
R 8 E S 36	in N. W. " " "														
<p>South Boundary T. 12 N., R. 8 E.</p> <p>At the cor. to Tps. 11 and 12 N., Rgs. 8 and 9 E., at 2 p.m., l.m.t., I set off 34° 23' N. on the lat. arc; 0° 02' N. on the decl. arc; and determine a true meridian with the solar.</p> <p style="text-align: right;">Magnetic declination 14° 10' E.</p>															

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 8 E.

Chains.	<p>Thence I run West on a true line between secs. 1 and 36, Over gradual W. slope, through scattering pine timber.</p> <p>7.45 Pine and Payson road, bears N. 10° W. and S. 10° E.</p> <p>8.43 Rail fence, bears N. 10° W. and S. 10° E., leave timber, enter cultivated land.</p> <p>9.00 Ben McDonald's house, bears N. 4.00 chs.</p> <p>17.25 Pine Creek, .20 lks. wide, 4 ins. deep, course S. 10° E., low banks.</p> <p>33.60 Irrigation ditch, course S. 80° E. Difference between measurements of 40.00 chs. by two sets of chainmen is nothing.</p> <p>40.00 Set a sandstone, 22x12x10 ins., 16 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which A yellow pine, 14 ins.diam., bears S. 13° 15' E., 63 lks. dist., marked 1/4 S B T An oak, 14 ins.diam., bears S. 26° 30' W., 34 lks. dist., marked 1/4 S B T No trees in limits on N. side of line.</p> <p>48.30 Log fence, bears N. W. and S. 80° E. Leave cultivated land, enter timber, ascend gradual E. slope.</p> <p>78.00 Top of spur, bears N. and S. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 79.98 chs. By 2nd set, 80.02 chs.; the mean of which is</p> <p>80.00 Set boundary post No. 50, for the cor. to secs. 1, 2, 35, and 36. Post, cap, and mound heretofore described. Cap marked No. 50 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 12 N S 36 in N. E. quadrant on rim. T 11 N S 2 in S. W. " " " R 8 E S 1 in S. E. " " " S 35 in N. W. " " " with 5 notches on W. and 1 notch on E. edges of rim; from which A juniper, 18 ins.diam., bears N. 68° 40' E., 135 lks.dist., marked T 12 N R 8 E S 36 B T A yellow pine, 14 ins.diam., bears S. 30° 10' E. 105 lks.dist., marked T 11 N R 8 E S 1 B T A juniper, 14 ins.diam., bears S. 62° 35' W., 176 lks. dist., marked T 11 N R 8 E S 2 B T A yellow pine, 20 ins.diam., bears N. 25° 15' W., 16 lks. dist., marked T 12 N R 8 E S 35 B T Land, level and rolling. Soil, 2nd and 3rd rate. Timber, yellow pine, oak, and juniper; live oak and manzanita brush. Sandstone formation.</p> <p style="text-align: right;">March 21, 1903.</p>
	<p>March 23; At 8 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 0° 45' N. on the decl. arc; and determine a true meridian with the solar at the cor. to secs. 1, 2, 35, and 36, S. bdy. T. 12 N., R. 8 E. Magnetic declination 14° 10' E.</p> <p>Thence I run West on a true line between secs. 2 and 35, Over gradual S. W. slope, through scattering timber; dense growth of live oak brush.</p>

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 8 E.

Chains.	<p>12.80 Drain, course S. E., ascend gradual E. slope.</p> <p>22.30 Small drain, course S. E.</p> <p>33.77 Small drain, course S. E.</p> <p>Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p style="padding-left: 40px;">By 1st set, 39.99 chs.</p> <p style="padding-left: 40px;">By 2nd set, 40.01 chs.; the mean of which is</p>														
40.00	<p>Set a sandstone, 26x14x10 ins. in mound of stone, 4 ft. base, 2 ft. high, around stone, for 1/4sec. cor., marked 1/4 on N. face; from which</p> <p style="padding-left: 40px;">A juniper, 6 ins.diam., bears S. 94° 35' N., 92 lks. dist., marked 1/4 S B T</p> <p style="padding-left: 40px;">A red cedar, 8 ins, diam., bears N. 11° W., 111 lks. dist., marked 1/4 S B T</p>														
46.50	Drain, course S. E.														
52.50	Drain, course S. E.														
66.50	Ascend steep E. slope.														
72.50	<p>At this point I set off 0° 48' N. on the decl. arc; and at 12^h 06^m 57^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is about 28" greater than the proper lat.</p> <p>Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point</p> <p style="padding-left: 40px;">By 1st set, 79.96 chs.</p> <p style="padding-left: 40px;">By 2nd set, 80.04 chs.; the mean of which is</p>														
80.00	<p>Set boundary post No. 51, for the cor. to secs. 2, 3, 34, and 35. post, cap, and mound heretofore described. Cap marked</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 40px;">No. 51</td> <td>on S. side of cap.</td> </tr> <tr> <td style="padding-left: 40px;">1903</td> <td>on S. side of rim.</td> </tr> <tr> <td style="padding-left: 40px;">RESERVE</td> <td>in N. E. and N. W. quadrants.</td> </tr> </table> <p style="padding-left: 80px;">also marked</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 40px;">T 12 N S 35</td> <td>in N. E. quadrant on rim</td> </tr> <tr> <td style="padding-left: 40px;">R 8 E S 2</td> <td>in S. E. " " "</td> </tr> <tr> <td style="padding-left: 40px;">T 11 N S 3</td> <td>in S. W. " " "</td> </tr> <tr> <td style="padding-left: 40px;">S 34</td> <td>in N. W. " " "</td> </tr> </table> <p>with 4 notches on W. and 2 notches on E. edges of rim; from which</p> <p style="padding-left: 40px;">A juniper, 10 ins.diam., bears N. 23° 30' E., 21 lks. dist., marked T 12 N R 8 E S 35 B T</p> <p style="padding-left: 40px;">A juniper, 12 ins.diam., bears S. 62° 20' W., 75 lks. dist., marked T 11 N R 8 E S 3 B T</p> <p style="padding-left: 40px;">A juniper, 12 ins.diam., bears N. 4° 30' W., 21 lks.dist., marked T 12 N R 8 E S 34 B T</p> <p>No trees in limits in S. E. quadrant.</p> <p>Land, mountainous.</p> <p>Soil, 4th rate.</p> <p>Timber, scattering pine, oak, juniper, and red cedar; dense growth of live oak, manzanita brush.</p> <p>Sandstone formation.</p> <p style="text-align: right;">March 23, 1903.</p>	No. 51	on S. side of cap.	1903	on S. side of rim.	RESERVE	in N. E. and N. W. quadrants.	T 12 N S 35	in N. E. quadrant on rim	R 8 E S 2	in S. E. " " "	T 11 N S 3	in S. W. " " "	S 34	in N. W. " " "
No. 51	on S. side of cap.														
1903	on S. side of rim.														
RESERVE	in N. E. and N. W. quadrants.														
T 12 N S 35	in N. E. quadrant on rim														
R 8 E S 2	in S. E. " " "														
T 11 N S 3	in S. W. " " "														
S 34	in N. W. " " "														
1.65	<p>March 28: At 8 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 2° 43' N. on the decl. arc; and determine a true meridian with the solar at the cor. to secs. 2, 3, 33, and 34, S. Bdy. T. 12 N., R. 8 E.</p> <p style="text-align: right;">Magnetic declination 14° 10' E.</p> <p>Thence I run</p> <p>West on a true line between secs. 3 and 34.</p> <p>Ascend steep E. slope of mountain, through dense growth of brush and scattering timber.</p> <p>Side hill drain, course S. E.</p>														

Black Mesa Forest Reserve Boundary,
South Boundary T. 12 N., R. 8 E.

Chains.	<p>12.00 Rock ledge, 20 ft. high, bears N. E. and S. W.</p> <p>16.25 Top of mountain, bears N. E. and S. W., thence over level land, through juniper, pine, and oak timber.</p> <p>32.00 Change to gradual W. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is</p> <p>40.00 Set a volcanic rock, 30x16x10 ins., in mound of stone, 4 ft. base, 2 ft. high, around stone for 1/4 sec. cor., marked 1/4 on N. face; from which A juniper, 30 ins.diam., bears N. 12 lks. dist., marked 1/4 S B T An oak, 12 ins.diam., bears S. 87° 30' W., 25 lks. dist., marked 1/4 S B T</p> <p>42.00 Descend steep W. slope.</p> <p>56.75 Drain, course S. W., ascend gradual S. E. slope.</p> <p>62.00 Change to gradual W. slope.</p> <p>63.00 Leave yellow pine timber, bears N. W. and S. E. Continue in scattering juniper. Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 80.03 chs. By 2nd set, 79.97 chs.; the mean of which is</p> <p>80.00 Set boundary post No. 52, for the cor. to secs. 3, 4, 33, and 34. Post, cap, and mound heretofore described. Cap marked No. 52 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 12 N S 34 in N. E. quadrant on rim. R 8 E S 3 in S. E. " " " T 11 N S 4 in S.W. " " " S 33 in N.W. " " " with 3 notches on E. and W. edges of rim; from which A juniper, 36 ins.diam., bears N. 73° 35' E., 41 lks. dist., marked T 12 N R 8 E S 34 B T An oak, 12 ins.diam., bears S. 68° 30' E., 34 lks. dist., marked T 11 N R 8 E S 3 B T An oak, 12 ins.diam., bears S. 37° W., 325 lks. dist., marked T 11 N R 8 E S 4 B T A juniper, 18 ins.diam., bears N. 84° 50' W., 52 lks. dist., marked T 12 N R 8 E S 33 B T Land, mountainous and level. Soil, 4th rate. Timber, pine, juniper, and oak; live oak brush. Volcanic rock.</p>
22.40	<p>West on a true line between secs. 4 and 33, Over nearly level land, through scattering juniper. Rail fence, bears N. E. and S. W. From this point D. H. Jones' house bears N. about 20.00 chs.</p>
28.82	<p>Rail fence, bears N. 20° W. and S. 20° E. Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 39.99 chs.</p>
40.00	<p>By 2nd set, 40.01 chs.; the mean of which is Set volcanic rock, 24x14x6 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which</p>

Black Mesa Forest Reserve Boundary;
South Boundary T. 12 N., R. 8 E.

Chains	A yellow pine, 10 ins.diam., bears N. 62° 30' E., 69 lks. dist., marked 1/4 S B T
57.00	A yellow pine, 14 ins.diam., bears S. 76° 30' E., 57 lks. dist., marked 1/4 S B T At this point I set off 2° 46' N. on the decl. arc; and at 12 ⁿ 05 ^m 27 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 23' N., which is about 28" greater than the proper lat. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 79.98 chs. By 2nd set, 80.02 chs.; the mean of which is
80.00	Set boundary post No. 53, for the cor. to secs. 4, 5, 32, and 33. Post, cap, and mound heretofore described. Cap marked No. 53 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 12 N S 33 in N. E. quadrant on rim. R 8 E S 4 in S. E. " " " T 11 N S 5 in S. W. " " " S 32 in N. W. " " " with 4 notches on E. and 2 notches on W. edges of rim; from which A juniper, 18 ins.diam., bears N. 56° 50' E., 83 lks. dist., marked T 12 N R 8 E S 33 B T A juniper, 14 ins.diam., bears S. 25° 30' E., 30 lks. dist., marked T 11 N R 8 E S 4 B T A juniper, 24 ins.diam., bears S. 26° 30' W., 77 lks. dist., marked T 11 N R 8 E S 5 B T A juniper, 14 ins.diam., bears N. 5° 45' W., 146 lks. dist., marked T 12 N R 8 E S 32 B T Land, nearly level. Soil, 2nd and 3rd rate. Timber, scattering yellow pine and scattering ju- niper. Volcanic rock.
13.25	West on a true line between secs. 5 and 32, Over gradual W. slope, through scattering juniper and pine timber.
28.50	Drain, course N. W., ascend gradual N. E. slope. Change to gradual N. W. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 40.02 chs. By 2nd set, 39.98 chs.; the mean of which is
40.00	Set a volcanic rock, 24x14x12 ins., 18 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which A juniper, 24 ins.diam., bears S. 3° 50' E., 40 lks. dist., marked 1/4 S B T A juniper, 8 ins.diam., bears N. 18° 40' W., 92 lks. dist., marked 1/4 S B T
47.50	Small drain, course N. E., ascend gradual S. E. slope.
68.50	Change to gradual N. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is

Black Mesa Forest Reserve Boundary.
South boundary T. 12 N., R. 8 E.

Chains.
80.00

Set boundary post No. 54, for the cor. to secs. 5, 6, 31, and 32. Post, cap, and mound heretofore described. Cap marked
 No. 54 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. and N. W. quadrants.
 also marked
 T 12 N S 32 in N. E. quadrant on rim.
 R 8 E S 5 in S. E. " " "
 T 11 N S 6 in S. W. " " "
 S 31 in N. W. " " "
 With 5 notches on E. and 1 notch on W. edges of rim; from which
 An oak, 12 ins.diam., bears N. 59° 45' E., 89 lks. dist., marked T 12 N R 8 E S 32 B T
 An oak, 8 ins.diam., bears S. 18° E., 60 lks. dist., marked T 11 N R 8 E S 5 B T
 No other trees within limits. Dig pits, 18x18x12 ins. in each sec. 5-1/2 ft. dist., raise a mound of earth and stone, 4 ft. base, 2-1/2 ft. high, N. of cor.
 Land, rolling.
 Soil, 3rd and 4th rate.
 Timber, scattering juniper, pine, and oak.
 Volcanic rock.

40.00

West on a true line between secs. 6 and 31, Over level land, through prairie. Difference between measurements of 40.00 chs. by two sets of chainmen is nothing.
 Set a volcanic rock, 22x14x12 ins., 16 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which
 A juniper, 10 ins.diam., bears N. 29° E., 250 lks. dist., marked 1/4 S B T
 A juniper, 24 ins.diam., bears S. 38° 25' E., 233 lks. dist., marked 1/4 S B T
 Difference between measurements of 78.53 chs. by two sets of chainmen is 6 lks.; position of middle point

78.53

By 1st set, 78.50 chs.
 By 2nd set, 78.56 chs.; the mean of which is
 Set boundary post No. 55, for the cor. to Tps. 11 and 12 N., Rgs. 7 and 8 E. Post, cap, and mound heretofore described. Cap marked
 No. 55 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. quadrant. also marked
 T 12 N S 31 in N. E. quadrant on rim.
 R 8 E S 6 in S. E. " " "
 T 11 N S 1 in S. W. " " "
 R 7 E S 36 in N. W. " " "
 with 6 notches on N., S., E., and W. edges of rim; from which
 A juniper, 20 ins.diam., bears N. 61° 10' E., 281 lks. dist., marked T 12 N R 8 E S 31 B T
 A juniper, 30 ins.diam., bears S. 15° 10' W., 276 lks. dist., marked T 11 N R 7 E S 1 B T
 No other trees in limits. Dig pits, 24x24x12 ins. N., E., W., 4 ft. dist., and S. 8 ft. dist, on line;
 Land, level.
 Soil, 3rd and 4th rate.
 Timber, scattering juniper,
 Volcanic rock.

Black Mesa Forest Reserve Boundary,
West Boundary T. 12 N., R. 8 E.

Chains.	<p>At the cor. to Tps. 11 and 12 N., Rgs. 7 and 8 E., At 4 p.m., l.m.t., I set off 34° 23' N. on the lat. arc; 2° 51' N. on the decl. arc; and determine a true meridian with the solar. Magnetic declination 14° 10' E.</p> <p>Thence I run North on a true line between secs. 31 and 36, Over nearly level land, stone surface, a few scatter- ing juniper trees.</p> <p>37.94 A lone juniper tree, 16 ins.diam., on line; cut two notches on N. and S. faces. Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 40.01 chs. By 2nd set, 39.99 chs.; the mean of which is</p> <p>40.00 Set a volcanic rock, 24x16x10 ins., 18 ins. in the ground for 1/4 sec. cor.; marked 1/4 on W. face; dig pits, 18x18x12 ins. N. and S. of cor., 3-1/2 ft. dist., raise a mound of earth and stone, 3-1/2 ft. base, 1-1/2 ft. high, W. of cor.</p> <p>55.00 Descend gradual N. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 79.98 chs. By 2nd set, 80.02 chs.; the mean of which is</p> <p>80.00 Set boundary post No. 56, for the cor. to secs. 25, 30, 31, and 36. Post, cap, and mound heretofore described. Cap marked No. 56 on S. side of cap. 1903 on S. side of rim; RESERVE in N. E. and S. E. quadrants. also marked T 12 N S 30 in N. E. quadrant on rim. R 8 E S 31 in S. E. " " " R 7 E S 36 in S. W. " " " S 25 in S. W. " " " with 1 notch on S. and 5 notches on N. edges of rim; from which A juniper, 12 ins.diam., bears N. 86° 15' E., 70 lks. dist., marked T 12 N R 8 E S 30 B T A yellow pine, 18 ins.diam., bears S. 44° 45' E., 224 lks. dist., marked T 12 N R 8 E S 31 B T A juniper, 8 ins.diam., bears S. 17° W., 54 lks. dist., marked T 12 N R 7 E S 36 B T A yellow pine, 18 ins.diam., bears N. 73° W., 110 lks. dist., marked T 12 N R 7 E S 25 B T Land, level and rolling. Soil, 3rd and 4th rate. Timber, scattering juniper and yellow pine. Surface stony; volcanic rock. March 28, 1903.</p>
3.75	<p>March 30: At 9 a.m., l.m.t., I set off 34° 23' N. on the lat. arc; 3° 30' N. on the decl. arc; and determine a true meridian with the solar at the cor. to secs. 25, 30, 31, and 36. Thence I run North on a true line between secs. 25 and 30, Over N. slope, through scattering pine and juniper timber.</p> <p>Strawberry Creek, 20 lks. wide, 6 ins. deep, course S. 80° W. This creek is at the bottom of a canyon 3.00 chs. wide and 50 ft. deep; ascend gradual S. slope.</p>

Black Mesa Forest Reserve Boundary,
West Boundary T. 12 N., R. 8 E.

Chains. 17.50	<p>Top of ascent, bears E. and W., thence over level land. Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p>By 1st set, 39.99 chs. By 2nd set, 40.01 chs.; the mean of which is</p>
40.00	<p>Set a volcanic rock, 20x12x8 ins., 15 ins. in the ground for 1/4 sec. cor., marked 1/4 on W. face; from which</p> <p>A juniper, 24 ins.diam., bears N. 64° 30' E., 250 lks. dist., marked 1/4 S B T A juniper, 8 ins.diam., bears S. 11° 25' W., 320 lks. dist., marked 1/4 S B T</p>
75.00	<p>Ascend gradual S. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p>By 1st set, 80.01 chs. By 2nd set, 79.99 chs.; the mean of which is</p>
80.00	<p>Set boundary post No. 57, for the cor. to secs. 19, 24, 25, and 30. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 57 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. also marked</p> <p>T 12 N S 19 in N. E. quadrant on rim. R 8 E S 30 in S. E. " " " R 7 E S 25 in S. W. " " " S 24 in N. W. " " "</p> <p>with 4 notches on N. and 2 notches on S. edges of rim; from which</p> <p>A juniper, 24 ins.diam., bears N. 26° 50' E., 403 lks. dist., marked T 12 N R 8 E S 19 B T A juniper, 8 ins.diam., bears S. 58° 25' E., 91 lks. dist., marked T 12 N R 8 E S 30 B T A juniper, 20 ins.diam., bears S. 8° 20' W., 506 lks. dist., marked T 12 N R 7 E S 25 B T A juniper, 20 ins.diam., bears N. 63° 45' W., 261 lks. dist., marked T 12 N R 7 E S 24 B T</p> <p>Land, level and rolling. Soil, 2nd and 4th rate. Timber, scattering juniper, pine, and oak. Volcanic rock.</p>
21.50	<p>North on a true line between secs. 19 and 24, Ascend gradual S. slope, through scattering juniper timber.</p> <p>South bank of Fossil Creek Canyon, bears E. and W. at this point. At about 15.00 chs. E. of this point canyon bears N. and S. Descend steep N. slope through dense growth of live oak, manzanita, and mahogany brush.</p>
25.00	<p>At this point I set off 3° 33' N. on the decl. arc; and at 12^h 04^m 57^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 25' N., which is about 30" greater than the proper lat.</p>
33.00	<p>Side hill drain, course N. E., thence over steep E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 12 lks.; position of middle point</p> <p>By 1st set, 39.94 chs. By 2nd set, 40.06 chs.; the mean of which is</p>
40.00	<p>Set a volcanic rock, 24x12x8 ins. in mound of stone, 4 ft. base, 18 ins. high, around rock for 1/4 sec.</p>

Black Mesa Forest Reserve Boundary,
West Boundary T. 12 N., R. 8 E.

Chains. cor., marked 1/4 on W. face; from which
 A red fir, 26 ins.diam., bears N. 34° 15' E.,
 154 lks. dist., marked 1/4 S B T
 A pinon pine, 10 ins.diam., bears N. 25° 30' W.,
 75 lks. dist., marked 1/4 S B T

45.00 Bend in same drain from S. E. to N. E.
 50.35 Same drain, course N. W.
 52.00 Side hill drain, course west.
 55.90 Side hill drain, course W., ascend gradual S. W.
 slope.
 58.00 Camp Verde and Payson mail trail, bears S. 70° E.
 and N. 70° W., change to W. slope.
 62.25 Head of drain, course S. W.
 65.35 Drain, course S. W. Ascend gradual S. W. slope.
 Difference between measurements of 80.00 chs. by two
 sets of chainmen is 4 lks.; position of middle
 point
 By 1st set, 80.02 chs.
 By 2nd set, 79.98 chs.; the mean of which is

80.00 Set boundary post No. 58, for the cor. to secs. 13,
 18, 19, and 24. Post, cap, and mound heretofore
 described. Cap marked
 No. 58 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. and S. E. quadrants.
 also marked
 T 12 N S 18 in N. E. quadrant on rim.
 R 8 E S 19 in S. E. " " "
 R 7 E S 24 in S. W. " " "
 S 13 in N. W. " " "
 with 3 notches on N., S. edges of rim. No trees
 large enough for bearing trees. Dig pits, 18x18x
 12 ins. in each sec., 5-1/2 ft. dist.
 Land, mountainous.
 Soil, 3rd and 4th rate.
 Timber, scattering pine, juniper, oak, and red fir;
 dense growth of manzanita and oak brush last
 60.00 chs.
 Volcanic and sandstone formation.
 March 30, 1903.

March 31: At 2 p.m., l.m.t., I set off 34° 25' N.
 on the lat. arc; 3° 58' N. on the decl. arc; and
 determine a true meridian with the solar at the
 cor. to secs. 13, 18, 19, and 24, W. Bdy. T. 12 N.,
 R. 8 E.
 Thence I run
 North on a true line between secs. 13 and 18,
 Ascend gradual S. W. slope, through dense growth of
 live oak and manzanita brush.

2.00 Top of spur, bears E. and W.
 From this point a red bluff bears E., 15.00 chs.
 dist., 600 ft. above this point.
 2.30 Descend steep N. slope.
 9.00 Foot of descent, bears E. and W., thence over broken
 W. slope.
 10.00 Small drain, course W.
 12.00 Ravine, 50 lks. wide, 20 ft. deep, course W.
 16.65 Ravine, 20 lks. wide, 10 ft. deep, course W.
 21.00 Drain, course S. W., ascend steep S. W. slope.
 32.60 Top of spur, bears N. 70° W. and S. 70° E.
 March 31, 1903.

April 6: At 9 a.m., l.m.t., I set off 34° 26' N.
 on the lat. arc; 6° 11' N. on the decl. arc; and
 determine a true meridian with the solar.
 Continue line N.
 Descend steep N. W. slope.

Black Mesa Forest Reserve Boundary,
West Boundary T. 12 N., R. 8 E.

Chains.	Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point
	By 1st set, 40.02 chs.
	By 2nd set, 39.98 chs.; the mean of which is
40.00	Set volcanic rock, 24x16x10 ins. in mound of stone, 4 ft. base, 18 ins. high, around stone for 1/4 sec. cor., marked 1/4 on W. face; from which
	A juniper, 10 ins.diam., bears S. 26° 10' E., 318 lks. dist., marked 1/4 S B T
	A juniper, 8 ins.diam., bears S. 31° 10' W., 85 lks. dist., marked 1/4 S B T
56.67	Ravine, 200 lks. wide, 50 ft. deep, course N. W.
72.50	Drain, course N. W.
76.00	Top of spur, bears N. W. and S. E.
76.40	At this point I set off 6° 14' N. on the decl. arc; and at 12 ^h 02 ^m 45 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 26' N., which is the proper lat.
78.75	Small drain, course N. W.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point
	By 1st set, 79.97 chs.
	By 2nd set, 80.03 chs.; the mean of which is
80.00	Set boundary post No. 59, for the cor. to secs. 7, 12, 13, and 18. Post, cap, and mound heretofore described. Cap marked
	No. 59 on S. side of cap.
	1903 on S. side of rim.
	RESERVE in N. E. and S. E. quadrants.
	Also marked
	T 12 N S 7 in N. E. quadrant on rim.
	R 8 E S 18 in S. E. " " "
	R 7 E S 13 in S. W. " " "
	S 12 in N. W. " " "
	with 4 notches on S. and 2 notches on N. edges of rim; from which
	A pinon pine, 8 ins.diam., bears N. 6° 40' E., 6 lks. dist., marked T 12 N R 8 E S 7 B T
	A pinon pine, 14 ins.diam., bears S. 23° 20' E., 115 lks. dist., marked T 12 N R 8 E S 18 B T
	A pinon pine, 9 ins.diam., bears S. 84° 20' W., 41 lks. dist., marked T 12 N R 7 E S 13 B T
	A pinon pine, 8 ins.diam., bears N. 35° W., 84 lks. dist., marked T 12 N R 7 E S 12 B T
	Land, mountainous.
	Soil, 3rd and 4th rate.
	Timber, scattering pine, juniper, and oak; dense growth of live oak, manzanita, and mahogany brush.
	Sandstone formation; volcanic surface rock.
	At 2 p.m., l.m.t., I set off 34° 26' N. on the lat. arc; 6° 16' N. on the decl. arc; and determine a true meridian with the solar at the cor. to secs. 7, 12, 13, and 18, W. bdy. T. 12 N., R. 8 E.
	Magnetic declination 13° 50' E.
	Thence I run
	North on a true line between secs. 7 and 12,
	Over N. W. slope, through scattering pine, juniper, oak, and red cedar; dense growth of live oak and manzanita brush.
15.00	Drain, course N. W.
32.00	Foot of 1300-ft. descent, bears N. E. and S. W.
35.31	Fossil Creek, 50 lks. wide, 6 ins. deep, course S.W.
39.50	Leave creek bottom, ascend S. E. slope of canyon.

Black Mesa Forest Reserve Boundary,
West Boundary T. 12 N., R. 8 E.

Chains.	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point</p> <p>By 1st set, 40.04 chs.</p> <p>By 2nd set, 39.96 chs.; the mean of which is</p>																		
40.00	<p>Set a volcanic rock, 24x16x6 ins. in mound of stone, 4 ft. base, 18 ins. high, around rock, for 1/4 sec. cor., marked 1/4 on W. face; from which</p> <p>A cottonwood, 16 ins.diam., bears S. 24° 15' E., 175 lks. dist., marked 1/4 S B T</p> <p>No other trees in limits. Raise a mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, W. of cor. Ascend steep S. E. slope of canyon from 1/4 sec. cor., through dense growth of live oak and manzanita brush.</p>																		
43.50	Small drain, course S. E.																		
50.50	Small drain, course S. E.																		
56.20	Drain, course S. E.																		
78.45	Change to steep E. slope.																		
	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point</p> <p>By 1st set, 79.96 chs.</p> <p>By 2nd set, 80.04 chs.; the mean of which is</p>																		
80.00	<p>Set boundary post No. 60, for the cor. to secs. 1, 6, 7, and 12. Post, cap, and mound heretofore described. Cap marked</p> <table style="margin-left: 20px;"> <tr> <td>No. 60</td> <td>on S. side of cap.</td> </tr> <tr> <td>1903</td> <td>on S. side of rim.</td> </tr> <tr> <td>RESERVE</td> <td>IN N. E. and S. E. quadrants.</td> </tr> </table> <p style="margin-left: 40px;">also marked</p> <table style="margin-left: 20px;"> <tr> <td>T 12 N S 6</td> <td>in N. E. quadrant</td> <td>on rim.</td> </tr> <tr> <td>R 8 E S 7</td> <td>in S. E.</td> <td>" " "</td> </tr> <tr> <td>R 7 E S 12</td> <td>in S. W.</td> <td>" " "</td> </tr> <tr> <td>S 1</td> <td>in N. W.</td> <td>" " "</td> </tr> </table> <p>with 5 notches on S. and 1 notch on N. edges of rim; from which</p> <p>A juniper, 10 ins.diam., bears S. 66° 45' W., 48 lks. dist., marked T 12 N R 7 E S 12 B T</p> <p>No other trees within limits. Dig pits, 18x18x12 ins., in each sec., 5-1/2 ft. dist.</p> <p>From this cor. a high bluff bears W. about 20.00 chs. dist., old ruins on top.</p> <p>Land, mountainous.</p> <p>Soil, 4th rate.</p> <p>Timber, pine, juniper, oak, and sycamore.</p> <p style="text-align: right;">April 6, 1903.</p>	No. 60	on S. side of cap.	1903	on S. side of rim.	RESERVE	IN N. E. and S. E. quadrants.	T 12 N S 6	in N. E. quadrant	on rim.	R 8 E S 7	in S. E.	" " "	R 7 E S 12	in S. W.	" " "	S 1	in N. W.	" " "
No. 60	on S. side of cap.																		
1903	on S. side of rim.																		
RESERVE	IN N. E. and S. E. quadrants.																		
T 12 N S 6	in N. E. quadrant	on rim.																	
R 8 E S 7	in S. E.	" " "																	
R 7 E S 12	in S. W.	" " "																	
S 1	in N. W.	" " "																	
	<p>April 7: At 10 a.m., l.m.t., I set off, 34° 27' N. on the lat. arc; 6° 35' N. on the decl. arc; and determine a true meridian with the solar at the cor. to secs. 1, 6, 7, and 12.</p> <p style="margin-left: 40px;">Magnetic declination 13° 50' E.</p> <p>Thence I run</p> <p>North on a true line between secs. 1 and 6,</p> <p>Over S. E. slope of canyon, through dense growth of live oak and manzanita brush.</p>																		
17.00	Change to steep E. slope.																		
22.75	Ravine, 100 lks. wide, 40 ft. deep, course E.																		
30.00	At this point I set off 6° 37' N. on the decl. arc; and at 12 ^h 02 ^m 28 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 27' 30" which is the proper lat.																		
34.00	Side hill drain, course E.																		
	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point</p>																		

Black Mesa Forest Reserve Boundary,
West Boundary T. 12 N., R. 8 E.

Chains.	<p>By 1st set, 39.97 chs. By 2nd set, 40.03 chs.; the mean of which is</p>
40.00	<p>Set a volcanic rock, 26x16x10 ins., in mound of stone, 4 ft. base, 18 ins. high, around stone for 1/4 sec. cor., marked 1/4 on W. face; from which A red cedar, 6 ins. diam., bears S. 22° 40' W., 36 lks. dist., marked 1/4 S B T No other trees in limits. Raise a mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, W. of cor.</p>
60.50	<p>Tin Can Creek, 10 lks. wide, 3 ins. deep, course S. 20° E., foot of 500-ft. descent below sec. cor. Ascend S. W. slope.</p>
64.73	<p>Top of spur, bears E. and W., descend N. W. slope.</p>
72.75	<p>Same Creek, course S. 20° W., ascend S. E. slope.</p>
80.00	<p>Set temp. closing cor. and search for the 3rd standard parallel N.</p>
	<p>April 7, 1903.</p>
	<p>April 15: I destroy the temp. closing cor. set. April 7, and continue line north between secs. 1 and 6. Difference between measurements of 91.23 chs. by two sets of chainmen is 6 lks.; position of middle point</p>
91.23	<p>By 1st set, 91.26 chs. By 2nd set, 91.20 chs.; the mean of which is Intersect the 3rd standard parallel north 5.86 chs. W. of the standard cor. to T. 13 N., Rgs. 7 and 8 E. Set boundary post No. 61 for the Closing Cor. to T. 12 N., Rgs. 7 and 8 E. Post, cap, and mound heretofore described. Cap marked No. 61 on S. side of cap. 1903 on S. side of rim. RESERVE in S.E., N.E., & N.W. quadrants. C C on S. side of rim. T 12 N R 8 E S 6 in S. E. quadrant on rim. R 7 E S 1 in S. W. " " " with 6 notches on E., W., and S. edges of rim. No trees within limits. Dig pits, 24x30x12 ins. E. and W. 4 ft. and S. 8 ft. dist. Land, mountainous. Soil, 4th rate. Timber, scattering juniper and pine, live oak brush. Volcanic rock.</p>
	<p>April 15, 1903.</p>
	<p><u>Third Standard Parallel N., Range 6 east.</u></p>
	<p>April 13, 1903. At 9 a.m., l.m.t., I set off 34° 28' N. on the lat. arc; 8° 47' N. on the decl. arc; and determine a true meridian with the solar at the Standard 1/4 sec. cor., S. Bdy. sec. 36, T. 13 N., R. 6 E.</p>
	<p>Thence I run</p>
40.00	<p>East on a random line along S. Bdy. sec. 36. Find no trace of standard cor. to T. 13 N., Rgs. 6 and 7 E. Set temp. cor. and continue line E. along S. bdy. sec. 31.</p>
80.00	<p>Find no trace of standard 1/4 sec. cor. Set temp. cor. and continue line</p>
120.00	<p>Find no trace of standard cor. to secs. 31 and 32. Set temp. cor. and continue line along S. Bdy. sec. 32.</p>
160.00	<p>Find no trace of standard 1/4 sec. cor. Set temp. cor. and continue line E.</p>
206.85	<p>The standard cor. to secs. 32 and 33, bears S. 291 lks. dist., which is a volcanic rock, 26x10x6 ins.</p>

Black Mesa Forest Reserve Boundary,
Third Standard Parallel N., Range 6 East.

Chains.	<p>in small mound of stone; stone had been lying on ground for some time. I test the position of the cor. from witness tree and find it correct. I enlarge mound of stone to 5 ft. base, 2 ft. high, around stone. This distance answers to a correction of 58-1/5 lks. S. per 1/2 mile, and 137 lks. E. per 1/2 mile.</p> <p>I return to the standard 1/4 sec. cor., S. bdy. sec. 36, T. 13 N., R. 6 E., heretofore described. Thence I run</p> <p>S. 89° 12' E. on a true line along S. bdy. sec. 36.</p> <p>4.00 Descend steep E. slope into canyon.</p> <p>20.00 Bottom of canyon, course N. W. ^{foot of} 400-ft. descent, ascend steep W. slope.</p> <p>32.00 Top of ascent, bears N. 20° W. and S. 70° E., thence over gradual S. W. slope.</p> <p>Difference between measurements of 41.37 chs. by two sets of chainmen is 6 lks.; position of middle point</p> <p>By 1st set, 41.34 chs.</p> <p>By 2nd set, 41.40 chs.; the mean of which is</p> <p>41.37 Set boundary post No. 67, for the standard cor. to T. 13 N., Rgs. 6 and 7 E. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 67 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. quadrant. S C on N. side of rim. T 13 N R 7 E S 31 in N. E. quadrant on rim. R 6 E S 36 in N. W. " " "</p> <p>with 6 notches on N., E., and W. edges of rim. No trees within limits. Dig pits, 24x30x12 ins. E. and W. of post 4 ft. and N. 8 ft. dist. Land, mountainous. Soil, 4th rate. Timber, live oak and mahogany brush. Volcanic rock. (Old ruins near cor.)</p>
8 10	<p>S. 89° 12' E. on a true line along S. Bdy. sec. 31, Ascend gradual S. W. slope, through live oak brush. Change to N. slope.</p> <p>Difference between measurements of 41 37 chs. by two sets of chainmen is 4 lks.; position of middle point</p> <p>By 1st set, 41.39 chs.</p> <p>By 2nd set, 41.35 chs.; the mean of which is</p> <p>41.37 Set volcanic rock, 24x10x8 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone, for standard 1/4 sec. cor., marked S C 1/4 on N. face; from which</p> <p>A juniper, 10 ins. diam., bears N. 54° 50' W., 214 lks. dist., marked S C 1/4 S B T</p> <p>No other trees within limits. Raise mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor., ascend W. slope from 1/4 sec. cor.</p> <p>65.00 Top of ridge, bears N. and S.</p> <p>Difference between measurements of 65.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p>By 1st set, 65.01 chs.</p> <p>By 2nd set, 64.99 chs.; the mean of which is</p> <p>65.00 Set boundary post No. 66. Post, cap, and mound heretofore described. Cap marked</p> <p>No. 66 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants.</p> <p>No bearing trees within limits.</p>

Black Mesa Forest Reserve Boundary,
Third Standard Parallel N., Range 4 East.

Chains.	
67.00	Descend gradual S. E. slope.
68.50	At this point I set off 8° 50' N. on the decl. arc; and at 12 ^h 00 ^m 48 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 28' N., which is the proper lat.
78.25	Drain, course S. E., ascend gradual S. W. slope. Difference between measurements of 82.74 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 82.72 chs. By 2nd set, 82.76 chs.; the mean of which is
82.74	Set volcanic rock, 26x10x8 ins. in mound of stone, 4 ft. base, 18 ins. high, around stone, for Standard cor. of secs. 31 and 32, marked S C on N. face; with 5 notches on E. and 1 notch on W. faces; from which A juniper, 20 ins.diam., bears N. 29° 50' E., 295 lks. dist., marked T 13 N R 7 E S 32 S C B T No other trees within limits. Raise mound of stone, 5 ft. base, 2-1/2 ft. high, N. of cor. Land, mountainous. Soil, 3rd and 4th rate. Timber, scattering juniper and pine; live oak brush. Volcanic rock.
20.00	S. 89° 12' E. on a true line along S. bdy, sec. 32, Ascend gradual S. W. slope, through live oak brush. Top of ridge, bears N. and S., descend gradual S. E. slope.
36.60	Drain, course S. Ascend W. slope through scattering timber. Difference between measurements of 41.37 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 41.35 chs. By 2nd set, 41.39 chs.; the mean of which is
41.37	Set volcanic rock, 26x14x6 ins., in mound of stone, 4 ft. base, 1-1/2 ft. high, around rock for Standard 1/4 sec. cor., marked S C 1/4 on N. face; from which A juniper, 20 ins.diam., bears N. 10° E., 183 lks. dist., marked S C 1/4 S B T No other trees within limits. Raise mound of stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.
44.00	Top of ridge, bears N. and S. Descend gradual E. slope.
60.00	Leave scattering timber and oak brush, bears N. and S.
80.00	A dry branch, 10 lks. wide, course S. There is water in pools about 20.00 chs. S. of this point. Difference between measurements of 82.74 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 82.71 chs. By 2nd set, 82.77 chs.; the mean of which is
82.74	The standard cor. to secs. 32 and 33. Land, rolling. Soil, 3rd and 4th rate. Timber, juniper and oak; live oak brush. Volcanic rock.

Black Mesa Forest Reserve Boundary,
Third Standard Parallel N., Range 8 East.

Chains.

40.98	<p>East on a random line along S. Bdy. sec. 33. The Standard 1/4 sec. cor., which is a volcanic rock, 14x8x6 ins., in small mound of stone, marked 1/4 on W. face, bears S. 211 lks. dist. I enlarge mound and stone, and mark bearing trees as follows: A juniper, 16 ins.diam., bears N. 12° 50' E., 176 lks. dist., marked S C 1/4 S B T A juniper, 8 ins.diam., bears N. 4° 25' W., 258 lks. dist., marked S C 1/4 S B T</p>
82.04	<p>Set over cor. and continue line east. The Standard Cor. to secs. 33 and 34, bears S., 203 lks. dist., which is a volcanic rock, 6x10x8 ins. above ground, firmly set, and marked with 3 notches on E. and W. faces; no mound of stone. I raise a mound of stone, 4 ft. base, 2 ft. high, N. of cor.; from which A juniper, 10 ins.diam., bears N. 30° 10' W., 247 lks. dist., marked T 13 N R 7 E S 33 S C B T No other trees within limits. I return to the Standard Cor. to secs. 32 and 33. Thence I run S. 87° 03' E. on a true line along S. bdy. sec. 33, Over nearly level land, scattering oak and juniper timber.</p>
3.50	<p>Difference between measurements of 3.50 chs. by two sets of chainmen is nothing. Set boundary post No. 65. Post, cap, and mound heretofore described. Cap marked No. 65 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. No trees within limits.</p>
4.00	<p>Ascend gradual W. slope.</p>
14.50	<p>Top of low ridge, bears N. and S., thence over nearly level mesa.</p>
34.75	<p>Ravine, 2.00 chs. wide, 20 ft. deep, course S. 20° W. Difference between measurements of 40.98 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 41.00 chs. By 2nd set, 40.96 chs.; the mean of which is</p>
40.98	<p>The Standard 1/4 sec. cor. Thence I run S. 87° 11' E.</p>
63.00	<p>Drain, course S. W.</p>
72.74	<p>Payson and Camp Verde mail trail, bears N. 20° W. and S. 20° E. Difference between measurements of 73.04 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 73.05 chs. By 2nd set, 73.03 chs.; the mean of which is</p>
73.04	<p>Set boundary post No. 64. Post, cap, and mound heretofore described. Cap marked No. 64 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. From which A juniper, 14 ins.diam., bears N. 32° 10' W., 165 lks. dist., marked BDY P No. 64 B T No other trees within limits.</p>
82.04	<p>Difference between measurements of 82.04 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 82.05 chs. By 2nd set, 82.03 chs.; the mean of which is The cor. to secs. 33 and 34. Land, level and rolling. Soil, 2nd and 4th rate. Timber, a few scattering juniper trees. Volcanic surface rock.</p>
41.00	<p>East on a random line along S. bdy. sec. 34. The Standard 1/4 sec. cor., bears S. 161 lks. dist., which is a volcanic rock, in place, 18x24x20 ins. above ground, marked 1/4 on W. face; no mound of stone. I raise mound of stone, 4 ft. base, 2 ft. high, N. of cor.; from which A juniper, 10 ins.diam., bears N. 6° 10' W., 175 lks. dist., marked S C 1/4 S B T</p>

Black Mesa Forest Reserve Boundary,
Third Standard Parallel N., Range 7 E.

Chains.	Set over cor. and continue line E.
81.25	The Standard Cor. to secs. 34 and 35, bears S. 325 lks., which is a volcanic rock, 8x8x6 ins. above ground, firmly set, marked with 4 notches on W. and 2 notches on E. faces. No mound of stone. I raise mound of stone, 4 ft. base, 2 ft. high, N. of cor., from which A juniper, 14 ins.diam., bears N. 28° 40' W., 124 lks. dist., marked T 13 N R 7 E S 34 S C B T No other trees within limits. I return to the Standard Cor. to secs. 33 and 34. Thence I run S. 87° 45' E. on a true line, along S. bdy. sec. 34, Over level mesa.
34.50	A shallow drain, course S. 10° W. Difference between measurements of 41.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 40.99 chs. By 2nd set, 41.01 chs.; the mean of which is
41.00	The Standard 1/4 sec. cor. Thence I run S. 85° 22' E. Difference between measurements of 81.25 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 81.24 chs. By 2nd set, 81.26 chs.; the mean of which is
81.25	The Standard cor. to secs. 34 and 35. Land, level mesa. Soil, 3rd and 4th rate. Timber, a few scattering juniper trees. Volcanic surface rock. April 13, 1903.
	April 14: At 8 a.m., l.m.t., I set off 34° 28' N. on the lat. arc; 9° 09' N. on the decl. arc; and determine a true meridian with the solar at the Standard Cor. to secs. 34 and 35, T. 13 N., R.7 E. Magnetic declination 16° 00' E.
40.90	Thence I run East on a random line along S. bdy. sec. 35. The Standard 1/4 sec. cor., bears S. 324 lks. dist., which is a volcanic rock, 15x10x4 ins. in small mound of stone (no other mound), marked 1/4 on W. face. I enlarge mound around stone; also raise a mound of stone, 4 ft. base, 1-1/2 ft. high, N. of cor. Mark bearing trees as follows: A juniper, 14 ins.diam., bears N. 28° 10' E., 110 lks. dist., marked S C 1/4 S B T A juniper, 8 ins.diam., bears N. 43° 45' W., 137 lks. dist., marked S C 1/4 S B T
80.00	Set over cor. and continue line E. Find no trace of the Standard Cor. to secs. 35 and 36. Set temp. cor. and continue line E. along S. bdy. sec. 36.
120.00	Find no trace of 1/4 sec. cor.; set temp. cor. and continue line E.
160.00	Find no trace of the Standard cor. to T. 13 N., Rgs. 7 and 8 E. I return to the Standard cor. to secs. 34 and 35. Thence I run S. 85° 28' E. on a true line along S. bdy. sec. 35, Over level mesa; a few scattering juniper
12.85	Trail, bears N. 10° E. and S. 10° W. Difference between measurements of 13.00 chs. by two sets of chainmen is nothing.

Black Mesa Forest Reserve Boundary,
Third Standard Parallel N., Range 8 East.

Chains.	
13.00	Set boundary post No. 63. Post, cap, and mound heretofore described. Cap marked No. 63 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants, from which A juniper, 26 ins.diam., bears N. 6° 50' W., 138 lks. dist., marked BDY P No. 63 B T A juniper, 14 ins.diam., bears S. 32° W., 109 lks. dist., marked BDY P No. 63 B T
	Difference between measurements of 40.90 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 40.91 chs. By 2nd set, 40.89 chs.; the mean of which is
40.90	The standard 1/4 sec. cor. Thence I run east.
72.80	Drain, course S. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is
80.00	Set a volcanic rock, 30x10x8 ins. in mound of stone, 5 ft. base, 2 ft. high, around stone, for Standard cor. to secs. 35 and 36, marked S C on N. face, with 5 notches on W. and 1 notch on E. faces; from which An oak, 8 ins.diam., bears N. 44° 40' E., 55 lks. dist., marked T 13 N R 7 E S 36 S C B T No other trees within limits; raise a mound of stone, 5 ft. base, 2-1/2 ft. high, N. of cor. Land, level and rolling. Soil, 3rd and 4th rate. Timber, scattering oak and juniper; live oak brush. Volcanic surface rock.
	At the cor. to secs. 35 and 36, I set off 9° 12' N. on the decl. arc; and at 12 ^h 00 ^m 32 ^s p.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 28' N., which is the proper lat. Thence I run East on a true line along S. bdy. of sec. 36, Ascend gradual W. slope, through oak brush.
5.00	Top of ridge, bears N. W. and S. E.
7.00	Descend steep S. E. slope.
18.00	Descend into Mud Tanks Canyon, bears S. 30° E. and N. 30° W.
21.40	Bottom of canyon, water in pools, course S. 30° E. Ascend steep W. slope of canyon.
24.00	East bank of canyon, bears N. and S. Ascend gradual W. slope.
27.90	Trail, bears N. W. and S. E. Difference between measurements of 28.40 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 28.42 chs. By 2nd set, 28.38 chs.; the mean of which is
28.40	Set boundary post No. 62. Post, cap, and mound heretofore described. Cap marked No. 62 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. from which

Black Mesa Forest Reserve Boundary,
Third Standard Parallel N., Range 6 East.

Chains. A juniper, 22 ins.diam., bears N. 31° 30' E.,
245 lks. dist., marked BDY P No. 62 B T

37.00 No other trees within limits.
Enter scattering timber and oak brush, bears N. W.
and S. E.

40.00 Difference between measurements of 40.00 chs. by two
sets of chainmen is 4 lks.; position of middle
point
By 1st set, 40.02 chs.
By 2nd set, 39.98 chs.; the mean of which is

Set a volcanic rock, 40x8x6 ins. in mound of stone,
5 ft. base, 3 ft. high, around stone, for Standard
1/4 sec. cor., marked S C 1/4 on N. face.

60.75 No trees within limits. Raise mound of stone, 3-1/2
ft. base, 1-1/2 ft. high, N. of cor.

67.50 Descend into canyon, bears N. and S.

78.00 Wall of canyon, 50 ft. high, descend steep E. slope,
through dense growth of live oak brush.

Tin Can Creek, water in pools, course S., foot of
600-ft. descent; ascend steep W. slope of canyon.

80.00 Difference between measurements of 80.00 chs. by two
sets of chainmen is 6 lks.; position of middle
point
By 1st set, 79.97 chs.
By 2nd set, 80.03 chs.; the mean of which is

Volcanic rock in place, 10 ft. ^{on lower side, 2 ft high} high, on upper side,
and 6 ft. wide; cut a cross (+) at the exact point
for the Standard cor. to T. 13 N., Rgs. 7 and 8 E.,
marked S C N. of cross; with 6 notches N., E.,
and W. of cross; from which

A juniper, 10 ins.diam., bears N. 13° W., 109
lks. dist., marked T 13 N R 7 E S 36 S C B T

No other trees within limits. Raise a mound of
stone, 3 ft. base, 2 ft. high, N. of cross.

Land, mountainous.
Soil, 4th rate.
Timber, scattering juniper and oak; live oak brush.
Volcanic surface rock.

April 14, 1903.

At camp, in sec. 26, T. 13 N., R. 7 E.,
April 14: At 5^h 51^m p.m., l.m.t., I observe Polaris
at Western elongation, and mark the line thus de-
termined by a tack driven in a wooden plug set
5.00 chs. N. of my station.

April 14, 1903.

April 15: At 8 a.m., l.m.t., I lay off the azimuth
of Polaris 1° 27' to the east, and mark the true
meridian thus determined by a tack driven in a
wooden plug set 5.00 chs. N. of my station.

At 9 a.m., l.m.t., I set off 34° 29' N. on the lat.
arc; 9° 31' N. on the decl. arc; and determine a
meridian with the solar; the meridian thus deter-
mined falls on the exact point established by
Polaris observations.

At 3 p.m., l.m.t., I set off 34° 29' N. on the lat.
arc; 9° 36' N. on the decl. arc; and determine a
meridian with the solar; the meridian thus deter-
mined falls at the exact point established by
Polaris observation; therefore the a.m. and p.m.
solar observations agree with the Polaris observa-
tions, and the adjustment of the solar apparatus
is correct.

April 15, 1903.

W. H. Thorn,
U. S. Surveyor.

Black Mesa Forest Reserve Boundary.
East Boundary T. 13 N., R. 6 E.

Chains. At the Standard Cor. to T. 13 N., Rgs. 6 and 7 E., on the 3rd Standard Parallel North, Boundary Post No. 67;

April 16, 1903. At 2 p.m., l.m.t., I set off $34^{\circ}28'N$. on the lat. arc; $9^{\circ}57'N$. on the decl. arc; and determine a true meridian with the solar.
Magnetic declination $13^{\circ}00'E$.

Thence I run North on a true line between secs. 31 and 36, through live oak and mahogany brush, over top of ridge, bears E. and W.

3.50 Top of ridge, bears N. $70^{\circ}W$. and S. $70^{\circ}E$., descend N. slope into canyon.

12.50 Descend steep rocky slope, bears E. and W.

25.00 Bottom of canyon, drain, course W., foot of 800-ft. descent; ascend steep S. slope.

31.36 North bank of canyon, bears E. and W., 600 ft. above drain, ascend gradual S. W. slope.

37.50 Top of ridge, bears E. and W. Descend gradual N. slope.

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point
By 1st set, 39.97 chs.
By 2nd set, 40.03 chs.; the mean of which is

40.00 Set volcanic rock, 22x12x8 ins., in mound of stone, 3 ft. base, 1-1/2 ft. high, around rock, for 1/4 sec. cor., marked 1/4 on W. face; raise a mound of stone, 4 ft. base, 2 ft. high, W. of cor.

42.75 Rock ledge, 10 ft. high, bears N. $70^{\circ}W$. and S. $70^{\circ}E$. Descend steep N. slope into canyon.

47.55 Drain, course W., foot of 100-ft. descent; ascend steep S. slope.

67.00 Top of ridge, bears E. and W., 500 ft. above last drain; descend steep N. slope, through dense growth of live oak brush.

Difference between measurements of 80.00 chs. by two sets of chainmen is 12 lks.; position of middle point
By 1st set, 79.94 chs.
By 2nd set, 80.06 chs.; the mean of which is

80.00 Set boundary post No. 68, for the cor. to secs. 25, 30, 31, and 36. Post, cap, and mound heretofore described. Cap marked

No. 68	on S. side of cap.
1903	on S. side of rim.
RESERVE	in S. E. and N. E. quadrants.
	also marked
T. 13 N S 30	in N. E. quadrant on rim.
R 7 E S 31	in S. E. " " "
R 6 E S 36	in S. W. " " "
S 25	in N. W. " " "

with 1 notch on S. and 5 notches on N. edges of rim; from which
A cedar, 8 ins. diam., bears N. $34^{\circ}50'W$., 76 lks. dist., marked T 13 N R 6 E S 25 B T
No other trees within limits. Dig pits, 18x18x12 ins. in each sec., 5-1/2 ft. dist.
Land, mountainous.
Soil, 4th rate.
Timber, a few scattering juniper and cedar trees; live oak brush.
Volcanic rock.

April 16, 1903.

Chains. April 18: At 10 a.m., l.m.t., I set off 34° 29' N. on the lat. arc; 10° 36' N. on the decl. arc; and determine a true meridian with the solar at the cor. to secs. 25, 30, 31, and 36, W. Bdy. T. 13 N., R. 7 E.

Magnetic declination 15° 00' E.

Thence I run
North on a true line between secs. 25 and 30,
Descend steep N. slope, through dense growth of live oak and mahogany brush.

1.50 Small drain, course W., foot of 300-ft. descent, thence over steep W. slope.

21.35 Drain, course W., ascend S. W. slope, through cedar and pinon pine.

24.30 Side hill drain, course S. W.

36.50 Rock ledge, bears N. W. and S. E., 100 ft. above the drain at 21.35 chs., thence over W. slope.

Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 40.02 chs.
By 2nd set, 39.98 chs.; the mean of which is

40.00 Set volcanic rock, 26x16x6 ins., in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone, for 1/4 sec. cor., marked 1/4 on W. face; from which

A cedar, 10 ins.diam., bears N. 86° 40' E.,
147 lks. dist., marked 1/4 S B T
A cedar, 12 ins.diam., bears S. 74° 25' W.,
86 lks. dist., marked 1/4 S B T

At this 1/4 sec. cor. I set off 10° 37' N. on the decl. arc; and at 11^h 59^m a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 29' N., which is about 20" less than the proper lat.

42.00 Change to gradual N. W. slope.

50.00 Small drain, course N. W.

72.00 Change to steep N. W. slope.

74.50 Rock ledge, 10 ft. high, bears E. and W.

77.40 Rock ledge, 15 ft. high, bears N. E. and S. W.

78.60 Rock ledge, 15 ft. high, bears N. E. and S. W.

Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 80.03 chs.
By 2nd set, 79.97 chs.; the mean of which is

80.00 Set boundary post No. 69, for the cor. to secs. 19, 24, 25, and 30. Post, cap, and mound heretofore described. Cap marked

No. 69	on S. side of cap.
1903	on S. side of rim.
RESERVE	in N. E. and S. E. quadrants.

also marked

T 13 N S 19	in N. E. quadrant on rim.
R 7 E S 30	in S. E. " " "
R 6 E S 25	in S. W. " " "
S 24	in N. W. " " "

with 2 notches on S. and 4 notches on N. edges of rim. No trees within limits.
Land, mountainous.
Soil, 4th rate.
Timber, scattering pine and cedar; live oak brush.
Volcanic rock.

At the cor. to secs. 19, 24, 25, and 30,
At 2 p.m., l.m.t., I set off 34° 30' N. on the lat. arc; 10° 39' N. on the decl. arc; and determine a true meridian with the solar.

Chains. Thence I run
North on a true line between secs. 19 and 24,
Descend steep N. W. slope.

10 50 Rock ledge, 40 ft. high, bears E. and W., enter
scattering cedar and live oak brush.

11.50 Bottom of canyon, bears E. and W. A dry branch in
bottom of canyon, course W., 30 lks. wide, foot of
550-ft. descent; ascend steep S. slope.

34.00 N. bank of canyon, bears E. and W., 700-ft. ascent,
thence over level mesa in scattering cedar.

Difference between measurements of 40.00 chs. by two
sets of chainmen is 10 lks.; position of middle
point
By 1st set, 39.95 chs.
By 2nd set, 40.05 chs.; the mean of which is

40.00 Set a volcanic rock, 26x14x10 ins. in mound of stone,
4 ft. base, 1-1/2 ft. high, around rock for 1/4
sec. cor., marked 1/4 on W. face; from which
A cedar, 4 ins.diam., bears S. 4° 30' E., 68 lks.
dist., marked 1/4 S B T
A pinon pine, 8 ins.diam., bears N.37°50'W., 16
lks. dist., marked 1/4 S B T

52.50 Descend steep N. slope into canyon.

68.40 Foot of descent of 500 ft., a dry branch, 10 lks.
wide, course W., ascend steep S. slope, through
scattering cedar and pinon pine.

Difference between measurements of 80.00 chs. by two
sets of chainmen is 8 lks.; position of middle
point
By 1st set, 80.04 chs.
By 2nd set, 79.96 chs.; the mean of which is

80.00 Set boundary post No. 70, for the cor. to secs. 13,
18, 19, and 24. Post, cap, and mound heretofore
described. Cap marked
No. 70 on S. side of cap.
1903 on S. side of rim.
RESERVE IN N. E. and S. E. quadrants.
Also marked
T 13 N S 18 in N. E. quadrant on rim.
R 7 E S 19 in S. E. " " "
R 6 E S 24 in S. W. " " "
S 13 in N. W. " " "
with 3 notches on N. and S. edges on rim; from which
A cedar, 7 ins.diam., bears N. 25° E., 29 lks.
dist., marked T 13 N R 7 E S 18 B T
A pinon pine, 6 ins.diam., bears S 22° 50' E.,
68 lks. dist., marked T 13 N R 7 E S 19 B T
A pinon pine, 8 ins.diam., bears S. 29° W.,
72 lks. dist., marked T 13 N R 6 E S 24 B T
A pinon pine, 10 ins.diam., bears N. 3° 05' W.,
127 lks. dist., marked T 13 N R 6 E S 13 B T

Land, mountainous.
Soil, 4th rate,
Timber, scattering pinon pine and cedar.
Volcanic surface rock.

April 18, 1903.

April 20: At 8 a.m., l.m.t., I set off 34° 31' N.
on the lat. arc; 11° 16' N. on the decl. arc; and
determine a true meridian with the solar at the
cor. to secs. 13, 18, 19, and 24.

Thence I run
North on a true line between secs. 13 and 18,
Ascend steep S. E. slope, through scattering cedar,
pinon pine, and oak.

14.50 N. bank of canyon, bears N. E. and S. W., 500-ft.
ascent; thence over level mesa.

Chains.	
22.22	Camp Verde and Payson wagon road, bears E. and W. Difference between measurements of 22.50 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 22.51 chs. By 2nd set, 22.49 chs.; the mean of which is
22.50	Set boundary post No. 71. Post, cap, and mound heretofore described. Cap marked No. 71 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. From which A pinon pine, 8 ins.diam., bears S. 69° E., 128 lks. dist., marked BDY.P. No. 71 B T A cedar, 6 ins.diam., bears N. 70° 10' W., 28 lks. dist., marked BDY.P. No. 71 B T
28.00	Descend steep N. slope of canyon.
29.00	Rock ledge, 20 ft. high, bears E. and W. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is
40.00	Set a volcanic rock, 24x14x10 ins., in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone for 1/4 sec. cor., marked 1/4 on W. face; from which A cedar, 12 ins.diam., bears N. 12° W., 176 lks. dist., marked 1/4 S B T A pinon pine, 8 ins.diam., bears S. 78° 25' E., 55 lks. dist., marked 1/4 S B T
51.80	A dry branch, 20 lks. wide, course W., foot of 800-ft. descent; ascend steep S. slope.
72.47	Top of ridge, bears E. and W., this is a 600-ft. ascent and sharp ridge on S. bank of Clear creek canyon. The true point for cor. to secs. 7, 12, 13, and 18 falls on steep slide rock. Difference between measurements of 72.47 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 72.50 chs. By 2nd set, 72.44 chs.; the mean of which is
72.47	Set boundary post No. 72, for the Witness Corner to secs. 7, 12, 13, and 18. Post, cap, and mound heretofore described. Cap marked No. 72 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. also marked W C in N. E. quadrant on rim. T 13 N S 7 in N. E. " " " R 7 E S 18 in S. E. " " " R 6 E S 13 in S. W. " " " S 12 in N. W. " " " with 4 notches on S. and 2 notches on N. edges of rim; from which A pinon pine, 10 ins.diam., bears S. 80° 30' W., 75 lks. dist., marked T 13 N R 6 E S 13 W C B T No other trees within limits. At this cor. I set off 11° 19' N. on the decl. arc; and at 11 ^h 59 ^m 07 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 32' N., which is the proper lat.
80.00	The true point for the cor. to secs. 7, 12, 13, and 18.

Black Meas Forest Reserve Boundary,
East Boundary T. 13 N., R. 6 E.

Chains.	<p>Land, mountainous. Soil, 4th rate. Timber, scattering pinon pine, cedar, oak, live oak, and palo verde brush. Volcanic rock.</p>
	<p>From the true point for the cor. to secs. 7, 12, 13, and 18, I run</p>
	<p>North on a true line between secs. 7 and 12, Descend steep N. slope into Clear Creek Canyon, through scattering cedar, live oak brush, and catsclaw.</p>
40.00	<p>True point for 1/4 sec. cor. falls on steep bank of Clear Creek.</p>
41.75	<p>Clear Creek, 50 lks. wide, 2 ft. deep, rapid current, pure water, course W., foot of 1000-ft. descent; ascend gradual S. slope.</p>
	<p>Difference between measurements of 43.47 chs. by two sets of chainmen is 6 lks.; position of middle point</p>
	<p>By 1st set, 43.50 chs.</p>
	<p>By 2nd set, 43.44 chs.; the mean of which is</p>
43.47	<p>Set a volcanic rock, 24x12x8 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone, for Witness 1/4 sec. cor., marked W C 1/4 on W. face; from which</p>
	<p>A cedar, 12 ins.diam., bears N. 68° W., 89 lks. dist., marked 1/4 S W C B T</p>
	<p>A cedar, 14 ins.diam., bears S. 31° E., 66 lks. dist., marked 1/4 S W C B T</p>
	<p>Difference between measurements of 45.87 chs. by two sets of chainmen is 6 lks.; position of middle point</p>
	<p>By 1st set, 45.90 chs.</p>
45.77	<p>By 2nd set, 45.84 chs.; the mean of which is</p>
45.87	<p>Trail, ^{bears East and West} Set boundary post No. 73. Post, cap, and mound here- tofore described. Cap marked</p>
	<p>No. 73 on S. side of cap.</p>
	<p>1903 on S. side of rim.</p>
	<p>RESERVE in N. E. and S. E. quadrants;</p>
	<p>from which</p>
	<p>A cedar, 12 ins.diam., bears S. 40° 30' W., 83 lks. dist., marked BDY.P.No. 73, B T</p>
	<p>A mesquite, 6 ins.diam., bears S. 37° E., 10 lks. dist., marked BDY.P.No. 73, B T</p>
52.00	<p>Ascend steep S. slope of canyon.</p>
80.00	<p>The true point for cor. to secs. 1, 6, 7, and 12 falls on bare rock.</p>
83.00	<p>North bank of Clear Creek Canyon, bears E. and W., 1500 ft. above creek, thence over level mesa, through cedar.</p>
	<p>Difference between measurements of 86.95 chs. by two sets of chainmen is 10 lks.; position of middle point</p>
	<p>By 1st set, 87.00 chs.</p>
	<p>By 2nd set, 86.90 chs.; the mean of which is</p>
86.95	<p>Set boundary post No. 74, for the Witness Corner to the cor. of secs. 1, 6, 7, and 12. Post, cap, and mound heretofore described. Cap marked</p>
	<p>No. 74 on S. side of cap.</p>
	<p>1903 on S. side of rim.</p>
	<p>RESERVE in N. E. and S. E. quadrants.</p>
	<p>also marked</p>
	<p>W C in N. E. quadrant on rim.</p>
	<p>T 13 N S 6 in N. E. " " "</p>
	<p>R 7 E S 7 in S. E. " " "</p>
	<p>R 6 E S 12 in S. W. " " "</p>
	<p>S 1 in N. W. " " "</p>

Black Mesa Forest Reserve Boundary,
East Boundary T. 13 N., R. 6 E.

Chains. with 5 notches on S. and 1 notch on N. edges of rim; from which
 A cedar, 8 ins.diam., bears N. 24° 40' E.,
 41 lks. dist., marked T 13 N R 7 E S 6 W C B T
 A pinon pine, 12 ins.diam., bears N. 12° W.,
 59 lks. dist., marked T 13 N R 6 E S 1 W C B T
 No other trees within limits. Dig pits, 18x18x12 ins. in each sec., 5-1/2 ft. dist.
 Land, mountainous.
 Soil, 2nd and 4th rate.
 Timber on Clear Creek Banks, cottonwood, sycamore, ash, box elder; on upland, cedar, catsclaw, live oak, mesquite, and pinon pine.
 Volcanic rock.
 April 20, 1903.

April 24: At the Witness Corner of secs. 1, 6, 7, and 12;
 At 8 a.m., l.m.t., I set off 34° 33' N. on the lat. arc; 12° 37' N. on the decl. arc; and determine a true meridian with the solar.
 Magnetic declination 14° 00' E.
 Thence I run
 North on a true line between secs. 1 and 6,
 Counting from the true point for the cor. to secs. 1, 6, 7, and 12, old cliff dwellings about 20.00 chs. W. of the cor., over level mesa, through cedar thicket.
 18.00 Descend N. W. slope.
 20.50 Descend steep N. W. slope.
 23.75 Side hill drain, course W.
 30.25 Side hill drain, course W., ascend gradual S. W. slope.
 Difference between measurements of 40.00 chs. by two sets of chainmen is 10 lks.; position of middle point
 By 1st set, 39 95 chs.
 By 2nd set, 40.05 chs.; the mean of which is
 40.00 Set a volcanic rock, 24x14x12 ins., in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone for 1/4 sec. cor., marked 1/4 on W. face; from which
 A cedar, 14 ins.diam., bears S. 61° 05' E.,
 40 lks. dist., marked 1/4 S B T
 A cedar, 10 ins.diam., bears N. 56° 25' W.,
 71 lks. dist., marked 1/4 S B T
 41.00 Top of spur, bears E. and W., descend N. W. slope.
 63.42 Ravine, 2.00 chs. wide, 60 ft. deep, course S. 30° W. water in pools (rain water), ascend gradual S. E. slope.
 74.00 Top of ridge, bears E. and W.
 75.00 Descend gradual N. slope.
 Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks.; position of middle point
 By 1st set, 80.04 chs.
 By 2nd set, 79 96 chs.; the mean of which is
 80.00 Set boundary post No. 75, for the cor. to Tps. 13 and 14 N., Rgs. 6 and 7 E. Post, cap, and mound heretofore described. Cap marked
 No. 75 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. and S. E. quadrants.
 also marked
 T 14 N S 31 in N. E. quadrant on rim
 R 7 E S 6 in S. E. " " "
 T 13 N S 1 in S. W. " " "
 R 6 E S 36 in N. W. " " "
 with 6 notches on N., S., E., and W. edges of rim;

Chains.	<p>from which A cedar, 8 ins.diam., bears N. 68° 50' E., 268 lks. dist., marked T 14 N R 7 E S 31 B T No other trees within limits. Dig pits, 24x24x12 ins. on each line E., W., N., and S. of post, 4 ft. dist. (mound around post). Land, level and mountainous. Soil, 4th rate. Timber, cedar and pinon pine; live oak brush. Volcanic rock.</p>
	<p>At the cor. to Tps. 13 and 14 N., Rgs. 6 and 7 E., At 11 a.m., l.m.t., I set off 34° 34' N. on the lat. arc; 12° 40' N. on the decl. arc; and deter- mine a true meridian with the solar. Thence I run North on a true line between secs. 31 and 36, Descend N. W. slope through scattering cedars and live oak brush. 6.90 Drain, course W., change to W. slope. 15.00 At this point I set off 12° 40' N. on the decl. arc; and at 11^h 58^m 17^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 34' N., which is the proper lat. 20.40 Side hill drain, course S. W. Ascend steep S. W. slope. 37.65 Rock ledge, 10 ft. high, bears N. 70° W. and S. 70° E. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point By 1st set, 40.03 chs. By 2nd set, 39 97 chs.; the mean of which is 40.00 Set a volcanic rock, 24x12x8 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone, for 1/4 sec. cor., marked 1/4 on W. face; from which A pinon pine, 14 ins.diam., bears S. 17° 35' E., 40 lks. dist., marked 1/4 S B T A pinon pine, 8 ins.diam., bears S. 79° W., 39 lks. dist., marked 1/4 S B T 41.25 Top of ascent, bears E. and W., 500 ft. above last drain, thence over level mesa, through cedar thicket. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is 80.00 Set boundary post No. 76, for the cor. to secs. 25, 30, 31, and 36. Post, cap, and mound heretofore described. Cap marked No. 76 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. also marked T 14 N S 30 in N. E. quadrant on rim. R 7 E S 31 in S. E. " " " R 6 E S 36 in S. W. " " " S 25 in N. W. " " " with 1 notch on S. and 5 notches on N. edges of rim; from which A pinon pine, 8 ins.diam., bears N. 45° 35' E., 8 lks. dist., marked T 14 N R 7 E S 30 B T A cedar, 18 ins.diam., bears S. 23° 15' E., 87 lks. dist., marked T 14 N R 7 E S 31 B T A pinon pine, 6 ins.diam., bears S. 24° 25' W., 20 lks. dist., marked T 14 N R 6 E S 36 B T A cedar, 14 ins.diam., bears N. 52° 20' W., 7 lks. dist., marked T 14 N R 6 E S 25 B T</p>

Black Mesa Forest Reserve Boundary,
East boundary T. 14 N., R. 6 E.

Chains. Land, level and mountainous.
Soil, 4th rate.
Timber, cedar and pine.

At the cor. to secs. 25, 30, 31, and 36, at 4 p.m., l.m.t., I set off 34° 35' N. on the lat. arc; 12° 44' N. on the decl. arc; and determine a true meridian with the solar.
Thence I run
North on a true line between secs. 25 and 30,
Over level mesa, through dense thicket of cedar.

4.95 A canyon, 4.00 chs. wide, 50 ft. deep, drain in bottom, course S. 70° W., continue over level mesa.
Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point
By 1st set, 39.99 chs.
By 2nd set, 40.01 chs.; the mean of which is

40.00 Set a volcanic rock, 26x14x10 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone for 1/4 sec. cor., marked 1/4 on W. face; from which
A cedar, 5 ins.diam., bears S. 63° 45' E., 16 lks. dist., marked 1/4 S B T
A cedar, 10 ins.diam., bears N. 60° W., 65 lks. dist., marked 1/4 S B T

48.00 At 4^h 30^m p.m., l.m.t., I set off 34° 35' N. on the lat. arc; 12° 45' N. on the decl. arc; and determine a true meridian with the solar; I mark the meridian thus determined by a tack driven in a wooden plug set 5.00 chs. N. of my station.
April 24, 1903.
April 25: At 5^h 17^m a.m., l.m.t., I observe Polaris at eastern elongation, and mark the line thus determined by a tack driven in a wooden plug set 5.00 chs. N. of my station.
At 7 a.m. I lay off the azimuth of Polaris 1° 28' to the west; the meridian thus determined falls at the exact point established by solar observation.
At 8 a.m., l.m.t., I set off 34° 35' N. on the lat. arc; 12° 57' N. on the decl. arc; and determine a true meridian with the solar. The meridian thus determined falls at the exact point established by solar and Polaris observations.
Continue line north.
Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point
By 1st set, 80.01 chs.
By 2nd set, 79.99 chs.; the mean of which is

80.00 Set boundary post No. 77, for the cor. to secs. 19, 24, 25, and 30. Post, cap, and mound heretofore described. Cap marked
No. 77 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and S. E. quadrants.
also marked
T 14 N S 19 in N. E. quadrant on rim.
R 7 E S 30 in S. E. " " "
R 6 E S 25 in S. W. " " "
S 24 in N. W. " " "
with 2 notches on S. and 4 notches on N. edges of rim; from which
A pinon pine, 5 ins.diam., bears N. 8° 10' E., 51 lks. dist., marked T 14 N R 7 E S 19 B T
A cedar, 14 ins.diam., bears S. 60° 20' E., 9 lks. dist., marked T 14 N R 7 E S 30 B T

Black Mesa Forest Reserve Boundary,
East Boundary T. 14 N., R. 6 E.

Chains.	<p>A cedar, 8 ins.diam., bears S. 54° 20' W., 15 lks. dist., marked T 14 N R 6 E S 25 B T A cedar, 5 ins.diam., bears N. 11° W., 49 lks. dist., marked T 14 N R 6 E S 24 B T Land, level mesa. Soil, 4th rate. Timber, scrub cedar and pinon pine; live oak brush. Volcanic rock.</p>
1.50 2.50 15.37 29.00 36.25 40.00 60.00 67.00 67.50 80.00	<p>At the cor. to secs. 19, 24, 25, and 30, At 9 a.m., l.m.t., I set off 34° 36' N. on the lat. arc; 12° 58' N. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a true line between secs. 19 and 24, Over level mesa, through scrub cedar. Descend steep N. slope into canyon, bears E. and W. Rock ledge, 25 ft. high, bears E. and W. A dry branch, 10 lks. wide, course W., foot of 500-ft. descent; ascend steep S. slope through live oak brush. Top of spur, bears E. and W., descend N. W. slope. Drain, course S. W., 200-ft. descent; ascend S. E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 39.96 chs. By 2nd set, 40.04 chs.; the mean of which is Set a volcanic rock, 24x14x12 ins. in place; cut cross (+) at the exact corner point for 1/4 sec. cor., marked 1/4 on W. face; from which A cedar, 5 ins.diam., bears N. 2° E., 68 lks. dist., marked 1/4 S B T A pinon pine, 24 ins.diam., bears N. 23° W., 58 lks. dist., marked 1/4 S B T At this point I set off 13° 00' N. on the decl. arc; and at 11^h 58^m 07^s a. m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 36' N., which is a little less than the proper lat. Top of ridge, bears E. and W., descend N. E. slope. A rock ledge, 6 ft. high, bears E. and W. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 79.98 chs. By 2nd set, 80.02 chs.; the mean of which is Set boundary post No. 78, for the cor. to secs. 13, 18, 19, and 24. Post, cap, and mound heretofore described. Cap marked No. 78 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. also marked T. 14 N S 18 in N. E. quadrant on rim. R 7 E S 19 in S. E. " " " R 6 E S 24 in S. W. " " " S 13 in N. W. " " " with 3 notches on N. and S. edges of rim; from which A pinon pine, 5 ins.diam., bears S. 75° 55' W., 123 lks. dist., marked T 14 N R 6 E S 24 B T No other trees within limits. Dig pits, 18x18x12 ins. in each sec. 5-1/2 ft. dist. Land, mountainous. Soil, 4th rate. Timber, scattering scrub cedar and pinon pine; live oak and catsclaw brush. Volcanic rock.</p>

Chains.	At the cor. to secs. 13, 18, 19, and 24, At 2 p.m., l.m.t., I set off 34° 37' N. on the lat. arc; 13° 02' N. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a true line between secs. 13 and 18, Over N. W. slope, through oak brush.
3.25	Side hill drain, course W., change to S. W. slope.
12.50	Change to N. slope.
32.80	A dry branch, 20 lks. wide, course S. 70° W., foot of 550-ft. descent; ascend steep S. E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which
40.00	Set a volcanic rock, 24x12x8 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone for 1/4 sec. cor., marked 1/4 on W. face; from which A cedar, 6 ins.diam., bears S. 28° 15' W., 82 lks. dist., marked 1/4 S B T A cedar, 24 ins.diam., bears N. 28° 10' W., 239 lks. dist., marked 1/4 S B T No trees in limits on E. side of line.
47.00	Top of ridge, bears west and N. E., 450-ft. ascent, thence along E. slope through scrub cedar
59.20	Descend N. E. slope, through scattering cedar.
69.00	Change to gradual E. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 79.99 chs. By 2nd set, 80.01 chs.; the mean of which is
80.00	Set boundary post No. 79, for the cor. to secs. 7, 12, 13, and 18, Post, cap, and mound heretofore described. Cap marked No. 79 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. also marked T 14 N S 7 in N. E. quadrant on rim R 7 E S 18 in S. E. " " " R 6 E S 13 in S. W. " " " S 12 in N. W. " " " with 4 notches on S. and 2 notches on N. edges of rim; from which A cedar, 5 ins.diam., bears N. 33° 40' E., 99 lks. dist., marked T 14 N R 7 E S 7 B T A cedar, 14 ins. diam., bears S. 21° 50' E., 96 lks. dist., marked T 14 N R 7 E S 18 B T A cedar, 12 ins.diam., bears S. 23° 35' W., 91 lks. dist., marked T 14 N R 6 E S 13 B T A cedar, 5 ins.diam., bears N. 86° 30' W., 157 lks. dist., marked T 14 N R 6 E S 12 B T Land, mountainous. Soil, 4th rate. Timber, scrub cedar and pine; live oak brush
2.40	North on a true line between secs. 7 and 12, Over gradual E. slope, through scattering cedar. Small drain, course E., ascend S. E. slope of a round butte.
31.75	Rock ledge, 50 ft. high, bears E. and W.
33.00	Top of butte, 600 ft. above sec. cor. The summit of this butte is about 3.00 chs. W. of this point.
37.50	Descend N. slope, a rock ledge, 20 ft. high, bears E. and W. April 25, 1903.

Black Mesa Forest Reserve Boundary,
East Boundary T. 14 N., R. 6 E.

Chains.	<p>April 26: At 8 a.m., l.m.t., I set off 34° 37' N. on the lat. arc; 13° 17' N. on the decl. arc; and determine a true meridian with the solar. Continue line N.</p>
40.00	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 39.96 chs.; the mean of which is Set a volcanic rock, 22x12x12 ins. in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone, for 1/4 sec. cor., marked 1/4 on W. face; from which A cedar, 10 ins.diam., bears N. 80° 25' E., 71 lks. dist., marked 1/4 S B T A cedar, 10 ins.diam., bears N. 6° 40' W., 50 lks. dist., marked 1/4 S B T</p>
49.50	<p>Descend steep N. slope of mountain.</p>
78.50	<p>Drain, course N. E., foot of 800-ft. descent, thence over E. slope. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point</p>
80.00	<p>By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is Set boundary post No. 80, for the cor. to secs. 1, 6, 7, and 12. Post, cap, and mound heretofore described. Cap marked No. 80 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. E. quadrants. also marked T 14 N S 6 in N. E. quadrant on rim R 7 E S 7 in S. E. " " " R 6 E S 12 in S. W. " " " S 1 in N. W. " " " with 5 notches on S. and 1 notch on N. edges of rim; from which A cedar, 15 ins.diam., bears N. 89° 45' E., 148 lks. dist., marked T 14 N R 7 E S 6 B T A cedar, 10 ins.diam., bears S. 21° 30' E., 120 lks. dist., marked T 14 N R 7 E S 7 B T A cedar, 14 ins.diam., bears S. 1° 50' W., 83 lks. dist., marked T 14 N R 6 E S 12 B T A cedar, 5 ins.diam., bears N. 63° 10' W., 69 lks. dist., marked T 14 N R 6 E S 1 B T Land, mountainous. Soil, 4th rate. Timber, scattering scrub cedar and pinon pine; live oak and catsclaw brush. Volcanic rock formation.</p>
8.75	<p>At the cor. to secs. 1, 6, 7, and 12, At 9 a.m., l.m.t., I set off 34° 38' N. on the lat. arc; 13° 17' N. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a true line between secs. 1 and 6, Over E. slope, through oak brush and scattering timber.</p>
25.25	<p>Spring Creek, 20 lks. wide, dry at this point, course N. 70° W. Ascend steep S. slope through scrub cedar. Rock ledge, 65 ft. high, bears N. 70° W. and S. 70° E. 400-ft. ascent, thence over level mesa, through dense growth of cedar.</p>

Black Mesa Forest Reserve Boundary,
East Boundary T. 14 N., R. 6 E.

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Chains.	<p>Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p>
40.00	<p>By 1st set, 39.99 chs. By 2nd set, 40.01 chs.; the mean of which is Set a volcanic rock, 22x10x12 ins., in mound of stone, 4 ft. base, 1-1/2 ft. high, around stone, for 1/4 sec. cor., marked 1/4 on W. face; from which A cedar, 12 ins.diam., bears N. 29° 40' E., 98 lks. dist., marked 1/4 S B T A pinon pine, 8 ins.diam., bears S. 24° 50' W., 71 lks. dist., marked 1/4 S B T</p>
60.00	<p>At this point I set off 13° 20' N. on the decl. arc; and at 11^h 57^m 55^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is about 34° 39' N.</p>
80.00	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 79.99 chs. By 2nd set, 80.01 chs.; the mean of which is Set boundary post No. 81, for the cor. to Tps. 14 and 15 N., Rgs. 6 and 7 E. Post, cap, and mound heretofore described. Cap marked No. 81 on S. side of cap. 1903 on S. side of rim. RESERVE in S.E., N.E., and N.W. quadrants. also marked T 15 N S 31 in N. E. quadrant on rim. R 7 E S 6 in S. E. " " " T 14 N S 1 in S. W. " " " R 6 E S 36 in N. W. " " " with 6 notches on N., S., E., and W. edges of rim; from which A cedar, 20 ins.diam., bears N. 49° 40' E., 114 lks. dist., marked T 15 N R 7 E S 31 B T A cedar, 15 ins.diam., bears S. 6° E., 66 lks. dist., marked T 14 N R 7 E S 6 B T A cedar, 16 ins.diam., bears S. 84° 00' W., 214 lks. dist., marked T 14 N R 6 E S 1 B T A pinon pine, 5 ins.diam., bears N. 48° 10' W., 103 lks. dist., marked T 15 N R 6 E S 36 B T Land, level and mountainous. Soil, 4th rate. Timber, scrub cedar and pinon. Volcanic surface rock.</p>
23.50	<p>At the cor. to Tps. 14 and 15 N., Rgs. 6 and 7 E., At 2 p.m., l.m.t., I set off 34° 40' N. on the lat. arc; 13° 21' N. on the decl. arc; and determine a true meridian with the solar. Thence I run West on a true line between secs. 1 and 36, Over level mesa, through dense growth of scrub cedar.</p>
25.60	<p>Leave mesa, bears N. and S. Descend steep W. slope into canyon.</p>
25.80	<p>East wall of canyon 100 ft. high bears N. and S.</p>
40.00	<p>Foot of bluff, bears N. and S. Continue to descend steep W. slope. The point for 1/4 sec. cor. falls in bed of a dry creek, 20 lks. wide, course N. 60° W., foot of 700-ft. descent; ascend E. slope. Difference between measurements of 42.71 chs. by two sets of chainmen is 10 lks.; position of middle point</p>

Chains. By 1st set, 42.76 chs.
 By 2nd set, 42.66 chs.; the mean of which is
 42.71 Set volcanic rock, 26x14x10 ins. in mound of stone,
 for Witness 1/4 sec. cor., marked W C 1/4 on N.
 face; mound of stone around cor. 4 ft. base, 18
 ins. high; from which
 A cedar, 8 ins.diam., bears S. 62° 30' W., 151 lks.
 dist., marked 1/4 S B T
 A cedar, 10 ins.diam., bears N. 85° 20' W.,
 117 lks. dist., marked 1/4 S B T
 Ascend steep E. slope from cor.
 68.00 Top of mountain, bears N. and S., 800-ft. ascent
 above creek.
 70.00 Descend N. W. slope.
 Difference between measurements of 80.00 chs. by two
 sets of chainmen is 12 lks.; position of middle
 point
 By 1st set, 80.06 chs.
 By 2nd set, 79.94 chs.; the mean of which is
 80.00 Set boundary post No. 82, for the cor. to secs. 1,
 2, 35, and 36. Cap marked
 No. 82 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. and N. W. quadrants.
 also marked
 T 15 N S 36 in N. E. quadrant on rim.
 R 6 E S 1 in S. E. " " "
 T 14 N S 2 in S. W. " " "
 S 35 in N. W. " " "
 with 5 notches on W. and 1 notch on E. edges of rim;
 from which
 A cedar, 16 ins.diam., bears S. 78° E., 188 lks.
 dist., marked T 14 N R 6 E S 1 B T
 No other trees within limits. Dig pits, 18x18x12
 ins. in each sec., 5-1/2 ft. dist.
 Land, level and mountainous.
 Soil, 4th rate.
 Timber, red cedar.
 Volcanic rock and sandstone.
 April 26, 1903.

April 27: At 8 a.m., l.m.t., I set off 34° 40' N.
 on the lat. arc; 13° 36' N. on the decl. arc; and
 determine a true meridian with the solar at the
 cor. to secs. 1, 2, 35, and 36, S. Bdy. T. 15 N.,
 R. 6 E.
 Thence I run
 West on a true line between secs. 2 and 35,
 Over N. slope, through dense growth of live oak
 brush.
 20.00 Descend steep W. slope of mountain; leave Black
 Mesa range; descend into Verde Basin.
 21.00 Sandstone ledge, 20 ft. high, bears N. W. and S. E.
 Difference between measurements of 40.00 chs. by two
 sets of chainmen is 10 lks.; position of middle
 point
 By 1st set, 40.05 chs.
 By 2nd set, 39.95 chs.; the mean of which is
 40.00 Set a sandstone, 26x12x12 ins. in mound of stone,
 4 ft. base, 20 ins. high, around stone, for 1/4
 sec. cor., marked 1/4 on N. face; from which
 A cedar, 6 ins.diam., bears N. 76° 40' W.,
 50 lks. dist., marked 1/4 S B T
 No other trees within limits. Raise mound of stone,
 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.

Black Mesa Forest Reserve Boundary,
South Boundary T. 15 N., R. 6 E.

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Chains.	
41.00	Descend steep S. W. slope into canyon.
50.00	Bottom of canyon, course N. W., 800-ft. descent; ascend steep N. E. slope.
65.00	Top of ascent, bears N. W. and S. E. Descend gradual S. W. slope.
78.00	Change to gradual W. slope.
	Difference between measurements of 80.00 chs. by two sets of chainmen is 6 lks.; position of middle point
	By 1st set, 80.03 chs.
	By 2nd set, 79.97 chs.; the mean of which is
80.00	Set boundary post No. 83, for the cor. to secs. 2, 3, 34, and 35. Post, cap, and mound heretofore described. Cap marked
	No. 83 on S. side of cap.
	1903 on S. side of rim.
	RESERVE in N. E. and N. W. quadrants.
	also marked
	T 15 N S 35 in N. E. quadrant on rim.
	R 6 E S 2 in S. E. " " "
	T 14 N S 3 in S. W. " " "
	S 34 in N. W. " " "
	with 2 notches on E. and 4 notches on W. edges of rim; from which
	A cedar, 8 ins.diam., bears N. 39° E., 115 lks. dist., marked T 15 N R 6 E S 35 B T
	A pinon pine, 14 ins.diam., bears S. 37° 25' E., 228 lks. dist., marked T 14 N R 6 E S 2 B T
	A cedar, 8 ins.diam., bears S. 34° 20' W., 125 lks. dist., marked T 14 N R 6 E S 3 B T
	A cedar, 8 ins.diam., bears N. 82° W., 104 lks. dist., marked T 15 N R 6 E S 34 B T
	Land, mountainous.
	Soil, 4th rate.
	Timber, scattering cedar and pinon pine; live oak brush.
	Volcanic rock first 20.00 chs.; sandstone formation last 60.00 chs.
	At the cor. to secs. 2, 3, 34, and 35,
	At 11 a.m., l.m.t., I set off 34° 40' N. on the lat. arc; 13° 38' N. on the decl. arc; and determine a true meridian with the solar.
	Magnetic declination 14° 15' E.
	Thence I run
	West on a true line between secs. 3 and 34,
	Descend gradual W. slope, through scattering cedar and pinon pine.
25.00	Leave timber, bears N. W. and S. E. Enter prairie, enter level land.
30.60	Small drain, course S. W.
	Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point
	By 1st set, 39.99 chs.
	By 2nd set, 40.01 chs.; the mean of which is
40.00	Set a volcanic rock, 22x12x10 ins., 16 ins. in the ground for 1/4 sec. cor., marked 1/4 on N. face; from which
	A cedar, 10 ins.diam., bears N. 55° 00' W., 220 lks. dist., marked 1/4 S B T
	No other trees within limits. Dig pits, 18x18x12 ins., E. and W. of cor., 3-1/2 ft. dist.; raise a mound of earth and stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.

Black Mesa Forest Reserve Boundary,
South Boundary T. 15 N., R. 6 E.

Chains.	At this 1/4 sec. cor. I set off 13° 30' N. on the decl. arc; and at 11 ^h 57 ^m 45 ^s a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 40' N., which is the proper lat.
72.00	A dry branch, 15 lks. wide, course N. W. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point
80.00	By 1st set, 80.01 chs. By 2nd set, 79.99 chs.; the mean of which is Set boundary post No. 84, for the cor. to secs. 3, 4, 33, and 34. Post, cap, and mound heretofore described. Cap marked No. 84 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and N. W. quadrants. also marked T 15 N S 34 in N. E. quadrant on rim R 6 E S 3 in S. E. " " " T 14 N S 4 in S. W. " " " S 33 in N. W. " " " with 3 notches on E. and W. edges of rim; from which A cedar, 8 ins.diam., bears S. 32° 35' E., 113 lks. dist., marked T 14 N R 6 E S 3 B T A cedar, 24 ins.diam., bears S. 66° 30' W., 158 lks. dist., marked T 14 N R 6 E S 4 B T A palo verde tree, 5 ins.diam., bears N. 73° 25' W., 63 lks. dist., marked T 15 N R 6 E S 33 B T No other trees within limits. Dig pits, 18x18x12 ins. in each sec. Land, rolling. Soil 3rd rate. Timber, scattering cedar; live oak and palo verde brush. Sandstone formation.
5.80	At the cor. to secs. 3, 4, 33, and 34, S. bdy.
27.50	T. 15 N., R. 6 E. At 2 p.m., l.m.t., I set off 34° 40' N. on the lat. arc; 13° 41' N. on the decl. arc; and determine a true meridian with the solar. Thence I run West on a true line between secs. 4 and 33, Over level land, through scattering cedar and live oak brush.
32.00	Drain, course N. W. A dry branch, 10 lks. wide, course N. 20° W. Ascend N. E. slope. Top of ascent, bears N. W. and S. E., 50-ft. ascent, thence over level mesa.
40.00	Difference between measurements of 40.00 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 39.98 chs. By 2nd set, 40.02 chs.; the mean of which is Set a limestone, 26x14x8 ins., 18 ins. in the ground for 1/4 sec.cor., marked 1/4 on N. face; from which A cedar, 10 ins.diam., bears S. 6° 00' E., 146 lks. dist., marked 1/4 S B T No other trees within limits; dig pits, 18x18x12 ins. E. and W. of cor., 3-1/2 ft. dist.; raise a mound of earth and stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks.; position of middle point

Black Mesa Forest Reserve Boundary.
South Boundary T. 15 N., R. 6 E.

Chains. 80.00 By 1st set, 80.01 chs.
By 2nd set, 79.99 chs.; the mean of which is
Set boundary post No. 85, for the cor. to secs. 4,
5, 32, and 33. Post, cap, and mound heretofore
described. Cap marked
No. 85 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked
T 15 N S 33 in N. E. quadrant on rim.
R 6 E S 4 in S. E. " " "
T 14 N S 5 in S. W. " " "
S 32 in N. W. " " "
with 4 notches on E. and 2 notches on W. edges of
rim; from which
A cedar, 8 ins.diam., bears S. 42° 40' E.,
115 lks. dist., marked T 14 N R 6 E S 4 B T
No other trees within limits. Dig pits, 18x18x12
ins. in each sec., 5-1/2 ft. dist.;

Land, rolling.
Soil, 4th rate.
Timber, scattering cedar, pinon pine, live oak and
palo verde brush.
Sandstone formation.

At the cor. to secs. 4, 5, 32, and 33, on S. bdy.
T. 15 N., R. 6 E.,
At 4 p.m., l.m.t., I set off 34° 40' N. on the lat.
arc; 13° 42' N. on the decl. arc; and determine a
true meridian with the solar.
Thence I run
West on a true line between secs. 5 and 32,
Over gently rolling land, through mesquite and live
oak brush.
28.00 Descend gradual W. slope.
35.50 Small drain, course S. 70° W.
Difference between measurements of 40.00 chs. by two
sets of chainmen is 4 lks.; position of middle
point
By 1st set, 39.98 chs.
By 2nd set, 40.02 chs.; the mean of which is
40.00 Set a limestone, 22x14x10 ins. in mound of stone,
4 ft. base, 1-1/2 ft. high, around stone, for 1/4
sec. cor., marked 1/4 on N. face; raise a mound of
stone, 3-1/2 ft. base, 1-1/2 ft. high, N. of cor.
53.15 A dry branch, 20 lks. wide, course N. W. Ascend
N. E. slope.
64.50 Ravine, 50 lks. wide, 10 ft. deep, course N.
79.50 Top of ridge, bears N. and S., thence over nearly
level land.
Difference between measurements of 80.00 chs. by two
sets of chainmen is 4 lks.; position of middle
point
By 1st set, 80.02 chs.
By 2nd set, 79.98 chs.; the mean of which is
80.00 Set boundary post No. 86, for the cor. to secs. 5,
6, 31, and 32. Post, cap, and mound heretofore
described. Cap marked
No. 86 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. and N. W. quadrants.
also marked
T 15 N S 32 in N. E. quadrant on rim.
R 6 E S 5 in S. E. " " "
T 14 N S 6 in S. W. " " "
S 31 in N. W. " " "

Chains:	<p>with 1 notch on W. and 5 notches on E. edges of rim; from which</p> <p>A cedar, 10 ins.diam., bears S. 36° 45' E., 207 lks. dist., marked T 14 N R 6 E S 5 B T</p> <p>A cedar, 10 ins.diam., bears S. 86° 55' W., 482 lks. dist., marked T 14 N R 6 E S 6 B T</p> <p>No other trees near. Dig pits, 18x18x12 ins. in each sec., 5-1/2 ft. dist.</p> <p>Land, rolling.</p> <p>Soil, 3rd rate.</p> <p>Timber, scattering cedar; palo verde, mesquite, catsclaw, and live oak brush.</p> <p>Sand and limestone formation.</p> <p style="text-align: right;">April 27, 1903.</p>
	<p>April 28: At 8 a.m., l.m.t., I set off 34° 40' N. on the lat. arc; 13° 55' N. on the decl. arc; and determine a true meridian with the solar at the cor. to secs. 5, 6, 31, and 32, S. Bdy. T. 15 N., R. 6 E.</p> <p style="text-align: center;">Magnetic declination 14° 00' E.</p> <p>Thence I run</p> <p>West on a true line between secs. 6 and 31, Over level mesa, through scattering cedar, Palo verde, and live oak brush.</p> <p>23.00 Descend gradual W. slope.</p> <p>29.00 Limestone ledge, 5 ft. high, bears N. E. and S. W.</p> <p>36.75 Drain, course N. W. Ascend gradual N. E. slope. Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point</p> <p style="padding-left: 2em;">By 1st set, 39.99 chs.</p> <p style="padding-left: 2em;">By 2nd set, 40.01 chs.; the mean of which is</p> <p>40.00 Set a limestone, 36x20x20 ins. in mound of stone, 6 ft. base, 2-1/2 ft. high, around stone, for 1/4 sec. cor., marked 1/4 on N. face; from which</p> <p style="padding-left: 2em;">A cedar, 16 ins.diam., bears S. 1° 50' E., 117 lks. dist., marked 1/4 S B T</p> <p style="padding-left: 2em;">A cedar, 8 ins.diam., bears N. 72° W., 167 lks. dist., marked 1/4 S B T</p> <p>From the 1/4 sec. cor., Montezuma's well bears N. 22° 30' E., about 40.00 chs.</p> <p>57.50 Change to gradual N. W. slope from 1/4 sec. cor. A dry branch, 20 lks. wide, course N. 20° W., foot of 75-ft. descent.</p> <p>66.53 Intersect W. bdy. of Tp., 9.59 chs. S. of the cor. to Tps. 14 and 15 N., Rgs. 5 and 6 E., which is a limestone, 10x8x8 ins. above ground, firmly set, marked with 6 notches on N., S., E., and W. faces; witnessed by 4 pits and mound of earth.</p> <p>I set temp. cor. for Closing Cor. to Tps. 14 and 15 N., R. 6 E.</p> <p>At the cor. to Tps. 14 and 15 N., Rgs. 5 and 6 E., At 9 a.m., l.m.t., I set off 34° 40' N. on the lat. arc; 13° 56' N. on the decl. arc; and determine a true meridian with the solar.</p> <p>Thence I run</p> <p>42.40 South on a random line along E. Bdy. of sec. 1. The 1/4 sec. cor., bears W. 454 lks., which is a limestone, 14x12x4 ins. above ground, firmly set, marked 1/4 on E. face; witnessed by mound of stone W. of cor. Set over corner and continue line S.</p> <p>82.27 The cor. to secs. 1 and 12 bears W. 117 lks., which is a limestone, 8x10x6 ins. above ground, firmly set, marked with 5 notches on S. and 1 notch on N. faces, witnessed by mound of stone W. of cor.</p>

Black Mesa Forest Reserve Boundary,
East Boundary T. 15 N., R. 5 E.

Chains. I return to the cor. to Tps. 14 and 15 N., Rgs. 5 and 6 E., and destroy the east pits, also marks on east face of stone; change mound of earth from S. of cor. to W. of cor., 5 ft. base, 2-1/2 Ft. high.

Thence I run
S. 6° 09' W., on a true line along E. bdy. of sec. 1,
T. 14 N., R. 5 E.,
Over gradual N. E. slope, through scattering brush.
Difference between measurements of 9.59 chs. by two sets of chainmen is nothing.

9.59 The Temp. Closing Cor. to Tps. 14 and 15 N., R. 6 E., bears E. 147 lks.
From the temp. C. C. at 66.53 chs. I continue the line west along the S. Bdy. of sec. 31.

67.75 Drain, course N. E.
Difference between measurements of 68.00 chs. by two sets of chainmen is nothing.

68.00 Intersect the W. bdy. of Tp. 9.59 chs. S. 6° 09' W. of the cor. to Tps. 14 and 15 N., R. 5 E.
Set boundary post No. 87 for the Closing Cor. to Tps. 14 and 15 N., R. 6 E. Post, cap, and mound heretofore described. Cap marked
No. 87 on S. side of cap.
1903 on S. side of rim.
RESERVE in N. E. quadrant.
also marked
T 15 N S 31 in N. E. quadrant on rim.
T 14 N R 6 E S 6 in S.E. " " "
C C on E. side of rim.
with 6 notches on N., S., and E. edges of rim; from which
A cedar, 12 ins.diam., bears N. 37° 05' E., 242 lks. dist., marked T 15 N R 6 E S 31 C C B T
A cedar, 10 ins.diam., bears S. 39° 52' E., 264 lks. dist., marked T 14 N R 6 E S 6 C C B T
Land, rolling.
Soil, 3rd and 4th rate.
Timber, scattering cedar, live oak brush.
Limestone formation.

From the cor. to Tps. 14 and 15 N., R. 5 E., heretofore described, a flag set at the 1/4 sec. cor. between secs. 31 and 36 bears N. 3° 25' W., therefore I run N. 3° 25' W. on a true line between secs. 31 and 36, over gradual N. E. slope, through scattering live oak and cedar.

12.00 Enter Beaver Creek bottom, bears S. 40° W. and N. 40° E. Enter cottonwood, ash, and sycamore timber.

21.57 Beaver Creek, 40 lks. wide, 6 ins. deep, pure water, course S. 70° W.

22.89 Wire fence, bears E. and W., enter cultivated land.

33.82 Wire fence, bears N. 80° E. and S. 80° W. Leave cultivated land.

34.30 Irrigation ditch, course S. 70° W., 5 lks. wide, 18 ins. deep.

35.50 Wagon road, bears N. E. and S. W.
From this point Wm. Back's house bears N. E. about 5.00 chs.
From same point a house bears E. 80 lks.
Difference between measurements of 35.70 chs. by two sets of chainmen is 2 lks.; position of middle point
By 1st set, 35.71 chs.
By 2nd set, 35.69 chs.; the mean of which is

Black Mesa Forest Reserve Boundary,
East Boundary T. 15 N., R. 5 E.

Chains.

- 35.70 Set boundary post No. 88. Post, cap, and mound heretofore described. Cap marked
 No. 88 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. and S. E. quadrants.
 from which
 A cottonwood, 24 ins.diam., bears S. 0° 50' W., 148 lks. dist., marked BDY P No. 88 B T
 A cottonwood, 8 ins.diam., bears N. 88° 30' E., 127 lks. dist., marked BDY P No. 88 B T
- 37.00 Ascend steep S. slope.
- 39.46 Rock ledge 20 ft. high, bears E. and W., enter mesa, Difference between measurements of 40.70 chs. by two sets of chainmen is 2 lks.; position of middle point
 By 1st set, 40.71 chs.
 By 2nd set, 40.69 chs.; the mean of which is
- 40.70 The 1/4 sec. cor., which is a limestone, 12x16x4 ins. above ground, firmly set, marked 1/4 on W. face; witnessed by mound of stone E. and W. of cor.
 From this cor. I run N. on a random line.
- 80.93 The cor. to secs. 25, 30, 31, and 36, bears W. 14 lks. dist., which is a limestone, 16x12x7 ins. above ground, firmly set, marked with 1 notch on S. and 5 notches on N. faces; witnessed by mound of stone W. of cor. I return to the 1/4 sec. cor.
 Thence I run
 N. 0° 12' W. on a true line between secs. 31 and 36. North half, over level mesa.
 Difference between measurements of 80.93 chs. by two sets of chainmen is 4 lks.; position of middle point
 By 1st set, 80.91 chs.
 By 2nd set, 80.95 chs.; the mean of which is
- 80.93 The cor. to secs. 25, 30, 31, and 36.
 Land, rolling and level mesa.
 Soil, 2nd and 4th rate.
 Timber, cottonwood, ash, sycamore, live oak, and catsclaw brush:

- 40.26 North on a random line between secs. 25 and 30.
 The 1/4 sec. cor., bears E. 4 lks., which is a limestone, 8x8x6 ins. above ground, firmly set, witnessed and marked. Set over cor. and continue N.
- 80.12 The cor. to secs. 19, 24, 25, and 30, bears W. 4 lks., which is a limestone, 6x10x6 ins. above ground, firmly set, marked with 2 notches on S. and 4 notches on N. faces, witnessed by pits and mound.
 I return to the cor. to secs. 25, 30, 31, and 36.
 Thence I run
 N. 0° 03' E. on a true line between secs. 25 and 30. Over level mesa, scattering catsclaw brush.
- 5.00 At this point I set off 13° 58' N. on the decl. arc; and at 11h 57m a.m., l.m.t., observe the sun on the meridian; the resulting lat. is 34° 41' N., which is the proper lat.
- 9.00 Descend N. slope.
- 14.15 A dry branch, 20 lks. wide, course W. for about 5.00 chs., thence S. W. Ascend gradual S. slope.
 Difference between measurements of 18.17 chs. by two sets of chainmen is nothing.
- 18.17 Set boundary post No. 89. Post, cap, and mound heretofore described. Cap marked
 No. 89 on S. side of cap.
 1903 on S. side of rim.
 RESERVE in N. E. and S. E. quadrants.
 No trees within limits.
- 35.40 Small dry branch, 10 lks. wide, course S. E.
 Difference between measurements of 40.26 chs. by two sets of chainmen is nothing.
- 40.26 The 1/4 sec. cor.
 Thence I run
 N. 0° 03' W.
- 41.60 Same branch, course S. 10° W.
- 42.75 Same branch, course S. 20° E.
- 43.60 Same branch, course S. W.
- 45.60 Same branch, course S. E.

Black Mesa Forest Reserve Boundary,
East Boundary T. 15 N., R. 5 E.

Chains.	
46 50	Same branch, course S. W.
59.15	Same branch, course S. E.
62.15	Same branch, course S. W.
64.00	Same branch, course S. E.
74.00	Same branch, course S. W.
	Difference between measurements of 80.12 chs. by two sets of chainmen is 4 lks.; position of middle point By 1st set, 80.10 chs. By 2nd set, 80.14 chs.; the mean of which is
80.12	The cor. to secs. 19, 24, 25, and 30. Land, rolling and level. Soil, 3rd and 4th rate. Timber, scattering scrub cedar, catsclaw brush. Limestone formation.
	At the cor. to secs. 19, 24, 25, and 30, E. Bdy. T. 15 N., R. 5 E., At 2 p.m., l.m.t., I set off 34° 41' N. on the lat. arc; 14° 01' N. on the decl. arc; and determine a true meridian with the solar. Thence I run North on a random line between secs. 19 and 24 .
40.03	The 1/4 sec. cor, bears W. 1 link, which is a limestone, 8x8x6 ins. above ground, firmly set, witnessed and marked. Set over cor. and continue line north.
80.05	The cor. to secs. 13, 18, 19, and 24, bears W. 3 lks., which is a limestone, 8x14x5 ins., in mound of stone, witnessed and marked. I return to the cor. to secs. 19, 24, 25, and 30. Thence I run N. 0° 01' W. on a true line between secs. 19 and 24. Ascend gradual S. E. slope.
14.15	Small drain, course E.
20.00	Change to level mesa.
24.50	Road, bears N. E. and S. W.
	Difference between measurements of 24.72 chs. by two sets of chainmen is nothing.
24 72	Set boundary post No. 90. Post, cap, and mound heretofore described. Cap marked No. 90 on S. side of cap. 1903 on S. side of rim. RESERVE in N. E. and S. W. quadrants. from which A cedar, 16 ins.diam., bears S. 2° W., 64 lks. dist., marked BDY P No.90 B T No other trees within limits.
39.50	Head of canyon, course W. Difference between measurements of 40.03 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st set, 40.04 chs. By 2nd set, 40.02 chs.; the mean of which is
40.03	The 1/4 sec. cor. Thence I run N. 0° 03' W.
42.00	Top of ridge, bears N. W. and S. E. Descend gradual N. slope.
48.50	Change to gradual N. E. slope.
69.50	A dry branch, 20 lks. wide, course N. W. Ascend gradual S. W. slope, through scattering pine timber and cedar.
75.00	Top of ridge, bears E. and W. Descend gradual N. slope.

Black Mesa Forest Reserve Boundary,
 East Boundary T. 15 N., R. 6 E.

Chains.	Difference between measurements of 80.05 chs. by two sets of chainmen is 2 lks.; position of middle point By 1st. set, 80.06 chs. By 2nd. set, 80.04 chs.; the mean of which is
80.05	The cor. to secs. 13, 18, 19, and 24. 6 lks. east of the cor. I set boundary post No. 91. Post, cap, and mound heretofore described. Cap marked No. 91 on S. side of cap. 1903 on S. side of rim. RESERVE in S. E. quadrant. Land, rolling and level. Soil, 4th rate. Timber, scattering cedar and pine; oak and catsclaw brush. Limestone formation.
	April 28, 1903. W. H. Thorn, U. S. Surveyor.

Final Oaths of Deputy Surveyor and his Assistants.

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LIST OF NAMES.

BOOK 1811

A list of the names of the individuals employed by W. H. Thorn,

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 E., W., and Fracl. S. Bdy. Black Mesa Forest Reserve,

showing the respective capacities in which they acted:

J. T. Price, W. L. Foster, Chainman.

J. L. Spaw, W. P. Hawkins, Chainman.

John Lightfoot, Moundman.

D. J. Woodward, Moundman.

T. M. Williamson, Axman.

W. D. Roach, Axman.

H. S. Smith, and W. D. Roach, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted W. H. Thorn,

United States ~~Deputy~~ Surveyor, in surveying all

those parts or portions of the E., W., and Fracl. S. Bdy. Black Mesa Forest Reserve,

and Gila & Salt River meridian, State of Arizona, of the G. & S. Base

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~~ Director, U. S. Geol. Survey.

J. T. Price, W. L. Foster, Chainman.

J. L. Spaw, W. P. Hawkins, Chainman.

John Lightfoot, Moundman.

D. J. Woodward, Moundman.

T. M. Williamson, Axman.

W. D. Roach, Axman.

H. S. Smith, and W. D. Roach, Flagman.

Subscribed and sworn to before me this 15th

day of December, 1902, for W.D. Roach as Axman.

W. H. Thorn,



U. S. Surveyor.

November 29, 1902 for H.S. Smith as Flagman.

Final Oath of United States Deputy Surveyor.

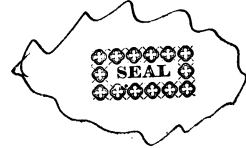
I, W. H. Thorn, United States Deputy Surveyor, do solemnly swear that, in pursuance of ~~a contract~~ ^{instructions} received from the Director, of the ~~United States Surveyor General~~ for U. S. Geological Survey, bearing date of the 6th day of August, 1902, ~~1901,~~ I have well, faithfully, and truly, in my own proper person, and in strict conformity with the instructions furnished by the ~~United States Surveyor General~~ for Director, U. S. G. S., the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the E., W., and Fracl. S. Bdy., Black Mesa Forest Reserve,

~~and~~ of the Gila and Salt ~~base~~ and Meridian, in the State 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 Director, U.S.G.S. 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.

W. H. Thorn,
United States Deputy Surveyor.

Subscribed by said W. H. Thorn, and sworn to before me this }
20th day of May, 1903. ~~1902~~

Frank Dysert,
Clerk of the District Court,
Graham Co., Arizona.



APPROVAL.

Office of the United States Surveyor General,

, 189

The foregoing field notes of the survey of

executed by _____, dated _____, 189 _____, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

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.

Final Oaths of Deputy Surveyor and his Assistants.

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LIST OF NAMES.

BOOK 1811

A list of the names of the individuals employed by W. H. Thorn,

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 E., W., and Fracl. S. Bdy., Black Mesa Forest Reserve,

showing the respective capacities in which they acted:

- J. T. Price, W. L. Foster, John W. Farmer, Chainman.
W. F. Bolinger, J. L. Spaw, Alvin Sands, Chainman.
D. J. Woodward, J. I. McKelvey, Moundman.
John W. Farmer, Moundman.
F. W. Powell, J. I. McKelvey, Elic Cox, Wm. Goswick, Axman.
A. L. Haught, John H. Haught, P. C. Haught, W. F. Bolinger, Axman.
W. D. Roach, J. I. McKelvey, D. C. Martin, Flagman.

FINAL OATH OF ASSISTANTS.

We hereby certify that we assisted W. H. Thorn,

United States Deputy Surveyor, in surveying all those parts or portions of the E., W., and Fracl. S. Bdy., Black Mesa Forest Reserve,

of the G. & S. Base and Gila & Salt River meridian, State 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 Director, U. S. Geol. Survey.

Names and positions of assistants, and dates of final oaths. 160

- Chainmen. W. F. Bolinger, January 24, 1903.
John W. Farmer, February 2, 1903, and again April 30, 1903.
J.T.Price, W.L.Foster, J.L.Spaw, Alvin Sands, " 30, 1903.
Moundmen. D. J. Woodward, January 24, 1903.
J. I. McKelvey, February 2, 1903, and again April 30, 1903.
John W. Farmer, April 30, 1903.
Axmen, F. W. Powell, J. I. McKelvey, January 24, 1903.
Elic Cox, Wm. Goswick, February 2, 1903. 1903
A.L.Haught, John H.Haught, P.C.Haught, W.F.Bolinger, April 30
Flagmen. W. D. Roach, February 2, 1903.
J. I. McKelvey, March 2, 1903.
D. C. Martin, April 30, 1903.

W. H. Thorn,

U. S. Surveyor.



Final Oath of United States Deputy Surveyor.

I, W. H. Thorn,, United States ~~Deputy~~ Surveyor, do solemnly swear that, in pursuance of ~~a contract~~ ^{instructions} received from the Director of the ~~United States Surveyor General for~~ U. S. Geological Survey, bearing date of the 6th day of August, 1902, ~~X30~~, 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 Director~~, U. S. G. S., the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the E., W., and Fracl. S. Bdy. Black Mesa Forest Reserve

~~X33~~ and ~~X33~~ of the Gila and Salt ~~X33~~ XXX River Base ~~X33~~ meridian, in the State 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 Director~~, U.S.G.S. 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.

W. H. Thorn,
United States ~~Deputy~~ Surveyor,

Subscribed by said W. H. Thorn, and sworn to before me this }
20th day of May, 1903. ~~X30X~~ }



Frank Dysert,
Clerk of the District Court,
Graham County, Arizona.

APPROVAL.

Geological Survey,
Office of the United States ~~Surveyor General~~,
Washington, D. C., DEC 17 1903, 189

The foregoing field notes of the survey of the E., W., and Fracl. S. Bdy.,
Black Mesa Forest Reserve,

executed by W. H. Thorn,
^{instructions}
under his ~~contract No.~~, dated August 6, 1902, ~~X30X~~, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Chas. Walden,
Director, United States ~~Surveyor General~~ Geol. Survey

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

Chas. Walden,
Director, United States ~~Surveyor General~~ Geol. Survey