

2821

Book "A"

Duplicate

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# FIELD NOTES

OF THE SURVEY OF THE

Amended South Boundary of the White Mountain, or

San Carlos, Indian Reservation, from the New Southwest Cor.

to the mouth of Hawk Canyon,

and

Resurvey of the South Boundary of the White Mountain,

or San Carlos, Indian Reservation, - from the Initial Point, (one

mile south of Camp Goodwin), north to the summit of the Gila

Mountains, thence southeasterly to the Southeast Corner of

the Reservation

Of the Gila & Salt River Base & Meridian,

In the State of Arizona

EXECUTED BY

H. L. Baldwin, Topographer,

In the capacity of U. S. Surveyor, under instructions dated January 6, 1915,

Commissioner of the General Land Office to A.F. Dunnington, issued by the United States Surveyor General to govern surveys included in Topographer in Charge of Indian Surveys,

Group No. , which were approved by the Commissioner of the General Land

Office, 1915

Survey commenced August 6, 1915

Survey completed November 15, 1915

2821

# INDEX DIAGRAM.

*Township* \_\_\_\_\_, *Range* \_\_\_\_\_

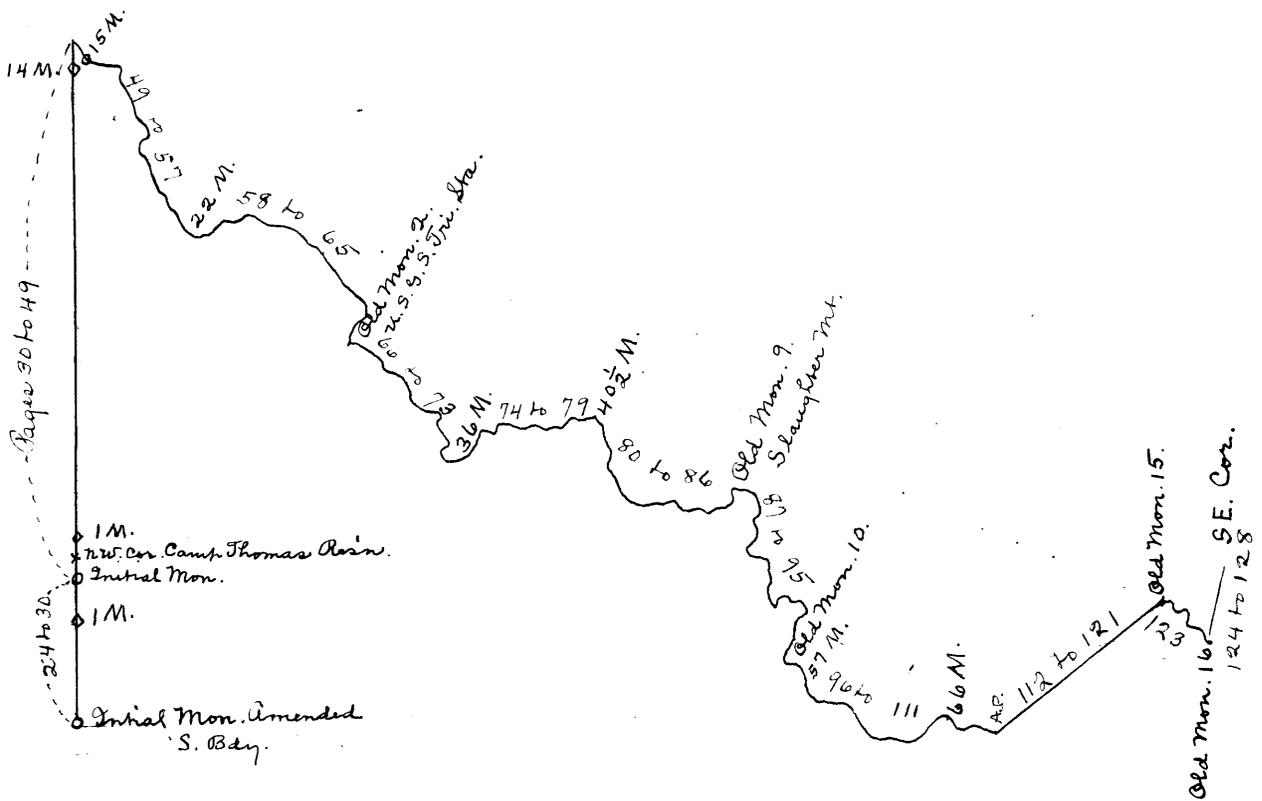
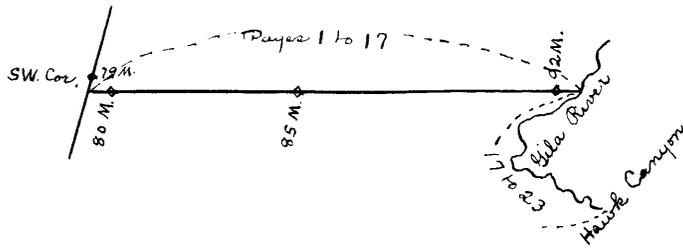
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

I N D E X.

Book No. 2821

Survey of Amended South Boundary of the  
White Mountain, or San Carlos, Indian Res'n,  
from new SW. Cor. to mouth of Hawk Canyon.

BOOK 2821



Resurvey of South Boundary of White Mountain,  
or San Carlos, Indian Res'n, from the Initial  
Mon. one mile S. of Camp Goodwin, north to the  
summit of the Gila Mountains, thence south-  
easterly to the Southeast Cor. of the Res'n.

Amended South Boundary of White Mountain (or San Carlos) Indian Reservation.

Survey commenced August 6, 1915, by H. L. Baldwin, Topographer, and executed with a Buff and Buff light weight transit No. 9207, with solar attachment, same being provided with two double verniers placed opposite to each other and reading to single minutes of arc, which is also the least reading of the latitude and declination arcs.

The instrument was placed in correct adjustment before beginning work and direction of lines determined by transit with double fore and back sights, on that portion of the boundary lying west of the Gila River.

On the portion lying along the Gila River, the solar was used for directions, and the correctness of its indications, at various times while running eastward.

The iron posts used in this survey are the regular General Land Office iron post, 36" long, set 26 ins. in the ground (unless otherwise noted) filled with cement, and fitted with brass caps. The posts at mile corners are 3 ins. in diameter, and those at 1/2 mile corners, are 1 ins. in diameter.

The old SW. Cor. of the White Mountain (or San Carlos) Indian Reservation is at a point 92 M. 14.70 chs. on the western Boundary. The executive order changes this corner to a point on the boundary, 13 miles northward or at 79 M. 14.70 chs. of the western boundary, and in latitude 33° 10' N., Longitude 110° 45' W.

At the 79 1/2 M. corner, which is a limestone, 20 x 12 x 10 ins. as described in the old notes and firmly set, marked W M I R W B 79 1/2 M on East, with mound of stone 3 1/2 ft. base, 1 1/2 ft. high, W. of cor., I observe Polaris on August 6, 1915, at 7 h. 06.5 m. p.m., l.m.t., with telescope direct, and at 7 h. 08.9 m., p.m., l.m.t., with telescope reversed, and mark the direction thus obtained on the ground a suitable distance North of my station. The observation is worked out as follows:

Time of upper culmination (next)	Aug. 7	
	4 h. 29.9 m. a.m.	429.9 a.m.
L. M. T. of observation,		
August 6,	7 h. 06.5 m. p.m.	708.9 p.m.
Time to elapse to next culmination,	9 h. 23.4 m.	9h. 21.0 m.
which corresponds to azimuths of	50.9'	51.4'

respectively east of north.

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains	
40.00	<p>On August 7, 1915, at 8 a.m., l.m.t., I lay off an angle of <math>7^{\circ} 29' 18''</math> to the East from the middle of these points, which gives a bearing of N. <math>8^{\circ} 21'</math> E., and run thence N. <math>8^{\circ} 21'</math> E. along the 80th mile N <math>\frac{1}{2}</math></p> <p>Fall 5 lks. West of the 79 mile cor., which is a limestone, 17 x 15 x 8 ins. firmly set and marked W M I R W B on East, with mound of stone, 5 ft. base, 3 ft. high, W. of cor.</p> <p>The SW. cor. of Reservation is at 79 m. 14.70 chs. of old measurement, therefore</p> <p>From the 79 mile cor. above described, I run S. <math>8^{\circ} 25'</math> W. along the west boundary of the White Mountain (or San Carlos) Indian Reservation.</p>
14.70	<p>Descending.</p> <p>Set an iron post 3" dia., on rocky ground, surrounded by mound of stone, for the SW. Cor. of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped</p> <p style="padding-left: 40px;">79 M 14.70 ch. SW Cor W M I R in NE. cor. P L in SW. 1915 in S.</p> <p>Raise a mound of stone, 5 ft. base, 3 ft. high, W. of cor.</p>
August 7, 1915.	
<p>I deflect an angle of <math>81^{\circ} 33.4'</math> from a Backsight on my true line to the northward, and run N. <math>89^{\circ} 58.4'</math> E. as if on a secant line starting from a point 14.70 chs. westward from this point, and 2 lks. S. of the cor.</p>	
<p>Over mountainous land, descending along East slope, with measurement from the 79 M. cor.</p>	
22.20	<p>Gulch, course SW., 50 lks. wide. Asc. West slope.</p>
27.00	<p>Slope, changes to SW.</p>
34.30	<p>Ridge, brs. N. and S. Descend SE. slope.</p>
38.65	<p>Ledge, brs. S. <math>20^{\circ}</math> E. and N. <math>20^{\circ}</math> W.</p>
40.00	<p>2 Lks. north of the secant, set an iron post 1" dia., 6" in rocky ground to rock, surrounded by mound of stone, for the 79 <math>\frac{1}{2}</math> mile cor., with brass cap stamped</p> <p style="padding-left: 40px;">79 <math>\frac{1}{2}</math> M W M I R S B in N. P L 1915 in S.</p>
<p>Raise a mound of stone, 4 ft. base, 3 ft. high, N. of cor.</p>	
40.20	<p>Gulch, course S., 50 lks. wide, Asc. west slope.</p>
44.75	<p>Slope changes to SW.</p>
47.95	<p>Ridge, brs. N. and S. Desc. SE. slope.</p>
52.85	<p>Gulch, course S., 30 lks. wide. Asc. SW. slope.</p>

Amended

South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains	
62.95	Ridge, brs. N. and S. Desc. SE. slope.
69.75	Gulch, course S., 50 lks. wide. Asc. SW. slope.
80.00	Set an iron post 3" in dia., on rocky ground to rock, for 80 mile cor. of south boundary of the White Mountain (or San Carlos) Indian Reservation, in mound of stone, with brass cap stamped
	80 M W M I R S B in N. P L 1915 in S.
	Raise a mound of stone 4 ft. base, 3 ft. high, N. of cor.
	Land, mountainous. Soil, rocky, 4th rate. Dense undergrowth, cactus, mescal, catclaw and mesquite. No timber.
-----	
	N. 89° 59' E. along secant adjacent to the 81st mile of the amended South Boundary of the White Mountain ( or San Carlos) Indian Reservation.
	Over mountainous land. Asc. W. slope.
4.45	Ridge, brs. N. and S. Desc. SE. slope.
7.60	Ledge, brs. N. 10° E. and S. 10° W.
15.15	Gulch, course S., 30 lks. wide. Asc. SW. slope.
24.75	Spur ridge, brs. S. 10 chs. Desc. SE. slope.
30.50	Gulch, course S., 40 lks. wide, Asc. W. slope.
34.00	Slope changes to SW.
40.00	1 Lk. S. of secant, set an iron post 1" dia., 8" in ground, surrounded by mound of stone, for the 80½ mile cor., of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped
	80½ M W M I R S B in N. P L 1915 in S.
	Raise a mound of stone, 5 ft. base, 3 ft. high, W. of cor.
41.15	Spur ridge, brs. S. 10 ch. Desc. along SE. slope.
47.00	Gulch, course S., 50 lks. wide, Asc. W. slope.
55.30	Spur ridge, course S. 8 ch. Desc. SE. slope.
57.50	Gulch, course SW., 20 lks. wide. Asc. W. slope.
66.25	Spur ridge, brs. SW. 20.00 chs. Desc. SE. slope.
70.00	Wash, course SW. Asc. SW. slope.
80.00	2 lks. South of secant, set an iron post 3" dia., on rocky ground, in mound of stone, for the 81 mile cor. of amended south boundary of the White Mountain ( or San Carlos) Indian Reservation , with brass cap stamped

Amended

## South Boundary of the White Mountain (or San Carlos) Indian Reservation.

Chains	
	<p>81 M W M I R S B in N. P L 1915 in S.</p> <p>Raise a mound of stone, 5 ft. base, 3 ft. high, N. of cor.</p> <p>Land, mountainous. Soil, rocky, 4th rate. Dense undergrowth of cactus, catclaw, mesquite and mescal. No timber.</p> <p style="text-align: right;">August 10, 1915.</p>
	-----
	<p>N. 89° 59' E. along secant adjacent to the 82nd mile of the Amended south boundary of the White Mountain (or San Carlos) Indian Reservation,</p> <p>Over mountainous land. Ascending SW. slope.</p>
23.65	<p>Summit of Mescal Mountains, hrs. N. 70° W. and E.</p> <p>Continue ascent along summit.</p>
33.30	<p>Thence along N. slope, nearly level.</p>
38.15	<p>Desc. steep NE. slope, Mescal Range, hrs. S. 70° E. and W.</p>
40.00	<p>2 lks. South of secant, set an iron post 1" dia., in ground to rock, for 81½ mile cor., surrounded by mound of stone, with brass cap stamped</p> <p>81½ M W M I R S B in N. P L 1915 in S.</p> <p>Raise a mound of stone 4 ft. base, 2 ft. high, N. of cor.</p> <p>Continue very steep descent.</p>
62.85	<p>Wash, course NE.</p>
75.35	<p>Thence along S. slope.</p>
76.85	<p>Desc. SE. slope.</p>
80.00	<p>3 lks. S. of secant, set an iron post 3" dia., 10" in the ground to rock, for 82 Mile cor. of amended south boundary of the White Mountain (or San Carlos) Indian Reservation, surrounded by mound of stone, with brass cap stamped</p> <p>82 M W M I R S B in N. P L 1915 in S.</p> <p>Raise a mound of stone, 4 ft. base, 3 ft. high, N. of cor.</p> <p>Land, mountainous. Soil, rocky, 3rd and 4th rate. Dense undergrowth of scrub oak, catclaw, cactus and mesquite. No timber.</p> <p>At a point on my foresight, 8.00 chs. East of this cor., I observe Polaris at</p>

Amended

South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains

7 h. 22.7 m. and 7 h. 26.3 m. p.m., l.m.t.  
4 h. 10.3 m. and 4 h. 10.3 m. T next U. Cul. Aug. 12

8 h. 47.6 m. 8 h. 44.0 m. hour angle before U.C.

60.3' 61.3' Corresponding azimuth E. of North.

From the middle point or average angle East of north, I turn off an angle of 88° 59.2' East, and which practically coincides with my foresight along the secant from this point.

August 11, 1915.

East along the secant in proximity to the 83rd mile of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation.

Descending SE. slope, through dense undergrowth of catclaw, manzanita and scrub oak brush.

.25 Gulch, or ravine, course NE. and which contains a small stream of running water, 1 lk. wide, 1/2" deep, from spring a few chains up the gulch.

Asc. NW. slope.

8.84 Top of knoll and point for triangulation across box canyon, 500 ft. deep, course NE., and which contains a small stream of running water, 1 lk. wide, 1" deep, course NE.

From point A, I set a flag C on line to the eastward, also from this point A, I lay off as long a base as possible, of which B brs. N. 51° 50' E. 5.95 chs.

I measure the angles at A & B & C, with the following results:

A equals 38° 10'  
B equals 126° 54' 50"  
C equals 14° 55' 10"

The required distance A C equals  $A B \frac{\sin B}{\sin C}$

which by logarithm equals 2.774517  
9.902840  
+ 9.410711

equals 3.266646 equals 1848 links

which added to 8.84 chs. equals 27.32 chs.

27.32 Equals Point C of triangulation on spur ridge, brs. N. Descend NE. slope.

34.75 Mescal Creek, 10 lks. wide, in canyon, course SE. Water is clear and sinks frequently, but forms frequent pools of water, which is not permanent in very dry seasons.

36.25 Asc. SW. slope.

40.00 2 lks. South of secant, set an iron post 1" dia., 12" in ground to rock, for 82 1/2 mile cor., of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

Amended  
South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains	
	<p>82½ M W M I R SB in N. P L 1915 in S.</p> <p>From which -</p> <p>Cat Claw, 5" dia., brs. N. 77½° W., 40 lks. dist., mkd. 82½ M W M I R B T</p> <p>Cat Claw, 5" dia., brs. N. 39° E., 101 lks. dist., mkd. 82½ M P L B T</p> <p>Raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.</p> <p>Cor. falls on south slope.</p>
45.70	Spur ridge, brs. S. 5.00 chs. Desc. SE. slope.
48.00	Gulch, course S., 50 lks. wide, Asc. SW. slope.
72.60	Spur, brs. South, 6.00 chs. Desc. SE. slope.
77.00	Wash, course S., 30 lks. wide, Asc. SW. slope.
80.00	<p>2 lks. South of secant, set an iron post 3" dia., 6" in ground to rock, for the 83 mile cor., of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped</p> <p>83 M W M I R S B in N. P L 1915 in S.</p> <p>Raise a mound of stone, 5 ft. base, 3 ft. high, N. of cor.</p> <p>From the corner I take, the following bearings:</p> <p>Largest white pebble in center of top of a pudding stone, 5 x 5 x 3 ft. resting on top of a larger one, 12 x 6 x 6 ft. above ground, brs. S. 12½° E. distance not taken.</p> <p>White quartz pebble, 2" x 3" in east face of con- glomerate rock, 20 x 15 x 12 ft. above ground, brs. S. 77½° W., 55 lks. dist.</p> <p>Boulder, 8 x 5 ins. near south edge of conglomerate rock, 15 x 12 x 9 ft. above ground, brs. N. 70¼° W., 42 lks. dist.</p> <p>Small juniper, 2 ft. high, in crack of conglomerate, 10 x 10 x 8 ft. above ground, brs. N. 14½° W., 1.71 chs. dist.</p> <p>All these objects are unmarked, as rocks are too easily dislodged and conglomerate will not take mark.</p> <p>Cor. falls about 10.00 chs. South of top of ridge and 20.00 chs. North of Mescal Creek.</p> <p>Land, rough and mountainous. Soil, rocky, 4th rate. Dense undergrowth of scrub oak, catclaw, mesquite and cactus. Timber, cottonwood, sycamore and walnut in canyons, and scattered juniper and pine on hillsides.</p>

**Amended**  
**South Boundary of White Mountain (or San Carlos) Indian Reservation.**

Chains	
	S. 89° 59' E. along the secant adjacent to the 84th mile of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation.
	Ascending SW. slope.
14.50	Spur, brs. S. 15 chs. Desc. SE. slope.
27.55	Wash, course S. 20 lks. wide. Asc. SW. slope.
34.40	Spur, brs. SE. Desc. E. slope.
40.00	1 Lk. South of secant, set an iron post 1" dia., for the 83½ mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped
	83½ M W M I R S B in N. P L 1915 in S.
	From which -
	Scrub Oak, 7" dia., brs. N. 31½° E., 6 lks. dist., mkd. 83½ M W M I R B T
	Scrub Oak, 6" dia., brs. S. 18½° E., 81 lks. dist., mkd. 83½ M P L B T
	Cor. falls near foot of very steep East slope.
44.64	Wash, course SE. Asc. SW. slope.
53.25	Ridge, brs. SE. and NW. Desc. E. slope.
57.80	Draw, course NE. Asc. NW. slope.
59.60	Spur, brs. NE. Desc. SE. slope.
72.50	Gulch, course NE. Asc. NW. slope.
79.20	Spur, brs. NE. Desc. E. slope.
80.00	Set an iron post 3" dia., 5" in ground to rock, for the 84 mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped
	84 M W M I R S B in N. P L 1915 in S.
	Raise a mound of stone, 5 ft. base, 3 ft. high, N. of cor.
	Land, mountainous. Soil, rocky, 4th rate. Dense undergrowth of scrub oak, cactus, catclaw and mesquite. Timber, scattered scrub oak and juniper.
-----	
	S. 89° 59' E. along secant adjacent to the 85th mile of the Amended south boundary of the White Mountain (or San Carlos) Indian Reservation.
	Over mountainous land. Descending E. slope.
3.50	Gulch, course N., 30 lks. wide. Asc. NW. slope.
7.65	Spur, brs. N. 1 ch. Desc. NE. slope.

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains	
15.50	Middle fork of Mescal Creek, course SE. A small stream of water at present from recent rains.
31.70	Spur, brs. S. 10 chs. Descend E. slope.
40.00	Wash, course SE. and true place for 84½ Mile cor. which falling in unsafe place, I set at
41.00	1 lk. North of the secant, set an iron post 1" dia., 8" in ground to rock, surrounded by mound of stone, for the W. C. to the 84½ mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped
	84½ M W M I R S B in N. P L 1915 in S. W C in W.
	Raise a mound of stone, 4 ft. base, 3 ft. high, N. of cor.
	Cor. falls on small spur between 2 drains.
	-----
	Thence over nearly level but broken country.
42.00	Wash, course S. Asc. SW. slope.
43.50	Spur, brs. S. Desc. E. slope.
55.40	East fork of Mescal Creek, dry, course S. 1 ch. wide, Asc. broken SW. slope.
80.00	Wash, course S., 30 lks. wide, and true but unsafe place for cor.
80.50	3 lks. North of the secant, set an iron post 3" dia., 6" in ground to rock, and surrounded by mound of stone, for the 85 mile cor., of the amended south boundary, of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped
	W C in W.  85 M W M I R S B in N. P L 1915 in S.
	Raise a mound of stone, 4 ft. base, 2 ft. high, N. of cor.
	Land, mountainous. Soil, 4th rate. Dense undergrowth of scrub oak, catclaw, cactus and mesquite. Timber, scattered scrub oak and juniper.
	Rain in afternoon and night. Close work, Aug. 12, 1915.
	-----
	From the secant point 3 lks. South of the true point for the 85 mile cor., I deflect an angle from my backsight of 3' 27" and run with foresight bearing of N. 89° 58.3' E. adjacent to the 86th mile of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation.

**Amended**  
**South Boundary of White Mountain (or San Carlos) Indian Reservation.**

Chains	
	Ascending SW. slope.
.50	Point on secant, 3 lks. South of W. C.
15.75	Spur, brs. S. Descend SE. slope.
20.75	Wash, course S., 50 lks. wide, Asc. W. slope.
31.00	Ridge, brs. N. and S. Desc. SE. slope.
37.50	Wash, course S., 20 lks. wide, Asc. SW. slope.
40.00	1 Lk. North of secant, set an iron post 1" dia., 6" in ground to rock, surrounded by a mound of stone, for the 85½ mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reser- vation, with brass cap stamped
	85½ M W M I R S B in N. P L 1915 in S.
	Raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.
80.00	Set 3" iron post 12" in ground to rock, surrounded by a mound of stone, for the 86 mile cor., of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped
	86 M W M I R A S B in N. P L 1915 in S.
	Raise a mound of stone, 4 ft. base, 2 ft. high, N. of cor.
	Land, rough and mountainous. Soil, rocky ledges, 4th rate. Dense undergrowth of scrub oak, cactus, mesquite, catclaw and mescal, ocatilla and spanish bayonet. Timber, scattered juniper.
	Close work, August 13, 1915. Rain in afternoon.
	Note: For convenience, work on this line was suspended for one month while the amended western boundary north from Chromo Butte was reestablished.
	On returning to this point and continuing line east- ward, I added here and hereafter instead of S B for south boundary, A S B for Amended South Boundary.
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	On September 19, 1915, work on line was resumed, my backsight to the westward being plainly visible.
	N. 89° 59' E. along secant adjacent to the 87th mile of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation.
	Ascending SW. slope.
4.40	Top of mountain range, brs. S. 30° E. and N. 30° W. Descend steep East slope.
40.00	1 lk. South of secant, set an iron post 1" dia., 26" in ground, for the 86½ mile cor., with brass cap stamped

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chairs	
	<p>86½ M W M I R A S B in N. P L 1915 in S.</p> <p>Raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.</p> <p>Cor. falls on south slope, 100 ft. N. of drain, and 7 chs. west of a prominent drain to south.</p>
47.00	Foot of steep desc. Gulch, course SE., 1 ch. wide. Asc. SW. slope.
68.55	Ridge, brs. S. 15° E. and N. 15° W. Desc. NE. slope.
80.00	2 lks. South of secant, set an iron post 3" dia., 22" in the ground, for the 87 mile cor., with brass cap stamped
	<p>87 M W M I R A S B in N. P L 1915 in S.</p> <p>Raise a mound of stone, 4 ft. base, 2½ ft. high, N. of cor.</p> <p>Cor. falls on north slope, 75 ft. below ridge and 4 chs. SE. of small ridge, course NE.</p> <p>Land, rough and mountainous. Soil, rocky, with rock ledges. Dense undergrowth of ocotilla, scrub oak, mescal and Spanish bayonet. No timber.</p>
-----	
	<p>S. 89° 59' E. along secant adjacent to the 88th mile of the amended south boundary of White Mountain (or San Carlos) Indian Reservation.</p> <p>Descending NE. slope.</p>
7.85	Thence along N. slope.
22.85	Descend E. slope.
27.82	Draw, course N. Ascend NW. slope.
30.30	Spur, brs. NE. Descend E. slope.
39.00	Canyon, course S. 50 lks. wide. Asc. SW. slope.
40.00	2 Lks. S. of the secant, set an iron post 1" dia., 24" in ground, for the 87½ mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped
	<p>87½ M W M I R A S B in N. P L 1915 in S.</p> <p>From which -</p> <p>Cedar, limb, 5" dia., brs. N. 99½° W., 140 lks. dist., mkd. 87½ M W M I R A S B B T</p> <p>Cedar, 14" dia., brs. S. 10° W., 127 lks. dist., mkd. 87½ M P L B T</p> <p>Cor. falls on East side of dry wash in canyon bed, and 1 ch. South of caved rock slide on East side of ravine.</p>
46.70	Rock spur, brs. S. 5 chs. Descend SE. slope.

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

## Chains

- 55.00 Draw, course South. Asc. SW. slope.
- 59.00 Spur, brs. S. 4 chs. Desc. SE. slope.
- 63.50 50 lks. South of this point is a red rock, 8 x 8 x 6 ft. above center of bed of wash, the only similar one noticed anywhere in creek bottom.
- 63.70 Same wash in canyon bed, course NE., 1 ch. wide. Asc. NW. slope.
- 73.40 Spur, brs. N., 2 chs. Descend NE. slope.
- 80.00 3 lks. S. of secant, set an iron post 3" dia., 16" in ground, to rock, surrounded by a mound of stone, for the 88 mile cor., of amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

88 M W M I R A S B in N.  
P L 1915 in S.

From which I take the following bearing objects:

X cut on red sloping sandstone, 10 x 10 x 2 ft. above ground on south side of wash and 8 ft. back from lower edge of red sandstone, brs. N. 55° W. 1.47 chs. marked B O.

X cut on dark red sandstone (the East half of which is of a lighter color) in ledge, 4 x 4 x 2 ft. above ground, and 3 ft. above bed of wash., brs. N. 51½° E. 1.40 chs. dist.

Raise a mound of stone, 4 ft. base, 2 ft. high, N. of cor.

Cor. falls about 30 ft. above bed of wash on south side thereof, 2 chs. East of where drain of canyon comes in from north at point where canyon begins to box up and 100 yards W. of falls over conglomerate rock.

Land, rough and mountainous.  
Soil, rocky, 4th rate.  
Dense undergrowth of scrub oak, cactus, catclaw, mescal and mesquite.  
Timber, scattered cedar.

Close work, Sept. 13, 1915.

-----  
East along the secant adjacent to the 89th mile of amended south boundary of the White Mountain (or San Carlos) Indian Reservation.

Descending East slope.

.25 Wash in same canyon, course S. 75° E., 1 ch. wide. Asc. SW. slope over mass of granite boulders.

11.60 Rocky spur, brs. S. 10.00 chs. Desc. SE. slope. through mesquite and giant cactus.

20.00 Gulch, course SW., 50 lks. wide, containing a small stream of running water, 2 lks. wide, 1" deep, probably permanent - from springs in the decomposed granite rock. Willows and cottonwoods along stream bed.

Asc. W. slope.

Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains	
38.50	Ridge., brs. N. and S. 2 lks. S. of secant on top of ridge, build mound of stone, 3 ft. base, 2 ft. high. Desc. East slope.
40.00	2 lks. S. of the secant, set an iron post 1" dia., 22" in ground to rock, surrounded by mound of stone, for 88½ mile cor. of amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped  88½ M W M I R A S B in N. P L 1915 in S.  From which - South top of granite boulder or ledge 3 x 2 x 10 ft. high, brs. S. 28½° W., 90 lks. (unmarked) A granite boulder regular in shape, brs. N. 13° W., 88 lks. dist. (unmarked). Giant Cactus, brs. N. 17° W., 106 lks. dist. (unmarked) Rocks are too hard to make an impression thereon with chisel. Cor. falls on East slope, 50 ft. below top of ridge. Descend very steep slope to
54.85	Wash in bed of canyon, course SW. Ascend steep W. slope, over granite boulders.
66.30	Ridge, brs. N. 10° W. and S. 10° E. Desc. SE. slope.
73.75	Draw, course SW., 5 lks. wide. Asc. W. slope.
79.00	Ridge, brs. SE. and NW. Desc. NE. slope.
80.00	2 Lks. S. of secant, set an iron post 3" dia., 24" in ground to rock, for 89 mile cor., of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, surrounded by mound of stone, with brass cap stamped  89 M W M I R A S B in N. P L 1915 in S.  From which - Cedar, 8" dia., brs. S. 47° E., 180 lks. dist., mkd. 89 M P L B T  No other trees available. Raise a mound of stone, 4 ft. base, 2½ ft. high, N. of cor.  Land, rough and mountainous. Soil, rocky, 4th rate. Dense undergrowth of buck brush, giant cactus, cat-claw and mesquite, mescal and ocatilla. Scattered scrub cedar timber, willow and cottonwoods along stream.  Cor. falls about 8 ft. below top of ridge, which 25 lks. S. brs. East, and 1 ch. West, brs. from SE. to NW.

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

## Chains

S.  $89^{\circ} 59'$  E, along the secant adjacent to the 90th mile of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation.

Descending NE. slope.

- 8.00 Wash, course S., 20 lks. wide. Asc. W. slope.
- 14.40 Line passes 10 lks. North of a rock monument on ridge, which brs. SE. and NW. Desc. NE. slope.
- 17.50 Slope changes to East.
- 30.00 Gulch, course SE., 30 lks. wide. Asc. SW. slope.
- 40.00 Set an iron post 1" dia., 22" in ground to rock, for the  $89\frac{1}{2}$  mile cor., with brass cap stamped

$89\frac{1}{2}$  M W M I R A S B in N.  
P L 1915 in S.

Raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.

Cor. falls on south side of spur to East.

Thence along south slope.

- 47.00 Descend East slope.
- 56.00 Wash in canyon, course S., 50 lks. wide. Asc. W. slope.
- 62.00 Ridge, brs. N. and S. Desc. SE. slope.
- 77.80 Slope changes to East.
- 80.00 Set an iron post 3" dia., 22" in ground to rock, for 90 mile cor., of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

90 M W M I R A S B in N.  
P L 1915 in S.

From which -

- Mesquite, 8" dia., brs. N.  $29\frac{1}{2}^{\circ}$  E., 32 lks. dist.,  
mkd. 90 M W M I R A S B B T
- Mesquite, 9" dia., brs. S.  $36^{\circ}$  W., 35 lks. dist.,  
mkd. 90 M P L B T
- No other trees available.

Raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.

In the afternoon of September 14, 1915, at this point, I take observation on Polaris as follows, with telescope direct and reversed, and mark these points on the ground north of station.

Time of observation, Sept. 14,  
5h. 18.5m. p.m. 1.m.t. 5h. 23.0m. p.m.

Time next upper culmination, Sept. 15 1h. 57.1m. a.m. 1.m.t. 1h. 57.1m.

Hour Angle 8h. 38.6m. 8h. 34.1m.

Which corresponds to azimuths of

62.3'

63.3'

From the middle of these points, I turn an angle of  $88^{\circ} 57.8'$  to the right to a foresight already lo-

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

## Chains

cated in advance, which gives the theoretic bearing of the secant at this point as S. 89° 59.4' E.

These lines practically coincide which was to be expected, as the character of the country traversed has permitted of long fore and backsights with very distant fore and back sights to run to and from.

100 yards NW. of this point is a spring in ravine - probably dry in very dry seasons. Frequent small springs occur in this decomposed granite country, some of which could be developed into a permanent supply of water sufficient for any possible grazing purposes.

Land, rough and mountainous.

Soil, rocky, 3rd and 4th rate, decomposed granite. Scattered mesquite, polo verde, ocatilla and giant cactus.

Fair grazing.

No timber.

Close work, Sept. 14, 1915.

S. 89° 59' E. along secant adjacent to 91st mile of the amended south boundary of the white Mountain (or San Carlos) Indian Reservation.

Descending East slope.

- 1.00 Wash, course SE., 30 lks. wide. Asc. SW. slope.
- 10.30 Trail, brs. N. and S.
- 10.50 Summit of low ridge, brs. N. and S. Desc. E. slope.
- 12.40 Gulch, course S., 50 lks. wide. Asc. steep broken SW. slope.
- 34.50 Rocky spur, brs. S. Desc. steep East slope.
- 37.75 Wash, course S., 20 lks. wide. Asc. steep SW. slope.
- 40.00 1 lk. North of secant, set an iron post 1" dia., on rocky ground, for the 90½ mile cor., of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, surrounded by mound of stone, with brass cap stamped
- 90½ M W M I R A S B in N.  
P L 1915 in S.
- Raise mound of stone, 4 ft. base, 2½ ft. high, N. of cor.
- Cor. falls on west slope of malpais ridge half-way up W. slope from ravine.
- 43.40 Spur ridge, brs. S. Desc. SE. slope.
- 50.00 Wash, course S., 20 lks. wide. Asc. SW. slope.
- 52.30 Spur brs. S. 20 chs. dist. Desc. SE. slope.
- 55.50 Wash, course S., 10 lks. wide. Asc. SW. slope.
- 70.55 High broken rocky spur, brs. S. 20 chs. Desc. steep broken SE. slope.

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains							
74.63	<p>Top of cliff nearly perpendicular on East side, brs. N. and S. Set flag C for triangulation.</p> <p>Set flag A eastward on line and measure thence south-eastward from A to B a distance of 678.7 lks.</p> <p>The angles of the triangle formed and the solution thereof, are as follows:</p> <p>A equals 101° 25' 30".          B equals 54° 46'          C equals 23° 48' 30"</p> <p>The required distance A C equals <math>A B \frac{\sin B}{\sin C}</math></p> <p>which by logarithms</p> <table> <tr> <td>A C equals</td> <td>0.831678</td> </tr> <tr> <td>Sin B</td> <td>9.912121</td> </tr> <tr> <td><math>\frac{1}{2}</math> Sin C</td> <td><u>9.606035</u></td> </tr> </table> <p>1.157764 equals 13.73 chs.</p> <p>which added to 74.63 chs. equals</p>	A C equals	0.831678	Sin B	9.912121	$\frac{1}{2}$ Sin C	<u>9.606035</u>
A C equals	0.831678						
Sin B	9.912121						
$\frac{1}{2}$ Sin C	<u>9.606035</u>						
88.36	<p>Point of triangulation at A or 8.36 chs. past the true point for corner.</p> <p>I measure back on line, 8.36 chs. and find that 3 lks. north of secant, true point for the 91 mile cor. falls in unsafe place on steep slide rock from cliff, therefore at</p>						
82.00	<p>3 lks. North of secant at foot of slide rock, set an iron post 3" dia., 10" in ground to rock, surrounded by mound of stone, for W. C. to the 91 mile cor., with brass cap stamped</p> <p>91 M W M I R A S B in N.          P L 1915 in S.          W C in W.</p> <p>Raise a mound of stone, 4 ft. base, 2½ ft. high, N. of cor.</p> <p>Cor. falls on steep East slope at foot of slide rock, 1/3 of the way from foot of rock cliff to river. Cor. is about the same elevation as the foot of the rock ledges some 200 yards south, and is about 1 ch. south of small side hill ravine, course SE.</p> <p>Land, extremely rough and mountainous.          Soil, almost none, malpais rocks and ledges.          Undergrowth of ocatilla, giant cactus and catclaw.          Occasional scrub cedar tree.</p>						
2.00	<p>At the secant point, 3 lks. South of the true point for the 91 mile cor., which falls in unsafe place in slide rock, I deflect an angle of 3' 27" north from my foresight to the east on old secant, and run N. 89° 58.3' E. along a new secant adjacent to the 92nd mile of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation.</p> <p>Continuing very steep descent of SE. slope.          3 lks. N.</p> <p>The W. C. to the 91 mile cor., at foot of slide rock, brs. E. and W.</p>						

Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains	
8.36	Point of triangulation from top of cliff westward. Rocky spur, brs. S. 10 chs. to Gila River. Descend very steep East slope. Over top of cliff, 30 ft. high.
16.20	Enter level bottom of Gila River.
22.97	A point 10 lks. N. of high water mark of Gila River. Large rock, South edge of river, brs. S. 50° W., 7.58 chs. dist.
24.07	Dry wash, course S., 150 lks. wide.
30.00	Leave river bottom. Ascend steep W. slope.
40.00	1 Lk. North of secant, set an iron post 1" dia., 8" in ground to rock, surrounded by mound of stone, for the 91½ mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped  91½ M W M I R A S B in N. P L 1915 in S.  Raise a mound of stone, 4 ft. base, 2½ ft. high, N. of cor.  Cor. falls about 100 yards East of a white spot on hillside, which spot is 3.00 chs. SE. of top of rocky red sandstone bluff and 100 ft. below top of of hill. It is also about 2 chs. N. of highest point of red sandstone bluff.
	Continue ascent.
47.35	Ridge, brs. N. and S. Descend E. slope.
52.20	Draw, course S. Asc. SW. slope.
56.90	Rock spur, brs. S. 40° E., 15 chs.
57.90	Desc. E. slope.
64.10	Wash, course S. 10° E., 10 lks. wide. Asc. SW. slope.
67.55	Spur, brs. S. 30° E. Desc. NE. slope.
73.60	Enter level land of Gila River bottom.
74.50	Dry wash, course S., 1 ch. wide.
80.00	Set an iron post 3" dia., 26" in ground for the 92 mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped  92 M W M I R A S B in N. P L 1915 in S.
	Also M. C. as the cor. falls on high water mark of Gila River.
	Raise a mound of stone, 4 ft. base, 3 ft. high, N. of cor.
	Cor. falls on right bank of Gila River, 150 yards East of conglomerate bluff and 100 yards south of limestone bluff. Also about 1/4 mile below point

Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains

selected by the U. S. Reclamation Service for a dam site.

Land, rough and mountainous.

Soil, rocky, 4th rate, except a very narrow strip along river, 1st rate.

Undergrowth of catclaw, mesquite, Ocatilla, and giant cactus.

No timber.

N. 89° 59' E. along secant in proximity to 92nd mile of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation.

Over level land.

Along right bank of Gila River, upstream.

2.60 Enter river bed, course S. 80° W. A trail from Christmas to San Carlos through the canyon of Gila River passes through river bed at this point.

9.30 North edge of Gila River 3.40 chs. wide on line, 1 foot deep, course S. 80° W.

15.70 Leave river bed. Ascend bank.

17.16  $\frac{1}{2}$  Lk. South of secant, set an iron post 3" dia., 20" in ground to rock, surrounded by mound of stone, with brass cap stamped

92 M 17.16 ch. W M I R A S B in N.  
A P in SE.  
P L in SW.  
M C 1915 in S.

From which -

Mesquite 8" dia., brs. S. 27° E., 83 lks. dist., mkd.  
92 M 17.16 ch. W M I R A S B B T

Mesquite, 6" dia., brs. S. 3° E., 71 lks. dist., mkd.  
92 M 17.16 ch. W M I R A S B B T

I take additional bearings as follows:

Highest point of hill brs. N. 44° W.

Highest rock on west side of dam site, brs. N. 8° 56' W.  
about 12.00 chs.

Highest point of rock on East side and about 800 ft.  
above river, brs. N. 57 $\frac{1}{4}$ ° E. about 15 chs.

U. S. B. M. of the Reclamation Service, brs. N. 0° 36'  
E., 9.31 chs.

Warm spring with a flow, 4 lks. wide, 4" deep, on  
west side of dam site, brs. N. 19 $\frac{1}{2}$ ° W., 7.48 chs.  
dist.

From this point, remaining portion of boundary follows the Gila River to its junction with Hawk Canyon. I, therefore, meander the East or left bank of Gila River, as follows:

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

## Chains

On Sept. 15, 1915, at 1 p.m., I set off  $33^{\circ} 10'$  N. on the lat. arc, and  $3^{\circ} 12'$  N. on the decl. arc, and determine a meridian with the solar.

Thence I run with meanders along the left bank of the Gila River downstream, along remaining portion of the 93rd mile.

S.  $37\frac{1}{4}^{\circ}$  W. 9.66 chs. West end of limestone spur,  
20 ft. above river.  
S.  $41^{\circ}$  W. 6.60 chs. Spur, brs. W. 25 lks.  
S.  $74\frac{1}{4}^{\circ}$  W. 6.58 chs. To  $92\frac{1}{2}$  mile cor.

Set an iron post 1" dia., 26" in ground, for the  $92\frac{1}{2}$  mile cor. of amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

92 $\frac{1}{2}$  M W M I R A S B in SE.  
P L in NW.  
1915 in S.

From which -

Mesquite, 5" dia., brs. S.  $27\frac{1}{2}^{\circ}$  E., 56 lks. dist.,  
mkd. 92 $\frac{1}{2}$  M W M I R A S B B T  
Mesquite 6" dia., brs. S.  $71\frac{1}{4}^{\circ}$  W., 55 lks. dist., mkd.  
92 $\frac{1}{2}$  M W M I R A S B B T  
No other trees available.

N.  $82^{\circ}$  W. 2.57 chs. To rocky conglomerate point.  
S.  $64\frac{1}{4}^{\circ}$  W. 7.60 chs. To rock spur.  
S.  $6\frac{1}{4}^{\circ}$  W. 3.30 chs. To rock spur.  
S.  $11^{\circ}$  E. 3.80 chs.  
S.  $29\frac{1}{4}^{\circ}$  E. 10.00 chs.  
S.  $30^{\circ}$  E. 5.70 chs. To point on rock spur to W.  
S.  $36\frac{1}{4}^{\circ}$  E. 2.70 chs. To point on rock spur to W.  
S.  $57\frac{1}{4}^{\circ}$  E. 4.33 chs.

Set an iron post 3" dia., 10" in ground to rock, surrounded by mound of stone, for the 93 mile cor. of amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

93 M W M I R A S B in N.  
P L 1915 in S.

Raise mound of stone, 4 ft. base, 2 $\frac{1}{2}$  ft. high, N. of cor.

Cor. falls on top of volcanic ledge on opposite side of river from where a cut off channel has been partially made through volcanic ledge from the right bank to another point on the right bank over a mile down the river via channel, but less than 100 ft. through the ledge.

From cor. I take the following bearings:

Highest rocky point about 300 ft. above river, brs. N.  $88\frac{3}{4}^{\circ}$  W. about 12 chs. dist.

Top of sharp rock, brs. N.  $46\frac{3}{4}^{\circ}$  W., 3/8 mile.

Highest point of rock ledge, brs. N.  $17\frac{1}{2}^{\circ}$  E. about 15 chs. dist.

Land, river bottom level, very mountainous on each side thereof.

Amended

South Boundary of White Mountain (or San Carlos) Indian Reservation.

Chains

Soil, rocky, except narrow strip along river, subject to overflow.  
Undergrowth of mesquite, catclaw and arrowweed.  
No timber.

-----  
Thence I run with meanders along the left bank of the Gila River on the 94th mile of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation.

N. 46½° E.	8.00 chs.	
N. 83¼° E.	5.80 chs.	To Malapai dike, brs. S.
N. 70¼° E.	8.40 chs.	
S. 59° E.	15.10 chs.	
S. 33° E.	2.70 chs.	

Set an iron post 1" dia., 12" in ground to rock, surrounded by mound of rocks, for the 93½ mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

93½ M W M I R A S B in E.  
P L in W.  
1915 in S.

From which -

Mesquite, 5" dia., brs. N. 27½° W., 60 lks. dist., mkd.	93½ M W M I R A S B B T
Mesquite, 5" dia., brs. S. 43½° E., mkd.	93½ M W M I R A S B B T

Cor. falls at north edge of 1st red boulder by river where it turns South.

S. 10¼° E.	4.00 chs.	
S. 5½° W.	5.00 chs.	
S. 28¼° W.	5.10 chs.	
S. 56¼° W.	8.40 chs.	To a point 25 lks. NE. of a rock 30 x 30 x 30 ft. on river bank. At 5.00 chs. drain, course W.
S. 62¼° W.	8.40 chs.	
N. 82° W.	9.10 chs.	To 94 mile cor.

Set an iron post 3" dia., 20" in ground to rock, surrounded by mound of stone, for 94 mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

P L in N.  
94 M W M I R A S B in S.

Raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.

Cor. falls on narrow rock spur which bis. NE. and SW. and is about 30 ft. above water in river.

Land, rough and mountainous along both sides of river.

Soil, none. Malpais rocks.  
Dense underbrush of mesquite.  
No timber.

September 16, 1915.

South boundary of White Mountain (or San Carlos) Indian Reservation.

Chains

September 17, 1915. At 8 a.m., l.m.t., I set off 53° 10' N. on the lat. arc, and 2° 32' N. on the decl. arc, and determine a meridian with the solar.

Thence I run with meanders along the left bank of the Gila River, the 95th mile.

N. 73° W.	3.80 chs.	
N. 41½° W.	5.80 chs.	
N. 52° W.	3.30 chs.	
N. 56½° W.	4.00 chs.	To a point opposite the partial cut off of river mentioned in the description of the 93rd mile cor. and about 4 chs. S. thereof.

N. 81½° W.	11.90 chs.	
N. 55½° W.	7.40 chs.	
N. 70½° W.	3.80 chs.	At 80 lks., drain, course North.

Set an iron post 3" dia., 24" in ground to rock, for the 94½ mile cor., with brass cap stamped

94½ M P L in N.  
W M I R A S B in S.  
1915 in S.

Raise a mound of stone, 4 ft. base, 2 ft. high, S. of cor.

Cor. falls about 20 ft. above high water mark of river, and 150 yards NW. of high vertical crag.

N. 70½° W.	.60 chs.	
N. 50½° W.	10.40 chs.	To A.P. on rock in edge of river.
S. 81½° W.	5.90 chs.	To A.P. on slide rock, brs. N. and S.
N. 50½° W.	7.20 chs.	
N. 29° W.	12.70 chs.	
N. 30° W.	3.20 chs.	

Set an iron post 3" dia., 26" in ground, for the 95 mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

95 M P L in N.  
W M I R A S B 1915 in S.

From which --

Mesquite, 8" dia., brs. S. 67½° W., 59 lks. dist., mkd. 95 M P L A S B B T  
No other trees available.

Raise mound of stone, 4 ft. base, 2 ft. high, SW. of cor.

Cor falls 2 chs. S. of rock ledge, and 15 ft. above high water mark of river. Also about 200 yards SE. of rock ledge, E. and W. from south side of river half way across channel.

Land, rough and mountainous.  
Soil, rocky, 4th rate.  
Dense undergrowth of mesquite and catclaw.  
No timber.

## Amended

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

## Chains

Thence I run with meanders of left bank of Gila River, along the 96th mile.

N.  $23\frac{1}{2}^{\circ}$  W. 2.40 chs.  
 N.  $43\frac{1}{2}^{\circ}$  W. 5.20 chs.  
 N.  $34^{\circ}$  W. 5.00 chs.

At end of this course, the large rock on south edge of river which was sighted from the point 22.87 chs. on the 92nd mile, but which is not on the meandered boundary, brs. N.  $38\frac{1}{2}^{\circ}$  W., 9.40 chs. dist.

S.  $83\frac{1}{2}^{\circ}$  W. 5.00 chs.  
 S.  $66^{\circ}$  W. 2.50 chs.

September 17, 1915. At this point, I set off  $2^{\circ} 27'$  N. on the decl. arc, and at apparent noon, observe the sun on the meridian. The derived latitude is  $33^{\circ} 10'$  N. which is correct.

S.  $52\frac{1}{2}^{\circ}$  W. 2.80 chs. To rocky spur.  
 S.  $43^{\circ}$  W. 4.10 chs. To rocky spur.  
 S.  $5\frac{1}{2}^{\circ}$  W. 8.00 chs.  
 S.  $10\frac{1}{2}^{\circ}$  E. 5.00 chs.

Set an iron post 1" dia., 22" in ground to rock, for the 95 $\frac{1}{2}$  mile cor., surrounded by a mound of stone, with brass cap stamped

95 $\frac{1}{2}$  M W M I R A S B in E.  
 P L in W.  
 1915 in S.

From which -

Mesquite, 8" dia., brs. S.  $7^{\circ}$  W., 19 lks. dist.,  
 mhd. 95 $\frac{1}{2}$  M W M I R A S B B T  
 No other trees available.

Raise mound of stone, 4 ft. base, 2 ft. high, E. of cor.

Cor. falls about 3 ft. above high water mark of river, and about East of the highest of 2 rock pinnacles by river on west side.

S.  $13\frac{1}{2}^{\circ}$  W. 7.10 chs. At 1.50 chs., drain, course W.  
 S.  $22^{\circ}$  W. 6.35 chs. To A.P. on trachyte ridge.  
 S.  $3^{\circ}$  E. 7.70 chs.  
 S.  $12^{\circ}$  W. 3.10 chs. At 2 chs. cross wire fence, brs. S.  $8^{\circ}$  W. and N.  $8^{\circ}$  E.  
 S.  $11\frac{1}{2}^{\circ}$  W. 6.30 chs.  
 S.  $27^{\circ}$  W. 4.70 chs. To point on line of same fence.  
 S.  $17\frac{3}{4}^{\circ}$  W. 4.75 chs. Along fence.

Set an iron post 3" dia., for the 96 mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

96 M W M I R A S B in E.  
 P L in W.  
 1915 in S.

From which -

Mesquite, 5" dia., brs. N.  $26\frac{1}{2}^{\circ}$  E., 35 lks. dist.,  
 mhd. 96 M W M I R A S B B T

Amended

BOOK 2821

## South Boundary of White Mountain (or San Carlos) Indian Reservation.

## Chains

Mesquite, 6" dia., brs. S. 52° E., 17 lks. dist.,  
 mkd. 96 M W M I R A S B B T  
 Mesquite, 8" dia., brs. S. 57½° W., 1.00 ch. dist.,  
 mkd. 96 M P L B T  
 Hackberry, 8" dia., brs. N. 31½° W., 2.12 chs. dist.,  
 mkd. 96 M P L B T

Cor. falls 2 lks. East of wire fence which brs. N. 18° E. and S. 18° W. and 35 lks. North of a gate, also 72 lks. N. of angle of fence and 150 yards East of a reddish outbank on the west side of Gila River.

This fence was built to follow the line of the boundary and does so with reasonable accuracy.

Heavy rain in afternoon, close work Sept. 17, 1915.

September 18, 1915. At 8 a.m., l.m.t., I set off 33° 9' N. on the lat. arc, and 2° 11' N. on the decl. arc, and determine a meridian with the solar.

left

Thence continue with meanders of the bank of Gila River downstream, along the boundary fence.

S. 16½° W.	.72 chs.	To angle of fence.
S. 11½° E.	14.30 chs.	At this point, leave fence, which continues about 1 ch. further on same bearing.
S. 2½° E.	2.60 chs.	
S. 35½° W.	8.50 chs.	To point on boundary fence, from N. 45° E.
S. 61½° W.	10.70 chs.	At 2 chs., drain, course NW. Fence crosses drain, 25 lks. SE of line.
S. 57° W.	1.60 chs.	
N. 84½° W.	1.58 chs.	

Set an iron post 1" dia., 26" in ground for the 96½ mile cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Reservation, with brass cap stamped

96½ M W M I R A S B in N.  
 P L 1915 in S.

Raise a mound of stone 2 ft. base, 1½ ft. high, SE. of cor.

amended

This cor. falls on the 31st mile of the south boundary line of the White Mountain (or San Carlos) Indian Reservation as established by Philip Contzen in 1898, 9.45 chs. N. 68° 4' W. of the 30 mile post, and 30.55 chs. S. 68° 4' E. of the 30½ mile post.

N. 68° W.	3.30 chs.	
N. 55° W.	2.50 chs.	
N. 65½° W.	10.70 chs.	
N. 66° W.	8.90 chs.	At 6.30 chs. on this course, fence cor. 60 lks. S., fences S. 60° E. and W.
N. 69½° W.	5.60 chs.	
S. 82½° W.	2.48 chs.	to terminal cor. of the amended south boundary of the White Mountain (or San Carlos) Indian Res., established by Philip Contzen, Feb. 2, 1898, at junction of Gila River and Hawk Canyon.

## Amended

South boundary of White Mountain (or San Carlos) Indian Reservation.

## Chains

This cor. is a quartzite 20 x 8 x 12 ins. above ground, firmly set and marked W M I R A S B on the north, 30 M 42.50 ch. on East, P L on S. and M C on W., with mound of stone East of cor.

From which -

Mesquite stump, 4 ft. high, brs. S.  $34^{\circ} 35'$  W., 4.11 chs. dist., in stead of S.  $34\frac{1}{4}^{\circ}$  W., 4.13 chs. dist.; and marked W M I R A S B 30 M 42.50 ch. on side facing cor. also A S B A R  $11\frac{1}{4}$  + 11 M X on south, but the significance of these marks I am unable to interpret.

The other old Bearing Tree has been cut down, or has otherwise disappeared.

Mescal Mountains, brs. S.  $41^{\circ} 55'$  W. about 2 miles dist. instead of S.  $42^{\circ}$  W.

I take additional bearing as follows:

U S G S B M which is a 4" iron post, 1 foot above ground, stamped 2290 ft. above sea, brs. S.  $48\frac{1}{4}^{\circ}$  E., 26 lbs.

A large boulder, 6 x 6 x 2 ft. on south bank of Hawk Canyon, brs. S.  $34^{\circ} 43'$  W. about 10 chs.

A flat boulder in cutbank on NW. side of Gila River, brs. N.  $50\frac{1}{2}^{\circ}$  E.

A boulder, 6 x 6 ft. on hill slope, brs. N.  $50^{\circ}$  E. about 15 chs. on North side Gila River.

To further perpetuate this corner, North and alongside old stone, I set a 3" iron post 26" in the ground, with brass cap stamped

96 M 73.48 CH W M I R A S B in N.  
30 M 42.50 CH W M I R A S B 1915 in S.  
P L in SW.

Rebuild the mound of stone, 4 ft. base, 3 ft. high, E. of cor.

From this cor., the 26 $\frac{1}{2}$  Mile cor. of old amended south boundary, brs. S.  $68\frac{1}{4}^{\circ}$  E., 248 chs. dist., properly marked and witnessed as described in old notes.

A trail from Christmas to San Carlos through the canyon of the Gila River passes close along north side of boundary and crosses river about 300 yards East of this point, also passing through gate in fence just west of cor.

Land, gently rolling.

Soil, 1st and 2nd rate, in a narrow strip along the river.

Dense undergrowth of catclaw, and mesquite.

No timber.

Close work, Sept. 18, 1915.

H. L. Baldwin,

Topographer.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

The subsequent corners were marked "E B" for East Boundary, owing to the fact that the north and south portions of this line formed a part of the original East boundary, but which now, owing to the sequence of numbering of the posts, becomes a part of the south boundary.

Sept. 22, 1915. At my camp SW. of San Carlos, Arizona, on Sunday Sept. 19, 1915, I test my solar during morning and afternoon hours upon the meridian established by me Sept. 14, at the 90 mile cor. of amended south Boundary of the White Mountain (or San Carlos) Indian Reservation, and find same to determine the meridian with accuracy.

During the progress of this survey, I test my instrument as frequently as possible upon meridians established at my various camps and keep same in constant adjustment. I also upon resuming work each morning test the last sight of the previous day to discover any possible variation between morning and afternoon determinations.

While running that portion of the line from the Gila River north to the summit of the Gila Mountains - the country being especially favorable therefor - I select very distant fore and back sights and place numerous flags along line to enable me to discover or prevent any possible variations from a true line and which procedure renders unnecessary the taking of observations each night, although same are always taken when at all practicable.

On Sept. 22nd, at 9 a.m., after discovering that the Initial Monument on the south side of the Gila River has been washed away, I proceed to the 1/4 mile cor. south of the Initial point, in lat. 33° 05' N. and long. 110° 03' W., which is a white granite stone, 9x8x5 ins. above ground, as described, mkd. E B S C R 1/4 M on E. No trace of old pits and mound. To further perpetuate this corner, - North and alongside of the old stone I set an iron post 1 inch dia., stamped in cap

1/4 M P L in E.  
E B W M I R in W.  
1915 in S.

I set off 33° 05' N. on the lat. arc, 0° 35' N. on the decl. arc, and determine a meridian with the solar, and note a distant point many miles to the north and on line.

Thence I run

39.70 South on a random line along the 1st mile (S 1/4). Falls 18 lks. W. of the 1 mile cor.

Returning to the 1/4 mile cor., thence I run

S. 0° 15' E. on a true line along the 1st mile (S 1/4) Over level land, along fence.

7.50 Leave Gila River bottom; ascend N. slope.

11.25 Right of way fence of Arizona Eastern Ry. brs. S. 61 1/4° E., and N. 61 1/4° W., parallel to railroad.

12.25 Telegraph line, parallel to railroad.

13.10 Arizona Eastern Ry. track brs. S. 61° 45' E. and

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
	N. 61° 45' W.
14.35	S. right of way fence, same bearing.
19.13	Spur ridge brs. E.; descend S. slope.
21.00	Wash, 20 lks. wide, course NE.; ascend N. slope.
36.20	Short spur to E.; descend SE. slope.
39.70	The 1 mile cor., which is a quartzite stone 12x9x6 ins., above ground, firmly set and marked E B S C R 1 M on E., with mound of stone 3 ft. base, 2 ft. high, W. of cor. To further perpetuate this cor., - North and alongside of the stone, I set an iron post 3 ins. dia. stamped in cap  E B W M I R in W. 1 M P L in E. 1915 in S.  Rebuild the mound of stone W. of cor.  The original cor. set by Rieker in 1883 and noted by Walker in his resurvey of 1887 remains in the same position.  Land, level and broken. Soil, 1st and 3rd rate. Mesquite undergrowth. No timber.
-----	
	South on a random line along the 2nd mile ( $N\frac{1}{2}$ ) of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.
39.72	Falls 15 lks. W. of the $1\frac{1}{2}$ mile cor.
	Returning to the 1 mile cor., thence I run S. 0° 13' E. on a true line along the 2nd mile ( $N\frac{1}{2}$ ). Over level mesa along fence, through mesquite undergrowth descending SE. slope.
1.70	Draw, course N. 10° E. Ascend N. slope.
7.13	The C.C. bet. secs. 14 and 23, a granite stone 10x7x5 ins., above ground, firmly set, marked C T M R C C on E., S C R on W.
12.15	Spur, brs. NE.; descend S. slope.
15.70	Wash, 20 lks. wide, course E. Ascend S. slope.
26.50	Ridge, brs. E. and W. Descend S. slope.
31.35	Wash, course E., 20 lks. wide. Ascend N. slope.
37.80	Enter level land.
39.72	The $1\frac{1}{2}$ mile cor., a red quartzite stone 12x8x8 ins. above ground, firmly set and marked E B S C R $1\frac{1}{2}$ M on top; witnessed by a mound of stone 3 ft. base, 2 ft. high, W. of cor. To further perpetuate this cor., -North

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

and alongside of the stone, I set an iron post 1 in. dia., stamped in cap

W M I R E B in W.  
P L 1 1/2 M in E.  
1915 in S.

Rebuild the mound of stone 3 ft. base, 2 ft. high, W. of cor.

-----

Thence I run

South on a random line along the 2nd mile (S 1/2).

39.91 Falls 17 lks. W. of the 2 mile cor.

Returning to the 1 1/2 mile cor., thence I run S. 0° 15' E. on a true line along the 2nd mile (S 1/2).

Along wire fence.

12.28 Draw, course E.

28.00 Descend S. slope.

30.20 Enter wash, course SE.

38.80 Leave wash, course SE. Ascend N. slope.

39.91 The 2nd mile cor., which is a granite stone 12x8x6 ins. above ground, firmly set, mkd. E B S C R 2 M, with scattered mound of stone west of cor. To further perpetuate this cor., - North and alongside of the stone, I set an iron post 3 ins. dia., stamped in cap

E B W M I R in W.  
P L 2 M in E.  
1915 in S.

ReBuild mound of stone 3 ft. base, 2 ft. high, W. of cor.

Land, gently rolling.  
Soil, gravelly, 2nd and 3rd rate.  
Mesquite undergrowth.  
No timber.

-----

South on a random line along the 3rd mile of S. bdy. of White Mountain (or San Carlos) Indian Reservation.

30.80 Falls 9 lks. W. of true point for flagstaff of old Camp Goodwin.

40.00 After diligent search no trace of the old 2 1/2 mile cor. is found.

79.78 Falls 35 lks. W. of the 3 mile cor.

Returning to the 2 mile cor., thence I run

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
	<p>S. 0° 10' E. on a true line along the 3rd mile of S. bdy. of White Mountain Indian Reservation.</p> <p>Along fence, descending S. slope.</p>
5.00	Draw, course NE. Ascend NW. slope.
7.15	The C.C. of secs. 23 and 25, T. 4 S., R. 21 E., which is a stone mkd. C T M R C C on E., with a small mound of stone E. of cor.
8.15	Spur brs. E. 10.00 chs. Descend SE. slope.
13.10	Draw, course E. Ascend NE. slope.
19.30	Spur brs. E. 6.00 chs. Descend S. slope.
24.30	Enter level land.
30.80	<p>True point for Flagstaff of old Camp Goodwin; all traces of which having disappeared, I reestablish as follows:</p> <p>From a mesquite tree described in the old notes of Chas. E. Walker as a mesquite stump 15 ins. dia. and 4 ft. high, and which has become a tree, and as the old stump shows faint marks of S O S T C G (other marks overgrown) I locate a point N.62°40'E., 1.89 chs.</p> <p>From a mesquite stump 2½ ft. at base, (now become a tree) and bearing marks S O C G partly decayed, and other marks illegible, I lay off a distance of 248 lks. N.14°24'E.</p> <p>These two points are north and south of each other 2 lks. dist.</p> <p>At the middle point or the true point (restored) for flagstaff of old Camp Goodwin, I set an iron post 3 ft. long, 3 ins. dia., 26 ins. in the ground, stamped in cap</p> <p style="text-align: center;">FLAGSTF in N. O C G in middle 1915 in S.</p> <p>Upon digging in this position for setting the iron post I find what appeared to have been very rotten cement or plaster, which probably was used to hold the flagpole in position, and I therefore conclude that the old bearing trees have enabled me to obtain correctly the original position of the flagpole.</p> <p>I mark additionally the following:</p> <p style="padding-left: 40px;">A mesquite 8 ins. dia. bearing S.57° E., 28 lks. dist. mkd. F S O C G B T.</p> <p>From the reestablished position of flagstaff wire fences bear N., S., and S. 59° E.</p> <p>Thence I run with slight deflection of line S. 18' E.</p>
37.73	Goodwin Creek (or dry wash) 50 lks. wide, course N.70°E.
39.89	<p>At middle point of the 3rd mile, set an iron post 1 in. dia., for 2½ mile cor., stamped in cap</p> <p style="text-align: center;">E B W M I R in W. 2½ M P L in E. 1915 in S., from which</p>

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

A willow 15 ins. dia. brs. N. 29°45'E., 1.30 chs. dist.  
mkd. 2½ M P L B T.

A cottonwood 30 ins. dia. brs. N.13°45'W., 1.10 chs.  
mkd. 2½ M W M I R B T.

A wire fence brs. N. and S. 3 lks. E. of cor.; and  
another wire fence 9 lks. E. brs. N. and S.

After diligent search no trace of the old 2½ mile cor.  
could be found.

Close work, 5 P.M., Sept. 22, 1915.

At the ½ mile cor. on the S. bdy. South of Gila River,  
I observe Polaris as follows, with telescope direct  
and reversed, and mark the points on the ground N. of  
the corner.

Time obs'n P.M., l.m.t., Sept. 22,	5h 40.0m	5h 46.8m
T. U. C. , Sept. 23,	<u>1 25.7</u>	<u>1 25.7</u>

Time to elapse, or hour angle - 7h 45.7m 7h 38.9m

which corresponds to azimuths of 72.8' 73.8' E. of N.

From the middle point I turn off an angle of 73.3' or  
1° 13.3' W. and find the direction thus determined to  
agree with the distant foresight to the north taken  
this morning from this place.

Sept. 23, 1915. At 9 a.m., l.m.t., I set off 33° 03' N.  
on the lat. arc, and 0° 13' N. on the decl. arc, and  
determine a meridian with the solar at the 2½ mile cor.  
on South bdy. of White Mountain Indian Reservation.

Thence I run

S. 0° 18' E. on a true line along the 3rd mile of the  
S. bdy. (S½), continuing measurement from the 2 mile  
cor.

44.95 Goodwin Springs (largest one of several) brs. West, 9.28  
chs. dist.

As this spring is not symmetrical in shape, it is diffi-  
cult to decide upon the exact center thereof and my  
measurement may not be to the same point as that taken  
by Contzen 17 years ago, which distance was given as  
9.30 chs.

45.00 Wire fence brs. N., S. and S. 45° E.

48.50 Wagon road, brs. SE. and NW.

69.60 Wash, 1 ch. wide, course NE.

79.78 The 3 mile cor., which is a sandstone 8x7x3 ins., above  
ground, firmly set, mkd. E B S C on Top, with faint  
trace of old mound and one pit.

Resurvey of South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	<p>To further perpetuate this cor., - North and alongside of the stone, I set an iron post 3 ins. dia., stamped in cap</p> <p style="text-align: center;">E B W M I R in W 3 M P L in E 1915 in S., From which</p> <p>A mesquite limb 5 ins. dia. brs. N. 30½° E., 80 lks. dist. Mkd. 3 M P L B T.</p> <p>A mesquite 8 ins. dia. brs. S. 6° 45' E., 42 lks. dist. Mkd. 3 M P L B T.</p> <p>A mesquite limb 5 ins. dia. brs. S. 43° W., 143 lks. dist. Mkd. 3 M W M I R B T.</p> <p>A mesquite 4 ins. dia. brs. N. 36° 15' W., 98 lks. dist. Mkd. 3 M W M I R B T</p> <p>Land, level. Soil, 1st and 2nd rate. Dense undergrowth of willow, catclaw, sunflowers, arrow weed; willow and cottonwood timber.</p> <p>-----</p> <p>South on a random line along the 4th mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.</p> <p>40.01 Fall 9 lks. E. of the 3½ mile cor.</p> <p>Returning to the 3 mile cor., thence I run</p> <p>S. 0° 08' W. on a true line along 4th mile (N½) of South bdy. of White Mountain (or San Carlos) Indian Reservation along fence, through scattered heavy timber of cottonwood and mesquite.</p> <p>7.50 J. H. Hinton's house brs. E., 30 lks. dist.</p> <p>25.00 Sam Hinton's house brs. E. about 6.00 chs. dist.</p> <p>30.00 Old well brs. E., 40 lks. dist.</p> <p>40.01 The 3½ mile cor., a granite stone 5x12x4 ins. above ground, firmly set, mkd. E B S C on top. No trace of pits or mound. To further perpetuate this cor., - North and alongside of the stone, I set an iron post 1 in. dia., stamped in cap</p> <p style="text-align: center;">E B W M I R in W 3½ M P L in E 1915 in S., from which</p> <p>A mesquite 20 ins. dia. brs. S. 25° W., 28 lks. dist. mkd. 3½ M W M I R B T</p> <p>A mesquite 12 ins. dia. brs. S. 6° 15' E., 98 lks. dist. mkd. 3½ M P L B T</p> <p style="text-align: center;">-----</p> <p>Thence</p> <p>South on a random line along the 4th mile of the S. bdy.</p>
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## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

of White Mountain (or San Carlos) Indian Reservation.

Along wire fence.

- 5.37 Falls 4 lks. E. of the Initial Monument of Amended south boundary of White Mountain (or San Carlos) Indian Res'n.

Returning to the  $3\frac{1}{2}$  mile cor., thence I run

S.  $0^{\circ} 26' W.$  on a true line along 4th mile of South bdy. of White Mountain (or San Carlos) Indian Res'n.

Through scattered cottonwood timber along reservation fence.

- 5.37 Intersect the Initial Monument of amended south boundary of White Mountain Indian Reservation, which is a granite stone 12x6x16 ins. above ground, mkd. I M A S B W M I R SE COR on N., and P L on S., from which

A mesquite 16 ins. dia., mkd. I M A S B W M I R SE COR B T, brs. N.  $15\frac{1}{2}^{\circ} E.$ , 192 lks. dist., instead of N.  $13\frac{1}{4}^{\circ} E.$ , 199 lks. dist., as reported.

A mesquite 10 ins. dia., mkd. I M A S B W M I R SE COR B T, brs. N.  $35^{\circ} 45' E.$ , 217 lks. dist., instead of N.  $34^{\circ} E.$ , 220 lks. dist. as reported.

A mesquite 6 ins. dia., mkd. I M A S B W M I R SE COR B T, brs. S.  $72^{\circ} 45' E.$ , 105 lks. dist., instead of S.  $75^{\circ} 45' E.$ , 99 lks. dist. as reported.

No trace of 4th bearing tree.

New B.T.,

A mesquite 12 ins. dia., brs. S.  $13\frac{1}{4}^{\circ} W.$ , 36 lks. dist.  
Mkd. A P P L B T.

To further perpetuate this cor., - North and alongside of the old stone, I set an iron post 3 ins. dia., stamped on cap with an angle opening to the NW., within which are the letters W M I R A P; outside of the angle, in the SE., P L, - and 1915 in S.

Land, level.

Soil, 2nd rate.

Cottonwood and mesquite timber, and underbrush of the latter.

Close work Sept. 23, 1915.

Sept. 24, 1915. At 8 a.m., I commence work at the  $\frac{1}{2}$  mile cor. south of the Gila River, previously described, and by transit line methods establish the boundary north from this point as follows, using, whenever possible, the foresight established on Sept. 22.

North on a random line along the S. bdy. of White Mountain (or San Carlos) Indian Reservation.

- 34.74 Point for W.C. to Initial Monument of S. bdy. now falls in River, and all trace thereof, including bearing trees, has recently been washed away.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

- 40.00 True distance for Initial Monument of S. bdy. of White Mountain (or San Carlos) Indian Reservation, and, as previously noted, it is not clear from the original notes of the Riecker survey of 1883 whether this initial monument for boundary south of the river coincides with the initial monument for the boundary north of the river; therefore, I make continuous search all along the line for this initial monument and successive corners, setting temp. corners at 1/4-mile intervals for future use.
- 73.80 No trace of old C.C. at NW. cor. of Camp Thomas (abandoned) Military Reservation.
- 120.00 No trace of old 1 mile cor.
- 203.01 Falls 83 lks. W. of the old 2 mile cor., as established by Paul Riecker in 1883, which is a limestone 14x2 1/2 x 10 ins. above ground, firmly set, and marked W M I R N 2 on E. side thereof, south of which is a well built mound of stone 3 ft. base, 2 ft. high,

There is no doubt in my mind that this is the original 2 mile cor. set by Riecker. Testimony to that effect was also given me by J. H. Hinton, who may properly be taken as representing interests of white settlers, and has known this cor. for over 20 years, - also Perry Mc Murrin, an employee of the Indian Department who has known the corner for a still longer period of time. Much gossip as to this line having been moved proved to have no foundation apparently. Several Indians claimed this was not the proper corner, but an invitation to show the correct one was accepted by them only after considerable reluctance, and very much insistence on my part.

After they had searched the country thoroughly from 5.00 to 10.00 chs. north of the present position and a few feet east of the line, without result, and failing to find any evidence whatever of any other corner in the position where they claimed the same would be, I accepted the corner found by me, - at no time previously or since having any doubt of its correct nature. I use this cor. only for the purpose of reestablishing the old NW. C.C. of Camp Thomas (abandoned) Military Reservation as described in notes of L. D. Chillson in his survey made in 1894, reestablishing same on the straight line joining the nearest known corners north and south thereof which are respectively the 2 mile cor. just described and the 1/4 mile cor. of the S. bdy. south of the initial point and south of Gila River.

The bearing of this reestablished line will be N.0°14'E.

From the nearest recoverable cor. on the N. bdy. of the Camp Thomas (abandoned) Military Reservation which is the 1/4 sec. cor. bet. secs. 7 and 12 of Tps. 4 S., Rgs. 22 and 23 E., and which is a cedar post with marked stone firmly set and plainly marked 1/4 S on W. face, I proceed as follows :

(Close work Sept. 24, 1915).

Sept. 25, 1915. At 8 a.m., at this cor., I set off 33° 06' N. on the lat. arc, 0° 34' S. on the decl. arc, and determine a meridian with the solar.

Thence I run

West on a random line along the N. bdy. of the Camp Thomas (Abandoned) Military Reservation.

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

98.98 Intersect random boundary line run North at a point 73.12 chs. North of the  $\frac{1}{2}$  mile cor. of S. bdy. south of Gila River. Set temp. post at point of intersection.

The bearing of the reestablished boundary will be as previously noted N.  $0^{\circ} 14'$  E. from the  $\frac{1}{2}$  mile cor. of S. bdy. south of Gila River which is a distance of 73.12 chs. Corresponds to a departure of 30 lks.

Therefore the restored position of the NW. cor. of the Camp Thomas (Abandoned) Military Reservation will be 30 lks. E. of the temporary post just established which was at the intersection of random lines.

Returning to the  $\frac{1}{4}$  sec. cor. bet. secs. 7 and 12, thence I run

West on a true line through secs. 12 and 11, reestablishing the N. bdy. of the Camp Thomas Military Reservation (Abandoned).

Over gently rolling land, ascending.

4.35 Descend from spur, brs. S.

5.00 Foot of descent.  
Thence through mesquite and arrow weed brush.

34.40 Draw, course S.

60.20 Old fence, brs. N. and S.

77.70 Road, brs. N. and S.

80.00 After diligent search, no trace of  $\frac{1}{4}$  sec. cor. bet. secs. 11 and 12 is found.

Set temp. stake only (being patented land).

80.40 Enter grassy pasture land in former river bottom, brs. N. and S.

91.40 Leave pasture, and enter dense undergrowth of willow and arrowweed, brs. N. and S.

98.68 Intersect the S. bdy. of White Mountain Indian Reservation 73.12 chs. N.  $0^{\circ} 14'$  E. of the  $\frac{1}{2}$  mile cor. south of the Gila River, at which point of intersection I set an iron post 3 ins. dia., for northwest closing corner of Camp Thomas (Abandoned) Military Reservation, stamped in cap

W M I R in W.  
P L in NE.  
C C C T M R in SE.  
1915 in S.

Afterwards, in running the boundary line of the White Mountain (or San Carlos) Indian Reservation, I add the letters M C for meander corner.

From the C.C.,

A cottonwood 6 ins. dia. brs. N.  $40\frac{1}{2}^{\circ}$  E., 150 lks. dist.  
mkd. T 4 S R 22 E S 11 C C B T.

A cottonwood 6 ins. dia. brs. S.  $89\frac{1}{4}^{\circ}$  E., 131 lks. dist.  
mkd. T 4 S R 22 E S 11 C C B T.

Resurvey of

BOOK 2821

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Cottonwood 11 ins. dia. brs. S. 71½° W., 228 lks. dist. mkd. W M I R A P B T.

Double mesquite, brs. N. 81° 45' W., 229 lks. dist. mkd. W M I R A P B T.

Cor. falls 1 ch. S. of old high bank of Gila River and 65 lks. E. of reservation fence.

Close work Sept. 25, 1915.

Returning to the ½ mile cor. S. of the Gila River, thence I run

N. 0° 14' E. reestablishing the boundary of the White Mountain Indian Reservation between this point and the NW. closing cor. of Camp Thomas (Abandoned) Military Reservation.

Over bottom land, of Gila River, approximately parallel to a wire fence constructed along the supposed reservation boundary.

5.40 Wagon road at gate through fence from Geronimo to San Carlos brs. N. 60° W. and S. 60° E.

Enter dense mesquite undergrowth with arrowweed.

28.30 Old road, brs. E. and W.

31.00 The Gila River as for some years been eroding the south bank, therefore, at this point which I consider may prove to be safe from erosion, I set an iron post 3 ins. dia. for W.C. to the Initial Monument, stamped on cap

W C M C in N.  
W M I R I M in W.  
T 4 S R 22 E S 14 in E.  
1915 in S., from which

A mesquite 8 ins. dia. brs. N. 23½° E., 158 lks. dist. mkd. T 4 S R 22 E S 14 I M W C B T.

A mesquite 6 ins. dia. brs. S. 57° 45' E., 359 lks. dist. mkd. T 4 S R 22 E S 14 I M W C B T.

A mesquite limb, 6 ins. dia. brs. S. 60° 45' W., 264 lks. dist. mkd. 1 M W M I R W C B T.

A mesquite limb, 7 ins. dia. brs. N. 74° W., 377 lks. dist., mkd. 1 M W M I R W C B T.

Raise a mound of stone 4 ft. base, 1 ft. high, around cor.

Cor. falls about 3.00 chs. S. of an adobe house on bank which is gradually falling into the river, and 30 lks. E. of the above mentioned reservation fence.

33.00 Narrow chute or channel of river, 1.00 ch. wide, course NW. The C.C. bet. secs. 11 and 14 should likely fall somewhere in this chute. Search for some distance north and south reveals no trace thereof, and it has likely been washed away.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
33.50	Ruins of adobe house brs. E., 30 lks. dist.
34.00	Left bank of Gila River; river now 5.00 chs. in width, 1 ft. in depth, course NW. and rapid current which is eroding the S. bank.  Leave brush brs. N. 60° W. and S. 60° E.
34.74	No trace of old initial monument or bearing trees, all of which have been washed into the river.
40.00	True point for Initial Monument falls on sandy flat or bar and no trace exists of original cor, which has been washed away.  Land, level river bottom. Soil, 1st rate. Dense undergrowth of mesquite and arrow weed. Some mesquite and cottonwood timber.
-----	
	From true point for Initial Monument which falls on sand bar or flat subject to overflow from Gila River, I continue
	N. 0° 14' E. along the 1st mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.
	Over sand flat subject to overflow, and which gradually becomes densely overgrown with willow and arrow weed and an occasional cottonwood tree.
33.12	The NW. C.C. of Camp Thomas (Abandoned) Military Reservation as previously described, and to which, (it being considered at high water mark and not liable to be washed away) I now add, in addition to other marks, M C, as previously described.  This corner falls within a former bank of Gila River, and the old corner can not be found, due either to its having been washed away or covered with a gradual deposit of soil from higher ground North thereof.  At this point as there is no further reason for continuing boundary on a bearing, I rectify same and continue thence (with continuous measurement)  North - through dense willow and arrow weed, ascending from overflowed land of Gila River.
34.00	Ascend 10-foot bank. Leave willow and arrow weed brs. E. and W. Enter flat land, covered with mesquite trees and undergrowth of mesquite and catclaw.
40.00	Set an iron post 1 inch dia., for $\frac{1}{2}$ mile cor. on S. bdy. of White Mountain Indian Reservation, stamped on cap  $\frac{1}{2}$ M P L in E. W M I R in W. 1915 in S., from which
	A mesquite 8 ins. dia. brs. S. 27° E., 206 lks. dist. mkd. $\frac{1}{2}$ M P L B T.
	A mesquite 7 ins. dia. brs. S. 77 $\frac{1}{2}$ ° W., 386 lks. dist. mkd. $\frac{1}{2}$ M W M I R B T.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

An adobe house brs. N.  $77\frac{1}{2}^{\circ}$  E.,  $\frac{1}{4}$  mile dist.

Cor. falls on flat land, 5.00 chs. N. of edge of a former river bank, and  $\frac{1}{2}$  ch. E. of reservation boundary fence.

56.47 An oak post of dressed lumber  $4\frac{1}{2}$  x  $4\frac{1}{2}$  ins. heveled on top, and 3 ft. long, set firmly in the ground and marked N U S on W. face, and W M R on S., alongside of which is a decayed cedar fence post; also an iron post 1 in. square, 2 ft. long, firmly set, brs. East 12 lks. dist.

This post is very much weathered and I was told by Perry Mc Murrin, an employee of this reservation for many years, that this post was set by Lieut. Bailey about 1887, and was later moved by Pecos Edwards.

It was evidently at some time and when in its original position considered as a point somewhere on the boundary but is not mentioned in official notes and therefore cannot be considered as having any bearing whatever in my survey.

64.00 Wash, 50 lks. wide, course SW.

79.70 Branch channel of wash, 10 lks. wide, course S.  $30^{\circ}$  W.

80.00 Set an iron post 3 ins. dia., for 1 mile cor., stamped in cap

W M I R in W.  
1 M P L in E.  
1915 in S., from which

A mesquite 6 ins. dia. brs. N.  $49^{\circ}$  E., 63 lks. dist.  
mkd. 1 M P L B T.

A mesquite 6 ins. dia. brs. S.  $19^{\circ}$  W., 192 lks. dist.  
mkd. 1 M W M I R B T.

No other trees available.

Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.

Cor. falls on W. side of wash about 1.00 ch. E. of reservation fence.

Land, nearly level.

Soil, 1st and 3rd rate.

Mesquite and chaparral brush on upland; willow and arrow weed in Gila River bottom.

After diligent search no trace of the old 1 mile cor. found.

North along the 2nd mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.

Over level land, through scattered mesquite and chaparral brush, following in general the bed of a broad wash of many channels, general course S.

20.00 A channel of wash, 2 chs. wide, course SW.

25.00 Begin ascent of SE. slope.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

40.00 Set an iron post 1 inch dia., for 1½ mile cor., stamped on cap

1½ M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.

Cor. falls on E. slope of round malpais hill, 3½ chs. W. of wash and about 2 lks. E. of reservation fence.

40.50 Reservation fence, brs. N. 2° E. and S. 2° W.

43.00 Thence along E. slope of hill.

46.00 Descend NE. slope. Reservation fence is 13 lks. E.

56.00 Thence along E. slope, generally level.

80.00 Set an iron post 3 ins. dia., for 2 mile cor., stamped on cap

2 M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 4 ft. base, 3 ft. high, W. of cor.

Cor. falls 3.00 chs. NW. of gravel peak and about 5.00 chs. S. of the main ravine, course E.

Land, rolling.

Soil, rocky, 3rd and 4th rate.

Undergrowth of mesquite and chaparral.

No timber.

Close work Sept. 27, 1915.

North on a true line along the 3rd mile of the S. bdy. of the White Mountain Indian Reservation.

Descending.

3.01 The old 2 mile cor., previously described, brs. E. 48 lks. dist.

I destroy all markings upon old stone, leaving the corner otherwise undisturbed.

3.25 Draw, course SE. Ascend S. slope.

4.70 Thence along broken E. slope.

16.20 Ascend SE. slope.

30.30 Spur, brs. E., 4.00 chs. dist. Descend NE. slope.

35.30 Slope changes to N. Descend.

40.00 Set an iron post 1 in. dia., for 2½ mile cor., stamped in cap

2½ M P L in E.  
W M I R in W.  
1915 in S.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
	Cor. falls in flat 10.00 chs. N. of NE. end of prominent flat-topped butte.
	Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.
40.25	Draw, course W. Ascend gentle S. slope.
62.25	Wagon road from Geronimo to Hinton's ranch brs. SE. and NW.
65.25	Slope changes to SW.
67.25	Same road, brs. NE. and SW.
74.25	Thence over level mesa.
80.00	Set an iron post 3 ins. dia., for 3 mile cor., stamped on cap
	3 M P L in E. W M I R in W. 1915 in S.
	Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.
	Land, broken and level. Soil, rocky 3rd rate. Volcanic ash, gravel and malpais rock. Undergrowth of mesquite and chaparral. No timber.
-----	
	North on a true line along the 4th mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.
	Over level land, through low undergrowth of mesquite, chaparral and cactus.
3.25	The old 3 mile cor., a basalt stone 14x14x10 ins., lying on mound of stone, probably in original position, brs. East 56 lks. dist. I destroy the marks on the stone.
8.10	Wash, course W. Ascend gentle SE. slope.
40.00	Set an iron post 1 in. dia., for 3½ mile cor., stamped on cap
	3½ M P L in E. W M I R in W. 1915 in S.
	Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.
	Cor. falls on open flat land with gentle slope N., W. and E. and falling off to S.
49.05	Low ridge, brs. NE. and SW. Descend NW. slope.
59.05	Wash, course SW., 20 lks. wide. Ascend gentle SE. slope.
72.00	Draw course SW.
75.32	Ridge, brs. NE. and SW.
78.50	Draw, course SW.
80.00	Set an iron post 3 ins. dia., for 4 mile cor., stamped

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

on cap

4 M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.

Land, gently rolling. (Good grazing land).  
Soil, 2nd and 3rd rate.  
Scattered chaparral and mesquite.

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North on a true line along the 5th mile of the S. bdy.  
of the White Mountain (or San Carlos) Indian Reservation.

Ascending SE. slope.

3.29 The old cor., a malpais rock 14x10x6 ins., loosely set  
north of a pile of stones, brs. E., 49 lks. dist. I de-  
stroy faint traces of markings thereon.

8.30 Slope changes to SW.  
Descend SW. slope.

19.50 Wash, course SW. Ascend S. slope.

27.45 Spur, brs. SW. Descend NW. slope.

36.55 Draw, course SE. Ascend S. slope.

40.00 Set an iron post 1 inch dia., for 4½ mile cor., stamped  
on cap

4½ M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, E. of cor.

Cor. falls in bottom of ravine, 3 ft. E. of drain  
therein.

Mound of stone deflects drain further west. Ascend.

55.40 Spur, brs. SW. Descend NW. slope.

60.40 Draw, course SW. Ascend S. slope.

70.35 Ridge, brs. E. and W. Descend N. slope.

75.00 Wash, course W., 2.00 chs. wide. Ascend SE. slope.

80.00 Set an iron post 3 ins. dia., for 5 mile cor. stamped  
on cap

5 M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, W. of  
cor.

Land, rolling.

Soil, 3rd rate.

Dense undergrowth of mesquite, chaparral, cactus, palo  
verde and ocatilla.

No timber.

Close work Sept. 28, 1915.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian reservation

Chains

Sept. 30, 1915 -

North on a true line along the 6th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Res'n.

Ascending SE. slope, through undergrowth of chaparral, cactus, ocotilla and spanish bayonet.

13.00 The old 5 mile cor., a limestone 12x6x10 ins. above ground, firmly set, N. of and alongside a mound of stone 4 ft. base, 3 ft. high, and marked 5 M W M I R on E., brs. East 51 lks. dist. I destroy all markings upon the stone.

I also rechain my last mile to verify my distance and find that Riecker made a 10-chain error between the 4 mile and 5 mile corners. The last three miles of his line however almost exactly parallel mine.

33.00 Slope changes to SW.

36.50 Thence along broken W. slope.

38.50 Head of draw, course W.

40.00 Set an iron post 1 inch dia., for 5 1/2 mile cor., stamped on cap

5 1/2 M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.

Cor. falls near head of drain to SW. 1 1/2 chs. W. of ridge which brs. N. and S., and 7 1/2 chs. S. of ridge which brs. E. and W.

43.00 Spur, brs. W.

47.90 Draw, course W.

51.50 Spur, brs. W.

54.50 Draw, course W.

59.45 Spur, brs. W.

69.40 Wash, course SW. Ascend SE. slope.

80.00 Set an iron post 3 ins. dia., for 6 mile cor., stamped on cap

6 M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.

Land, rolling.  
Soil, 3rd and 4th rate.  
Dense undergrowth of chaparral, cactus and mesquite.  
No timber.

North on a true line along the 7th mile of the S. bdy. of White Mountain (or San Carlos) Indian Res'n.

Ascending SE. slope.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

1.70 Ridge, brs. NE. and SW.  
Descend NW. slope.

3.67 Falls 42 lks. W. of a small mound of stone, but no trace of the original corner. Mr. Sam Hinton says he found this corner destroyed, - fresh marks in the snow where stones had been rolled down hill, also that he gathered up and carried back to the proper position such as he could find. The falling of my line on this monument would indicate his statement was correct and also that in some way Riecker had detected and allowed for the 10-chain error noted in the 5th mile.

12.65 Wash, course NW., 30 lks. wide. Ascend S. slope.

20.70 Ridge, brs. E. and W. Descend NW. slope.

25.65 Draw, course W. Ascend SW. slope.

31.85 Ridge, brs. SE. and NW.  
Descend N. slope.

40.00 Set an iron post 1 in. dia., 8 ins. in ground to rock for 6 1/2 mile cor., stamped on cap

6 1/2 M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.

Cor. falls on N. slope 1 1/2 chs. S. of junction of ravines and about 8.00 chs. S. of a prominent ledge of brown rocks which brs. E. and W., the line north from the corner passing about 8.00 chs. W. of highest point.

At this point I take an observation for meridian as follows:

Sept. 30, 1915. At this corner I observe Polaris as follows, with telescope direct and reversed, and mark the points on the ground at summit of the ridge about 8.00 chs. N. of my station.

L. M. T. obs'n,	-	5h 33.6m P.M.,	5h 36.6m P.M.
T. U. C. (next)	-	0 54.3	0 54.3
		<hr/>	
H. A.		7h 20.7m	7h 17.7m
Corresponding azimuth -		76.5'	76.9'

From the middle point I turn off an angle of 1° 16.7' to the west, and find the deviation of my line to be less than 1/2' of arc to the east.

Close work Sept. 30, 1915.

Oct. 1, 1915. I correct my foresight as obtained by observation last evening, and run north along the N 1/2 of the 7th mile.

Descending.

42.15 Gulch, 40 lks. wide, course W. Ascend S. slope.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
48.00	Spur brs. W., Descend N. slope.
57.00	Wash, course W. Ascend SE. slope.
68.10	Ridge, brs. NE. and SW. Descend steep broken NW. slope to
72.32	Narrow rock ridge, brs. NE. and SW., and as at this place the country becomes too steep and broken for direct measurement, I triangulate as follows across the canyon:  From this point which I designate as "A" I lay off a base "AB" of 939.7 lks. of which the point "B" brs. S. 83° 25' W. from "A". I also set rodman at a suitable point "C" on line across canyon north from "A".  The three angles of the triangle thus formed are  <div style="margin-left: 40px;">           "A" = 96° 35'            "B" = 58° 02'            "C" = 25 23'         </div> and the distance required, or "AC" = $\frac{AB \sin B}{\sin C}$  or by logarithms - 0.972989 <div style="margin-left: 40px;">             9.928578              ÷ 9.632125              1.269442 = 18.60 chs., which added              to 72.32 =           </div>
90.92	Station "C" on hillside North of canyon, or 10.92 chs. N. of true point for corner.  I therefore measure back on line south as far as possible which is 10.67 chs., and at
80.25	25 lks. N. of the true point, set an iron post 3 ins. dia. 20 ins. in ground to rock, for 7 mile cor., stamped on cap  <div style="margin-left: 40px;">             7 M P L B T in E.              W M I R in W.              W C 1915 in S., from which               A cottonwood 8 ins. dia. brs. N. 23½° E., 3.37 chs.              mkd. 7 M P L W C B T.               A cottonwood 8 ins. dia. brs. N. 1° W., 1.67 chs. dist.              mkd. 7 M W M I R W C B T.               No other trees available.               A notch between two rocks on ridge 20.00 chs. W. and 2.00              chs. N. of a peak, brs. N. 63° 45' W.               The easternmost edge of an overhanging rock ledge 15.00              chs. N. on rim of canyon, brs. N. 23° 48' E.               The center of the top of a square limestone boulder              about 8x8x6 ft. above ground on N. side of creek, brs.              N. 24° 15' W., about 2 chs. (unmarked).               Raise a mound of stone 3 ft. base, 2 ft. high, W. of cor,              which falls about 20 ft. above bed of canyon on south              side thereof, and about midway north from the perpendicu-           </div>

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

lar rock ledge 200 ft. high. Canyon 700 ft. deep.

Land, rough and mountainous.  
Soil, rocky 3rd and 4th rate.  
Mesquite, cactus and buck brush undergrowth.  
No timber.

After diligent search, no trace of the old 7 mile cor.  
could be found.

From the true point for the 7th mile cor., which is 0.25  
chs. S. of the W.C., I run

North on a true line along the 8th mile of the S. bdy.  
of the White Mountain (or San Carlos) Indian Reserva-  
tion.

Descending to

- 0.25 The W.C. to the 7th mile cor., heretofore described.
- 2.00 Bed of canyon, course SW. Ascend.
- 10.92 Point of triangulation at Station "C", heretofore noted  
on side hill sloping SE.
- 20.00 Continue steep ascent; over S. slope.
- 25.00 Continue steep ascent, over SW. slope.
- 33.50 Ridge, brs. SE. and NW. Descend NE. slope.
- 40.00 Set an iron post 1 inch dia., for 7½ mile cor., stamped  
on cap

7½ M P L in E.  
W M I R in W.  
1915 in S., from which

A cedar 8 ins. dia. brs. N. 89½° E., 232 lks. dist.  
Mkd. 7½ M P L B T.

Cedar 8 ins. dia. brs. N. 70° 45' W., 300 lks. dist.  
Mkd. 7½ M W M I R B T.

Cor. falls on NE. slope 2.00 chs. E. of rock ledge which  
bears NW. and SE.

- 40.95 Draw, course E. Ascend SE. slope.
- 45.40 Spur, brs. SE., Descend NE. slope.
- 49.00 Draw, course E. Ascend SE. slope.
- 55.25 Spur, brs. E. Descend N. slope.
- 62.50 Wash, 25 lks. wide on canyon, course NW.  
Ascend steep SW. slope.
- 72.00 Ridge, brs. SE. and NW. Descend NE. slope.
- 75.00 Slope changes to NW.
- 80.00 Set an iron post 3 ins. dia., for 8 mile cor., stamped  
on cap

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

8 M P L in E.  
W M I R in W.  
1915 in S., from which

A palo verde 8 ins. dia. brs. N. 73°45' E., 108 lks. dist.  
Mkd. 8 M P L B T.

A palo verde 8 ins. dia. brs. S. 78°45' E., 140 lks. dist.  
Mkd. 8 M P L B T.

A mesquite limb 6 ins. dia. brs. S. 2½° W., 318 lks. dist.  
Mkd. 8 M W M I R B T.

A cedar limb 5 ins. dia. on 12 inch tree, brs. N. 24½° W.,  
377 lks. dist. 8 M W M I R B T.

Cor. falls on W. slope 8.00 chs. N. of lozenge shaped  
hill ¼ of a mile west of yellow, stratified rock  
ledges on south outcrop of hill, and is about 2.00 chs.  
W. of top of ridge bearing N. and S.

After diligent search no trace of old 8 mile cor. could  
be found.

Land, very mountainous and rough.  
Soil, rocky, 4th rate.  
Undergrowth of buck brush, cactus and mesquite.  
Scattered cedar and palo verde timber.

North on a true line along the 9th mile of the S. bdy.  
of White Mountain (or San Carlos) Indian Reservation.

Descending NW. slope.

8.20 Draw, course W. Ascend SW. slope.

40.00 Set an iron post 1 in. dia., for 8½ mile cor., stamped  
on cap

8½ M P L in E.  
W M I R in W.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.  
Cor. falls on SW. slope.

Close work Oct. 1, 1915.

42.35 Ridge, brs. E. and W. Descend NW. slope.

60.00 Wash, in canyon, course SW. Ascend steep SE. slope.

69.30 Top of rim rock, brs. SE. and NW.

71.88 Ridge, brs. NE. and SW. Descend NW. slope.

This is the ridge upon which my foresight was taken as  
obtained by Polaris observation near the ½ mile cor.,  
S. of Gila River.

The summit of Gila Mountains north from this point is  
visible from here, as well as my flag at the ½ mile cor.

I note carefully a new foresight near the summit of the

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
	mountains and use it whenever possible to control the direction of my line from this point north.
79.50	Draw, course W. Ascend SW. slope.
80.00	Set an iron post 3 ins. dia., 16 ins. in the ground to rock, for 9 mile cor., stamped on cap  9 M P L in E. W M I R in W. 1915 in S.  Build a mound of earth and stone 3 ft. base, 2 ft. high, W. of cor.  After diligent search no trace of the old 9 mile cor. is found.  Land, rough and mountainous. Soil, rocky, 4th rate. Undergrowth of scrub oak, scattered cedar and spanish bayonet. No timber.
-----	
	North on a true line along the 10th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Res'n.  Ascending SW. slope.
13.90	Spur, brs. SW.
17.90	Thence along W. slope.
22.60	Rock ledge brs. SE. and NW. Descend NE. slope.
38.00	Draw, course E.
40.00	Set an iron post 1 ins. dia., 15 ins. in ground to rock, for 9½ mile cor., stamped in cap  9½ M P L in E. W M I R in W. 1915 in S.  Build a mound of stone 3 ft. base, 2 ft. high, W. of cor.
44.00	Wash, 20 lks. wide, course SE. Ascend SW. slope.
61.35	Ridge, brs. E. and W. Descend steep N. slope.
72.20	Wash, 20 lks. wide, in canyon, course E. Ascend steep S. slope.
80.00	Set an iron post 3 ins. dia., 22 ins. in ground, surrounded by a mound of stone, for 10 mile cor., stamped in cap  10 M P L in E. W M I R in W. 1915 in S.  Build a mound of stone 3 ft. base, 2 ft. high, W, of cor.

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains													
	<p>Cor. falls on S. slope 1.00 ch. S. 10° W., of a rock pinnacle and 8.00 chs. N. of canyon, also 1½ chs. E. of a small ravine, course S.</p> <p>After diligent search no trace of the old 10 mile cor. could be found.</p> <p>Land, mountainous and rough. Soil, rocky, 4th rate. Dense undergrowth of catclaw, cactus, mesquite and palo verde. No timber, except very scattered cedar.</p>												
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	<p>North on a true line along the 11th mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.</p> <p>Ascending SW. slope.</p>												
5.20	Ridge, brs. E. and W. Descend N. slope.												
10.25	Wash in canyon, course E., 10 lks. wide; ascend S. slope.												
17.30	Spur brs. E. Descend NE. slope.												
24.00	Top of ledge brs. SE. and NW.												
32.25	Wash, 50 lks. wide, course SE. Ascend SW. slope.												
40.00	Set an iron post 1 inch dia., 10 ins. in ground to rock, surrounded by a mound of stone, for 10½ mile cor., stamped on cap												
	<p>10½ M P L in E. W M I R in W. 1915 in S., from which</p>												
	<p>A pine 5 ins. dia. brs. N. 39½° E., 76 lks. dist. Mkd. 10½ M P L B T.</p> <p>A pine 12 ins. dia. brs. N. 68° W., 134 lks. dist. Mkd. 10½ M W M I R B T.</p>												
42.00	Spur brs. W., 3.00 chs. Descend NW. slope.												
47.50	Drain, course E. Ascend SW. slope.												
63.05	Spur brs. W. Descend NW. slope.												
67.80	Drain, course W. Ascend SW. slope.												
76.60	Slope changes to NE.												
	<p>At this point I take an observation on Polaris as follows with instrument direct and reversed, and mark the respective point on the ground about 5.00 chs. N. of instrument.</p>												
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">L.M.T. of obs'n,</td> <td style="width: 30%;">Oct. 3,</td> <td style="width: 20%;">5h 17.5m p.m.</td> <td style="width: 20%;">5h 23.6m p.m.</td> </tr> <tr> <td>T.U.C. (next)</td> <td>Oct. 4,</td> <td>Oh 42.6</td> <td>Oh 42.6</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">7h 25.1m</td> <td style="text-align: center;">7h 19.0m</td> </tr> </table>	L.M.T. of obs'n,	Oct. 3,	5h 17.5m p.m.	5h 23.6m p.m.	T.U.C. (next)	Oct. 4,	Oh 42.6	Oh 42.6			7h 25.1m	7h 19.0m
L.M.T. of obs'n,	Oct. 3,	5h 17.5m p.m.	5h 23.6m p.m.										
T.U.C. (next)	Oct. 4,	Oh 42.6	Oh 42.6										
		7h 25.1m	7h 19.0m										
	<p>which corresponds to 75.9' - 76.4'</p> <p>respectively E. of north.</p>												
	Close work Oct. 3.												

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
80.00	<p>Oct. 4, 1915. At 7 a.m., I turn off an angle of <math>1^{\circ} 16.2'</math> to the west from the middle point and the line thus determined as North agrees perfectly with my distant foresight.</p> <p>Set an iron post 3 ins. dia., 20 ins. in ground to rock, surrounded by a mound of stone, for the 11 mile cor., stamped in cap</p> <p style="text-align: center;">11 M P L in E. W M I R in W. 1915 in S., from which</p> <p>A cedar limb 8 ins. dia. brs. <math>N. 86\frac{1}{2}^{\circ} E.</math>, 19 lks. dist., mkd. 11 M P L B T.</p> <p>A cedar limb 10 ins. dia. brs. <math>S. 11\frac{1}{2}^{\circ} E.</math>, 274 lks. dist. mkd. 11 M P L B T.</p> <p>A mesquite 8 ins. dia. brs. <math>S. 51^{\circ} W.</math>, 300 lks. dist. mkd. 11 M W M I R B T.</p> <p>No other trees available.</p> <p>Raise a mound of stone 3 ft. base, 2 ft. high, W. of cor. After diligent search, no sign of old 11 mile cor. is found Land, rough and mountainous. Soil, rocky, 4th rate. Dense undergrowth of oak, brush, and cactus. Scrub cedar, palo verde and pine timber.</p>
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1.00 14.15 16.30 19.50 25.90 35.50 40.00 64.15	<p>North along the 12th mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.</p> <p>Ascending SE. slope.</p> <p>Ridge, brs. NE. and SW. Descend NW. slope.</p> <p>Drain, course W. Ascend broken SW. slope.</p> <p>Spur, brs. SW.</p> <p>Drain, course SW.</p> <p>Spur, brs. SW.</p> <p>Wash, course SW.</p> <p>Set an iron post 1 inch dia., 20 ins. in the ground to rock surrounded by a mound of stone, for the <math>11\frac{1}{2}</math> mile cor., stamped in cap</p> <p style="text-align: center;"><math>11\frac{1}{2}</math> M P L in E. W M I R in W. 1915 in S., from which</p> <p>A cedar 16 ins. dia. brs. <math>S. 58\frac{1}{2}^{\circ} E.</math>, 162 lks. dist. Mkd. <math>11\frac{1}{2}</math> M P L B T.</p> <p>A cedar 8 ins. dia. brs. <math>N. 69^{\circ} W.</math>, Mkd. <math>11\frac{1}{2}</math> M W M I R B T.</p> <p>Ascend through dense Palo Christi and scattered cedar timber.</p> <p>Spur, brs. W. Descend NW. slope.</p>

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
69.10	Head of draw, course W. Ascend SW. slope.
75.15	Ridge, brs. SE. and NW. Descend NE. slope.
80.00	Set an iron post 3 ins. dia., for 12 mile cor., stamped in cap
	<p style="text-align: center;">12 M P L in E. W M I R in W. 1915 in S., from which</p>
	A pine 16 ins. dia. brs. N. 26° E., 12 lks. dist. mkd. 12 M P L B T.
	A pine 9 ins. dia. brs. S. 18½° E., 24 lks. dist. mkd. 12 M P L B T.
	Juniper limb 6 ins. dia. brs. S. 2½° W., 40, lks. dist. mkd. 12 M W M I R B T.
	Pine 5 ins. dia. brs. N. 29¼° W., 31 lks. dist. mkd. 12 M W M I R B T.
	Cor. falls about 50 ft. below top of ridge which brs. E. and W., and 500 ft. above the canyon bed 15 chs. N.
	After diligent search no trace of the old 12 mile cor. is found.
	<p>Land, mountainous and rough. Soil, rocky, 3rd rate. Dense undergrowth of scrub oak, palo christi; scattered cedar and mesquite. Timber, same.</p>
-----	
	North along the 13th mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.
	Descending through scattered cedar, pine and palo christo timber, about 500 ft.
12.75	Drain, course W. Ascend SW. slope.
	About 2.00 chs. E. of line in the drain are indications of water which could be readily developed with a little labor and expense.
40.00	Set an iron post 1 inch dia., 6 ins. in the ground to rock surrounded by a mound of stone, for 12½ mile cor., stamped in cap
	<p style="text-align: center;">12½ M P L in E. W M I R in W. 1915 in S., from which</p>
	A cedar 6 ins. dia. brs. N. 77¼° E., 217 lks. dist. mkd. 12½ M P L B T.
	A cedar 20 ins. dia. brs. N. 56° W., 160 lks. dist. mkd. 12½ M W M I R B T.
	Cor. falls 5 ft. N. of a small drain; ¼ mile E. of a drain to south, and ¼ mile W. of high malpais hill.
50.50	Drain, course W.
60.00	Spur, brs. W.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
63.75	Wash, course W., 20 lks. wide. Ascend SW. slope.
70.15	Rocky spur, brs. SW.
72.25	Spur ridge brs. W. Descend NW. slope.
74.35	Trail, brs. NE. and SW.
80.00	Set an iron post 3 ins. dia., 10 ins. in ground to rock surrounded by a mound of stone, for 13 mile cor., stamped on cap
	13 M P L in E. W M I R in W. 1915 in S., from which
	A cedar limb 5 ins. dia. brs. N. 64½° E., 77 lks. dist. Mkd. 13 M P L B T.
	A cedar limb 10 ins. dia. brs. S. 25° E., 91 lks. dist. Mkd. 13 M P L B T.
	A cedar 10 ins. dia. brs. S. 18°45' W., 309 lks. dist. Mkd. 13 M W M I R B T.
	A cedar 10 ins. dia. brs. N. 32°45' W., 140 lks. dist. Mkd. 13 M W M I R B T.
	Cor. falls on steep W. slope near lower edge of indefinite rock ledge and 150 ft. above drain, course S. along which are cottonwoods at frequent intervals.
	After diligent search no trace of the old 13 mile cor. was found.
	Land, rough and somewhat mountainous. Soil, rocky, 3rd and 4th rate. Dense undergrowth of scrub oak on 1st half mile, also cactus and catclaw. Timber, pine, cedar and palo christo.
-----	
	along S.bdy. North on a true line along the 14th mile of the White Mountain (or San Carlos) Indian Reservation.
	Descending over rolling land and NW. slope.
11.00	Drain, course W.
15.80	Wash, 40 lks. wide, course SW. Ascend SE. slope.
25.00	Spur brs. E., 2.00 chs. Descend NE. slope.
29.95	Same wash, course SE. Ascend SW. slope.
40.00	Set an iron post 1 inch dia., 16 ins. in ground to rock surrounded by a mound of stone, for 13½ mile cor., stamped on cap
	13½ M P L in E. W M I R in W. 1915 in S., from which
	A cedar limb 8 ins. dia. brs. N. 67° 45' E., 151 lks. dist. mkd. 13½ M P L B T.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
	A cedar limb 6 ins. dia. brs. N. 41 $\frac{1}{2}$ <sup>o</sup> W., 204 lks. dist. Mkd. 13 $\frac{1}{2}$ M W M I R B T.
	Cor. falls about 10 ft. above drain, course S. and 50 lks. E. thereof; also 250 yds. E. of rocky knob.
46.00	Spur brs. W., 50 lks. Descend NW. slope.
47.00	Same wash, course SW. Ascend SE. slope.
56.00	Drain, course E.
66.52	Thence along E. slope.
72.72	Ascend SE. slope.
76.90	Ridge, brs. E. and SW. Descend N. slope.
80.00	Set an iron post 3 ins. dia., 10 ins. in ground to rock, surrounded by a mound of stone, for 14 mile cor., stamped in cap
	14 M P L in E. W M I R in W. 1915 in S. , from which
	A cedar limb 10 ins. dia. brs. N. 6 <sup>o</sup> E., 192 lks. dist. Mkd. 14 M P L B T.
	A cedar 6 ins. dia. brs. N. 68 $\frac{1}{2}$ <sup>o</sup> E., 115 lks. dist. Mkd. 14 M P L B T.
	A cedar limb 6 ins. dia. brs. S. 6 <sup>o</sup> W., 203 lks. dist. Mkd. 14 M W M I R B T.
	A pine 12 ins. dia. brs. N. 50 <sup>o</sup> W., 88 lks. dist. Mkd. 14 M W M I R B T.
	Cor. falls on N. slope. After diligent search, no sign of old 14 mile cor. could be found. Land, rough and rolling. Soil, 3rd and 4th rate. Undergrowth of scrub oak, cactus and catclaw, and mesquite. Timber, scattered cedar, pine and oak.
	Close work Oct. 4, 1915.

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	North along the 15th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.
	Descending NW. slope.
3.10	Top of bluff, brs. NE. and SW. Descend N. slope.
6.60	Wash, course NW. Ascend SW. slope.
10.60	Spur brs. W., 5.00 chs. Descend NW. slope.
15.00	Wash in ravine, course SW. Ascend SE. slope.
30.00	Draw, course SE. Slope changes to S.
40.00	Set an iron post 1 inch dia., <del>xxx</del> 20 ins. in ground to

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

rock surrounded by mound of stone for 14½ mile cor., stamped in cap

14½ M P L in E.  
W M I R in W.  
1915 in S., from which

A cedar 6 ins. dia. brs. N. 76° W., 102 lks. dist.  
mkd. 14½ M W M I R B T.

A mesquite 5 ins. dia. brs. N. 64° E., 36 lks. dist.  
mkd. 14½ M P L B T.

45.23 Intersect the summit of the Gila range of mountains which brs. E. and W.

This is an angle point on line. I set an iron post 3 ins. dia., 20 ins. in the ground to rock surrounded by a mound of stone, stamped in cap

W M I R A P in W.  
14 M 45.23 chs. P L in E. Angle  
1915 in S.

Build a mound of stone 4 ft. base, 4 ft. high, NW. of cor.

The old cor. set on summit of Gila range of mountains which is a volcanic rock 18x15x16 ins. above ground, firmly set with mound of stone 4 ft. base, 2 ft. high, S. of cor. mkd. W M I R on N. with letters which are plainly visible, - no other marks legible thereon, brs. N. 59½° W., 223 lks., from which a cedar 36 ins. dia. brs. S. 82° W., 486 lks. dist., mkd. W M I R 14 60.20 B T.

From my cor., a cross on top of volcanic rock ledge 14x14x12 ins. above ground, brs. S. 61° 45' W., 65 lks. dist., marked with a cross and "B O".

I take additional bearings as follows:

A monument on a high peak brs. S. 23° 17' W., about 3 miles.

A higher rounded hill with two cedars on top and many on the south side 25 to 50 ft. below summit, brs. N. 59½° W. about 10.00 chs.

A high rocky peak brs. N. 40° 25' W., 3 miles.

A peak brs. N. 13° 18' W. about 15 miles dist.

A timbered peak brs. 4 miles S. 28° 48' E.

Mount Turnbull brs. S. 43° 12' W., 25 miles dist.

From this point the S. bdy. line of the White Mountain (or San Carlos) Indian Reservation follows the summit of the Gila Mountains to the SE. cor. of the reservation, and the boundary will therefore consist of a meander of the summit or water shed between the Gila River on the south and Bonita Creek on the north.

For the purpose of marking the boundary so it can be readily followed, I mark the angle points thereon with a small mound of stone, - the minimum size of these

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

mounds being 1 ft. base, 6 ins. high, and frequently very much larger. These rock mounds are in addition to the one-half and one mile corners established at half mile intervals.

From the angle point at 14 miles, 45.23 chs., I meander the summit of the Gila range of mountains as follows:

N.  $74\frac{1}{2}^{\circ}$  E., 8.43 chs.

S.  $40\frac{1}{2}^{\circ}$  E., 26.34 # Set an iron post 3 ins. dia. 6 ins. in ground to rock surrounded by a mound of stone, for the 15 mile cor. on S. bdy. of White Mountain Indian Reservation, stamped in cap

15 M W M I R in NE.  
P L in SW.  
1915 in S.

Build mound of stone 4 ft. base, 2 ft. high, NW. of cor.

Land, mountainous and rolling.  
Soil, rocky, 3rd and 4th rate.  
Cactus, catclaw and mesquite undergrowth.  
Timber, scattered scrub cedar and oak.

Continue along the summit of rocky slope of the Gila range of mountains.

Ascending.

N.  $63^{\circ}$  E. 7.30 chs.

S.  $27\frac{1}{2}^{\circ}$  E. 5.00 chs.

S.  $20^{\circ}45'$  E. 5.00 "

S.  $2\frac{1}{2}^{\circ}$  W., 22.70 "

Set an iron post 1 in. dia., 16 ins. in ground, surrounded by a mound of stone, for  $15\frac{1}{2}$  mile cor. stamped in cap

$15\frac{1}{2}$  M W M I R in E.  
P L in W.  
1915 in S.

Raise mound of stone 3 ft. base, 2 ft. high, E. of cor.

S.  $32^{\circ}$  E. 11.20 "

S.  $59\frac{1}{2}^{\circ}$  E., 6.80 "

S.  $34\frac{1}{2}^{\circ}$  E., 15.00 "

S.  $7^{\circ}$  E., 7.00 "

Set an iron post 3 ins. dia. 15 ins. in ground surrounded by mound of stone for 16 mile cor., stamped in cap

16 M W M I R in E.  
P L in W.  
1915 in S.

Raise mound of stone 3 ft. base, 2 ft. high, E. of cor.

Land, heavily rolling.  
Soil, rocky, 3rd and 4th rate.  
Scattered scrub cedar timber.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Thence up gentle ascent over flat country.

S. 27½° W. 22.20 chs.

S. 2¼° W., 10.00 "

S. 10½° E., 7.80 "

Set an iron post 1 in. dia. 18 ins. in ground to rock surrounded by mound of stone, for 16½ mile cor., stamped in cap

16½ M W M I R in NE.

P L in SW.

1915 in S.

Raise mound of stone 4 ft. base, 2 ft. high, NE. of cor.

S. 46½° E., 10.00 chs.

S. 4° W., 11.10 "

This angle point is about 1.00 ch. S. of lone hackberry tree.

S. 52° E. 16.40 "

This angle point is about 1.00 ch. SE. of two cedar trees, one of which is a bearing tree.

South 2.50 "

On top of rocky ledge, set an iron post surrounded by a mound of stone for 17 mile cor., stamped on cap

17 M W M I R in E.

P L in W.

1915 in S., from which

A cedar 18 ins. dia. brs. N.44°W., 363 lks. dist., mkd. 17 M P L B T. No other trees available.

Build a mound of stone 4 ft. base, 2 ft. high, E. of cor.

Land, rolling. Cor. falls about 1.00 S. of the north  
Soil, rocky, 4th rate. end of an outcrop of very hard  
No timber. volcanic rock, 15 chs. N. of a  
very prominent bare hill.

I take additional bearings as follows:

Mt. Turnbull brs. S. 42° 06' W.

Tripletts brs. N. 75½° W.

Thence along 18th mile of S. bdy. of White Mountain (or San Carlos) Indian Reservation.

Up steep ascent.

S. 12½° W., 7.55 chs.

S. 20½° E., 13.95 "

To a point 50 ft. S. of the summit of a high bare hill.

N. 68½° E., 4.00 "

N. 56½° E., 8.90 "

S. 69° 45' E., 3.20 "

S. 46½° E., 2.40 "

Set an iron post 1 in. dia. 8 ins. in ground to rock surrounded by a mound of stone for 17½ mile cor. stamped in cap

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

17 1/2 M W M I R in NE.  
P L in SW.  
1915 in S.,

Build a mound of stone 4 ft.  
base, 2 ft. high, NE. of cor.

Cor. falls on E. slope of high  
volcanic butte, rock ledges on  
south side.

S. 46 1/2° E., 15.80 chs.  
S. 68° 45' E., 18.00 "  
S. 48° E., 6.20 "

Set an iron post 3 ins. dia.,  
20 ins. in ground to rock sur-  
rounded by a mound of stone,  
for 18 mile cor., stamped in  
cap

18 M W M I R in NE.  
P L 1915 in SW,

from which - a juniper 16 ins.  
dia., brs. S. 1° 45' E., 347 lks.  
dist., mkd. 18 M P L B T.  
No other trees available.

Raise a mound of stone 3 ft. base,  
2 ft. high, NE. of cor.

Cor. falls on flat divide 5.00  
chs. NW. of a flat round knoll.

Land, rolling.  
Soil, rocky, 4th rate.

Thence along the summit of the Gila range of mountains  
and the 19th mile of the S. bdy. of the White Mountain  
(or San Carlos) Indian Reservation.

S. 47 1/2° E., 6.20 chs.  
S. 33° E., 9.00 "  
N. 75° E., 15.00 "  
S. 56 1/2° E., 5.00 "  
S. 68 1/2° E., 4.80 "

Descend.  
At 5.00 chs. land becomes level.

Set an iron post 1 inch dia., 14  
ins. in ground to rock surrounded  
by a mound of stone, for 18 1/2 mile  
cor., stamped on cap

18 1/2 M W M I R in N.  
P L in SW.  
1915 in S., from which

A juniper 16 ins. dia. brs.  
S. 65° W., 329 lks. dist. mkd.  
18 1/2 M P L B T.

A juniper 8 ins. dia. brs.  
S. 78 1/2° E., 315 lks. dist. mkd.  
18 1/2 M W M I R B T.

Cor. falls on flat summit one-  
half mile North of a rounded tim-  
bered hill.

Mt. Turnbull brs. S. 45° 45' W.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

S. 69° E., 15.00 chs.  
 S. 47½° E., 13.00 "  
 S. 0° 45' E., 7.90 "  
 S. 45½° W., 4.10 "

Set an iron post 3 ins. dia. 9 ins. in ground to rock surrounded by a mound of stone, for the 19 mile cor., stamped in cap

19 M W M I R in SE.  
 P L in NW.  
 1915 in S., from which

An oak 9 ins. dia. brs. N. 81° E., 51 lks. dist., mkd. 19 M W M I R B T.

A juniper limb 5 ins. dia. brs. S. 38° E., 148 lks. dist., mkd. 19 M W M I R B T.

Cedar 30 ins. dia. brs. S. 66° W., 113 lks. dist., mkd. 19 M P L B T.  
 No other trees available.

Land, rolling.  
 Soil, rocky, 3rd and 4th rate.  
 Scattered scrub oak and cactus undergrowth.  
 Scattered juniper and oak timber.

Close work Oct. 7, 1915.

Oct. 8, 9 and 10, - no work.

Thence along the summit of the Gila Range of mountains on the 20th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

S. 32° W., 5.50 chs. To top of hill brs. SE. and NW. At 35 lks. - the probable remains of an old monument which cannot be identified as Monument No. 1.

S. 39° E. 5.00 "  
 S. 46° E., 3.00 "  
 S. 52° E., 11.75 "  
 S. 55° E., 5.45 "  
 S. 51° W., 9.30 "

To low point. Thence To ridge brs. NE. and SW. Set an iron post 1 inch dia., 6 ins. in ground to rock, surrounded by mound of stone, for 19½ mile cor., stamped in cap

19½ M W M I R in SE.  
 P L in NW.  
 1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, SE. of cor.

Cor. falls near the top of knoll.

S. 51° W., .70 "  
 S. 40½° E., 7.10 "  
 S. 47½° E., 6.60 "  
 S. 17° E., 1.70 "  
 S. 25° E., 9.30 "  
 S. 2½° E., 5.50 "  
 S. 44° E., 6.00 "

Top of knoll.  
 To point in saddle.  
 To top of rocky spur.

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

S. 42° E., 2.00 chs.  
S. 12° W., 1.10 "

Set an iron post 3 ins. dia., 10 ins. in ground to rock, surrounded by a mound of stone, stamped in cap

20 M W M I R in E.  
P L in W.  
1915 in S., from which

A juniper 20 ins.dia.brs. S.55°10'E.  
404 lks. dist., mkd. 20 M W M I R  
B T.

A juniper 30 ins.dia.brs. S.30½°E.,  
268 lks. dist., mkd. 20 M W M I R  
B T.

A juniper limb 6 ins.dia. brs.  
N. 33½° W., 210 lks. dist., mkd.  
20 M P L B T.

No other trees available.

Raise a mound of stone 3 ft.base,  
2 ft. high, SE. of cor.

Land, rolling.

Soil, rocky, 4th rate.

Scattered timber of pine and cedar.

Tesota and cactus underbrush.

Cor. falls about 2.00 chs. N. of the low saddle and  
1 mile N. of high timbered peak.

Thence along the summit of the Gila range of mountains  
along the 21st mile of the S. bdy. of the White Moun-  
tain (or San Carlos) Indian Reservation.

S. 20° W., 3.00 chs. to foot of descent.  
S. 42° W., 17.10 " Thence ascend.

Close work Oct. 11.

Oct. 12, At 8 a.m., l.m.t., I set off 33° 15' N. on the  
lat. arc, 7° 07' S. on the decl. arc, and determine  
a meridian with the solar.

Thence I continue

S. 10½° E., 3.00 chs.  
S. 30½° W., 4.80 "  
S. 42½° W., 3.30 "  
S. 51° W., 1.90 "  
S. 42½° W., 1.00 "

To angle point between large rocks.

S. 55° W., 3.40 "  
S. 69½° W., 1.40 "  
S. 69° E., 1.10 "

To pinnacle of mountains.

Set an iron post 1 inch dia., 16 ins.  
in ground to rock, surrounded by a  
mound of stone for 20½ mile cor.,  
stamped in cap

20½ M W M I R in NE.  
P L in SW.  
1915 in S., from which

a pine 4 ins.dia.brs. N. 44° E.,  
7 lks. dist., mkd. 20½ M W M I R  
B T.

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

A pine 6 ins.dia.brs. S. 46° W.,  
24 lks. dist., mkd. 20½ M P L B T.

I also mark additionally -  
A cross marked B O on rock ledge  
or pinnacle some 20 ft. high, brs.  
N. 5° E., 9 lks. dist.

At this cor. I set off 7° 11' S.  
on the decl. arc, and at apparent  
noon observe the sun on the meri-  
dian; the resulting lat. is 33°15'  
which is about correct.

- S. 31° E., 4.60 chs.
- S. 42°45'E., 2.30 "
- S. 73½° E., 2.80 "
- N. 88° E., 3.20 "
- S. 83½° E., 21.10 "

Desc. level ridge.

At 70 lks. on this course, foot of  
steep descent; thence gradual  
descent.

- S. 57° E., 6.00 "

Set an iron post 3 ins. dia., 10  
ins. in ground to rock, surrounded  
by a mound of stone stamped in cap

21 M W M I R in NE.  
P L in SW.  
1915 in S., from which

A juniper 10 ins.dia.brs. N.67°E.,  
198 lks. dist., mkd. 21 M W M I R  
B T.

A pine 12 ins. dia. brs. S.36½°E.,  
275 lks. dist., mkd. 21 M P L B T.

A pine 5 ins.dia.brs. S.56½°W.,  
49 lks. dist., mkd. 21 M P L B T.

A juniper 20 ins.dia.brs. N.33°45'W.  
335 lks. dist., mkd. 21 M W M I R  
B T.

Cor. falls on nearly level land, l.  
1.00 ch. SE. of rocky outcrop and  
at head of ravine, course S.,  
thence SE.

Land, rough and mountainous.  
Soil, rocky, 4th rate.  
Undergrowth of scrub oak, tesota and mescal.  
Timber, scattered pine, cedar and juniper.

-----  
Thence continue along the Gila range of mountains on the  
22nd mile of the S. bdy. of the White Mountain (or  
San Carlos) Indian Reservation.

- S. 38½° E., 5.00 chs.
- S. 4° E., 4.00 "
- S. 69° E., 6.30 "
- S. 26½° E., 7.70 "
- South 6.70 "
- S. 25° E., 3.50 "
- N. 83½° E., 5.00 "
- S. 65° E., 1.80 "

To saddle. Ascend.

Thence descend to

Low point. Ascend.

Set an iron post 1 inch dia., 16  
ins. in ground to rock, surrounded

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

by a mound of stone for 21½ mile cor., stamped in cap

21½ M W M I R on N.  
P L 1915 in S., from

which -

A juniper 12 ins.dia.brs. S.36°45'E.  
94 lks.dist., mkd. 21½ M P L B T.

A cedar 12 ins.dia.brs. S.54°E.,  
220 lks. dist., mkd. 21½ M W M I  
R B T.

Cor. falls just east of saddle and  
a hill with scattered cedar and  
juniper E. thereof.

S. 50½° E., 7.80 chs. To top of hill. Descend. An old  
mound of stone probably an origin-  
al line but no marks discernable  
brs. N. 84° E., 10 lks. dist.

S. 63°45'E., 4.70 "

S. 69½° E., 3.30 "

S. 32° E., 4.40 "

N.55°45'E., 5.40 "

S.62°45'E., 14.40 "

Set an iron post 3 ins.dia., 16  
ins. in ground to rock, for 22 mile  
cor., stamped in cap

22 M W M I R in N.  
P L 1915 in S., from which

A cedar limb 6 ins.dia.brs.S.15½°E.  
185 lks.dist., mkd. 22 M P L B T.

A cedar limb 6 ins.dia.brs.S.77°W.,  
28 lks.dist., mkd. 22 M P L B T.

No other trees available.

Raise a mound of stone, 3 ft.base,  
2 ft.high, NE. of cor.

Cor. falls on nearly level land  
250 yds. N. of rock ledge and 100  
yds. W. of steep slope to E.

Land, rolling.

Soil, 4th rate.

Scattered undergrowth of scrub oak and cactus.

Scattered juniper and cedar timber.

Thence along the water-shed of the Gila Mountains, which  
has here become nearly flat prairie, and along the 23rd  
mile of the S. bdy. of White Mountain (or San Carlos)  
Indian Reservation.

S. 51½° E., 3.60 chs.

N. 5½° W., 10.00 "

N. 23½° E., 21.60 "

N. 81° E., 4.80 "

Set an iron post 1 inch dia., 20  
ins. in ground to rock, surrounded  
by a mound of stone, for the 22½  
mile cor., stamped in cap

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
	<p>22½ M W M I R in N. P L 1915 in S.</p> <p>Raise a mound of stone 3 ft. base, 2 ft. high, N. of cor.</p> <p>Cor. falls on flat prairie and it is difficult to determine within a couple of hundred feet exactly where the watershed goes.</p>
N. 88½° E., 10.00 chs.	
N. 31½° E., 30.00 "	Set an iron post 3 ins. dia., 26 ins. in ground in low mound of stone, stamped in cap
	<p>23 M W M I R in NW. P L in SE. 1915 in S.</p> <p>Build a mound of stone 3 ft. base, 2 ft. high, NW. of cor.</p>
Land, rolling and level. Soil, 3rd rate. No timber.	Cor. falls about 3.00 chs. N. of saddle on gentle slope to S.
-----	
	<p>Thence along the summit of the Gila range of mountains and the 24th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.</p>
N. 31½° E., 11.00 chs.	At 7.00 chs., trail brs. SE. and NW.
S. 73½° E., 17.00 "	At 5.40 chs., trail brs. E. and W.
S. 38°45' E., 3.00 "	
S. 89° E., 9.00 "	Set an iron post 1 inch dia., 18 ins. in ground to rock surrounded by a low mound of stones for the 23½ mile cor., stamped on cap
	<p>23½ M W M I R in N. P L 1915 in S., from which</p> <p>A juniper 3 ft. dia. brs. N. 49° 45' E., 167 lks. dist., mkd. 23½ M W M I R B T.</p> <p>No other trees available.</p> <p>B.O., a cross on a boulder 4x3x3 ft. above ground brs. S. 25° W., 5 lks. dist., mkd. B O and a cross. No other trees.</p> <p>Build a mound of stone 3 ft. base, 2 ft. high, N. of cor.</p> <p>Cor. falls on steep W. slope of hill.</p>
N. 86°45' E., 2.90 chs.	
N. 85°15' E., 9.40 "	To top of rocky malpais hill brs. SE. and NW. Descend.
S. 19°45' E., 11.50 "	

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

N.  $76^{\circ}$  E., 8.20 chs.  
N.  $73\frac{1}{4}^{\circ}$  E., 8.00 "

Set an iron post 3 ins. dia., 15 ins. in ground to rock, surrounded by a mound of stone, for 24 mile cor., stamped in cap

24 M W M I R in N.  
P L 1915 in S., from which

A juniper limb 12 ins. dia. brs.  
N.  $63^{\circ}$  W., 121 lks. dist., mkd. 24 M  
W M I R B T.

A juniper 28 ins. dia. brs. N.  $36\frac{1}{4}^{\circ}$  E.  
298 lks. dist., mkd. 24 M W M I R  
B T.

No other trees available.

Raise a mound of stone 3 ft. base,  
2 ft. high, N. of cor.

Cor. falls 2 chs. SE. of rocky knob  
on this ridge, and on top of spur  
at foot of rocky ledge.

From this cor. Monument No. 2 brs.  
S.  $22^{\circ}00'$  E., about 4 miles dist.

Oct. 13, - At this cor., I set off  
 $7^{\circ} 34'$  S. on the decl. arc, and at  
apparent noon, observe the sun on  
the meridian; the resulting lat. is  
 $33^{\circ} 14\frac{1}{2}'$ , which is the correct lat.

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

-----  
Thence along the summit of the Gila range of mountains  
and the 25th mile of the S. bdy. of the White Mountain  
(or San Carlos) Indian Reservation.

Descending.

S.  $53^{\circ}$  E., 2.90 chs.  
S.  $53\frac{1}{4}^{\circ}$  E., 17.50 "

To angle point in saddle where I  
build a rock mound 3 ft. base, 2  
ft. high, 85 lks. W. of a trail  
which brs. N. and S. Thence ascend.

S.  $33^{\circ}45'$  E., 19.60 chs. - Set an iron post 1 inch dia.,  
10 ins. in the ground to rock,  
surrounded by a mound of stone  
for  $24\frac{1}{2}$  mile cor., stamped in  
cap

$24\frac{1}{2}$  M W M I R in N.  
P L 1915 in S., from

which -

A pine 6 ins. dia. brs. S.  $57\frac{1}{4}^{\circ}$  E.,  
175 lks. dist., mkd.  $24\frac{1}{2}$  M  
W M I R B T.

A pine 12 ins. dia. brs. S.  $43\frac{1}{4}^{\circ}$  E.  
43 lks. dist., mkd.  $24\frac{1}{2}$  M  
W M I R B T.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

S. 31½° E., 6.50 chs. Continuing ascent.  
 S. 30° 45' E., 2.90 " Top of rocky ledge brs. SE. and NW.  
 S. 39° E., 8.10 " Thence ascend gradually over mal-  
 pais boulders.  
 S. 72° E., 10.00 "  
 S. 38½° E., 8.00 "  
 S. 36° E., 4.50 "

Set an iron post 3 ins. dia. 15 ins. in ground to rock, surrounded by low mound of stone, for 25 mile cor., stamped in cap

25 M W M I R in E.  
 P L in W.  
 1915 in S., from which

Juniper 12 ins. dia. brs. N. 29° 45' E. 170 lks. dist., mkd. 25 M W M I R B T.

Juniper 22 ins. dia. brs. S. 8° E., 91 lks. dist., mkd. 25 M P L B T.

Juniper 26 ins. dia. brs. N. 36° 45' W., 271 lks. dist., mkd. 25 M P L B T.

A juniper 20 ins. dia. brs. N. 44½° E. 195 lks. dist., mkd. 25 M W M I R B T.

Also raise a mound of stone 3 ft. base, 2 ft. high, NE. of cor.

Cor. falls on flat top of mountain.

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

Undergrowth of scrub oak, mescal, with scattered juniper and cedar timber.

Thence along the summit of the Gila range of mountains and the 26th mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.

Ascending gradually.

S. 44° E., 12.50 chs.  
 S. 66° 45' E., 5.00 "  
 N. 72° E., 15.00 "  
 S. 21½° W., 7.50 "

Descending.  
 Set an iron post 1 inch dia., 16 ins. in ground to rock, surrounded by a mound of stone 4½ ft. base, 2 ft. high, stamped in cap

25½ M W M I R in E.  
 P L in W.  
 1915 in S., from which

A juniper 10 ins. dia. brs. N. 78½° E., 350 lks. dist., mkd. 25½ M W M I R B T.

A juniper 18 ins. dia. brs. S. 73½° W., 321 lks. dist., mkd. 25½ M P L B T.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

S. 28½° E., 7.20 chs. Over nearly level land.  
 S. 49° E., 14.00 "  
 N. 89°45'E., 12.00 "  
 S. 79° E., 8.80 "

Set an iron post 3 ins. dia., 12 ins. in ground to rock surrounded by a mound of stone, for 26 mile cor., stamped in cap

26 M W M I R in N.  
 P L 1915 in S., from which

A juniper 18 ins.dia.brs. N.62°E. 14 lks.dist., mkd. 26 M W M I R B T.

Scrub oak 12 ins.dia.brs. S. 9°E. 10 lks. dist., mkd. 26 M P L B T.

Scrub oak 6 ins.dia.brs. S.81½°W., 69 lks.dist., mkd. 26 M P L B T.

Juniper 20 ins.dia.brs. N.68°W., 71 lks. dist., mkd, 26 M WMIR BT.

Land, mountainous.  
 Soil, rocky, 4th rate.  
 Scattered scrub oak and mesal undergrowth.  
 Scattered juniper and scrub oak timber, full distance.

-----

Thence along the summit of Gila Mountains and the 27th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Over generally level land.

S. 61½° E., 7.50 chs.  
 S. 6° W., 4.00 "  
 S. 52°45'W., 2.60 "

Close work Oct. 13.

From this point Monument No. 2, brs. S.1°05'E., about 2 miles dist.

Oct. 14, 1915. At 8 a.m., l.m.t., At this point I set off 33° 13½' N. on the lat. arc, and 7° 52' S. on the decl. arc, and determine a meridian with the solar.

Thence continue -

S. 14½° E., 8.40 chs.  
 S. 31½° E., 9.00 "  
 S. 9½° E., 5.00 "  
 S. 26°45'E., 3.50 "

Set an iron post 1 inch dia., 12 ins. in ground to rock, surrounded by a mound of stone, for 26½ mile cor., stamped in cap

26½ M W M I R in NE.  
 P L in SW.  
 1915 in S., from which

A scrub oak 10 ins.dia.brs. N. 54° 45' E., 113 lks. dist., mkd. 26½ M W M I R B T.

A juniper 20x36 ins., brs. S.1½°E., 29 lks. dist., mkd. 26½ P L B T.



Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

A double juniper 8 ins.dia.brs.  
S.78½°E., 73 lks.dist., mkd.  
27½ M W M I R B T.

A juniper 18 ins.dia.brs.N.45½°W.,  
83 lks. dist., mkd. 27½ M P L B T.

Cor. falls on flat spur.

S. 74½° W., 15.20 chs. To near top of rounded knoll which  
trends E. and W. Descend.  
S.28°45'E., 24.80 " After 8.00 chs. - Begin ascent.

Set an iron post 3 ins.dia. 14  
ins. in ground to rock, surrounded  
by a mound of stone, for 28 mile  
cor., stamped in cap

28 M W M I R in NE.  
P L in SW.  
1915 in S.

Build a mound of stone 3 ft.base,  
2 ft.high, NE. of cor.

Land, heavy rolling.  
Soil, 4th rate.  
Undergrowth, mescal.  
Timber, scattered juniper.

-----  
Thence along the Gila range of mountains and the 29th  
mile of the White Mountain (or San Carlos) Indian  
Reservation, (S. bdy.)

S. 28°45' E., 4.30 chs. To top of hill.  
S. 10° E., 18.00 " Descending for 13.00 chs.  
Thence ascending.

S. 27½° E., 13.20 " To point on flat rock ledge.  
Descending. At 6.20 chs. on  
this course, wire fence brs. E.  
and W.

S. 31°45' E., 4.50 " Set an iron post 1 inch dia., 18  
ins. in ground to rock, for 28½  
mile cor., stamped in cap

28½ M W M I R in E.  
P L in W.  
1915 in S., from which

A juniper 7 ins.dia.brs.S.38°E.,  
70 lks.dist.; mkd. 28½ M W M I  
R B T.

A juniper 5 ins.dia.brs. S.30°  
45'W., 69 lks.dist., mkd.  
28½ M P L B T.

Triplett brs. N.67°37'W., about  
25 miles dist.

Close work Oct. 14, 1915.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Oct. 15, 1915. At this cor, at 8 a.m., l.m.t., I set off 33° 12' on the lat. arc, 8° 14' S. on the decl. arc, and determine a meridian with the solar.

Thence I run

S. 1° W., 17.10 chs. Ascending. To Angle Point 2.00 chs. SE. of rocky peak which although the highest point of the mountain, is not on the divide.

S. 41° E., 3.10 " " " " " "

S. 52° E., 4.90 " " " " " "

S. 13° W., 2.50 " " " " " "

S. 31½° W., 2.80 " " " " " "

S. 48° 45' W., 4.90 " " " " " "

S. 24° 30' W., 4.70 " " " " " "

To point in saddle. Ascend. Set an iron post 3 ins. dia., 10 ins. in ground to rock, surrounded by a mound of stone, stamped in cap

29 M W M I R in SE.  
P L in NW. angle  
1915 in S., from which

A juniper 24 ins. dia. brs. N. 43½° E. 277 lks. dist., mkd. 29 M W M I R B T.

A juniper limb 18 ins. dia. brs. S. 23° 45' E., 210 lks. dist., mkd. 29 M W M I R B T.

Land, rough and mountainous.  
Soil, rocky, 3rd and 4th rate.  
Very scattered juniper timber.  
Scrub oak brush, mescal and spanish bayonet.

Thence along the Gila range of mountains and the 30th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Ascending.

S. 81½° W., 6.00 chs. To top of rocky knob. Descend.

S. 31½° W., 11.10 " " " " " "

S. 17½° W., 1.90 " " " " " "

S. 86° W., 2.70 " " " " " "

S. 59° 45' W., 6.30 " " " " " "

Descending., to flag "A".  
At end of this course, direct measurement becomes impracticable and I therefore set a flag "C" on line for the next course near the top of the rocky peak, and which brs. S. 57° 07' W. I also measure an angle therefrom eastward to point "B", and measure the distance "AB" = 13.20 chs.

The three angles of the triangle are:

"A" 36° 10' 20"  
"B" 87° 17' 40"  
"C" 56° 32'  

---

180° 00' 00"

and the required distance

$$A C = \frac{A B \sin B}{\sin C}$$

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

or by logarithms : AC = 3.120574  
                           9.999516  
                           + 9.921274  
                           -----  
                           3.198816 = 15.81

which added to the distance to this point from the 29 mile cor. or 28.00 chs., equals 43.81 chs., or 3.81 chs. past the true point for the 29½ mile cor., and as neither this nor the true point is a safe place for the cor., I continue from the end of this triangulated course, which was

S. 57° 07' W., from "A", 15.81 chs. to flag "C"

S. 38½° W., 1.89 chs. Continuing ascent. At this point I set an iron post 1 inch dia., 8 ins. in ground to rock, surrounded by a mound of stone, for W.C. to 29½ mile cor., stamped in cap

29½ M W M I R in E.  
 P L in W.  
 W C in NE.  
 1915 in S.

Build a mound of stone around post 4 ft. base, 2½ ft. high, from which a cross cut on flat rock ledge brs. N. 12° E., 58 lks. marked B O.

The probable position of old Monument No. 2 is now occupied by a stone monument 8 ft. base, 6 ft. high, built by the U.S. Geological Survey to mark their triangulation station "Gila" and which brs. S. 55° W., about 10 lks. from the W.C. No trace of old marks was discovered nor the cedar bearing tree, although from the description there is no doubt this is the mountain upon which the monument was placed.

To more simply express the relation of my W.C. to the 29½ mile cor. to the true point for cor. I compute the bearing and distance thereto and find that the W.C. to the 29½ mile cor. brs. S. 50° 51' W. 5.63 chs. from true point.

S. 30½° W., 2.00 chs. To edge of mountain.  
 S. 1° E., 2.60 " Descending abruptly.  
 S. 28° E., 9.10 "

Close work Oct. 14.

Oct. 16, 1915. At 8 a.m., l.m.t., I set off 35° 11' N. on the lat. arc, 8° 36½' S. on the decl. arc, and determine a meridian with the solar.

Thence continue along summit, descending.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

S. 31½° E., 7.80 chs.  
 S. 26½° E., 2.60 " To high rocky point; descend.  
 S. 78°45'E., 6.20 "  
 S. 59½° E., 4.00 " At 2.00 chs. on this course, Asc.

Set an iron post 3 ins. dia., 8 ins. in ground to rock, surrounded by a mound of stone for 30 mile cor., stamped in cap

30 M W M I R in NE.  
 P L in SW. angle  
 1915 in S., from which

A pine 7 ins.dia.brs. N.87°E., 75 lks. dist., mkd. 30 M W M I R B T.

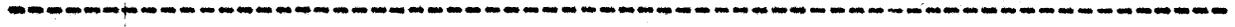
A pine 5 ins.dia.brs. S.17°45'W., 64 lks.dist., mkd. 30 M P L B T.

A pine 10 ins.dia.brs. S.75½°W., 51 lks. dist., mkd. 30 M P L B T.

A pine 5 ins.dia. brs. N. 13° W., 41 lks. dist., mkd. 30 M W M I R B T.

Cor. falls about 1.00 chs. above and E. of saddle between pinnacle east and pinnacle west.

Land, very rough and mountainous.  
 Soil, rocky, 4th rate.  
 Scrub oak underbrush.  
 Scattered pine and cedar timber.



Thence along the summit of the Gila range of mountains and the 31st mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Ascending.

S. 52½° E., 1.80 chs.  
 S. 9°45' E., 1.50 "  
 S. 63°45'E., 1.00 " Descend; to point about 1.00 ch. N. of inaccessible pinnacle. Thence very broken at first descending.

S. 32° E., 9.70 " At 7.70 chs. on this course, ascend.  
 S. 9½° E., 3.40 "  
 S. 46° E., 7.60 " Descending.  
 S. 13½° E., 4.00 " To low point; ascend.  
 N. 85½° E., 6.80 " At 2.00 chs. - wire fence brs.  
 S. 57° E., 4.20 " S. 80° E. and N. 80° W.

Set an iron post 1 inch dia., 14 ins. in ground to rock, for 30½ mile cor., surrounded by a mound of stone, stamped in cap

30½ M W M I R in NE.  
 P L in SW. angle  
 1915 in S., from which

A juniper 12 ins. dia. brs. N.76°E.,

Resurvey of

South Boundary of White Mountain(or San Carlos) Indian Reservation

21 lks.dist., mkd. 30½ M W M I R B T.

A pine 8 ins.dia. brs. S. 2½° E., 129 lks. dist., mkd. 30½ M P L B T.

Oct. 16. At this cor., I set off 8° 41' S. on the decl. arc, and at apparent noon observe the sun on the meridian; the resulting lat. is 33° 11' . Thence -

- S. 26½° E., 2.50 chs.
- N. 88° 45' E., 6.80 "
- S. 43½° E., 20.80 "
- N. 79½° E., 2.50 "
- N. 81½° E., 7.40 "

At 6.00 chs., cross wire fence brs. S. 80° E. and N. 80° W. At 8.00 chs., same fence brs. S. 80° E. and N. 80° W.

At 6.00 chs., same wire fence brs. N. 70° W. and S. 70° E.

Set an iron post 3 ins. dia., 12 ins. in ground to rock, surrounded by a mound of stone for 31 mile cor., stamped in cap

31 M W M I R in N.  
P L 1915 in S. angle,

from which -

A pine 8 ins.dia. brs. N. 73½° E., 155 lks. dist., mkd. 31 M W M I R B T.

A juniper 5 ins.dia. brs. S. 49½° E., 181 lks. dist., mkd. 31 M P L B T.

A juniper limb 6 ins.dia. brs. S. 67° W., 63 lks. dist., mkd. 31 M P L B T.

A pine 8 ins.dia. brs. N. 89½° W., 200 lks. dist., mkd. 31 M W M I R B T.

Cor. falls on flat ridge nearly ½ mile W. of high rocky pinnacle.

Land, mountainous.  
Soil, rocky, 4th rate.  
Scrib oak, mesquite and spanish bayonet undergrowth.  
Timber, scattered juniper and pine.

Thence along the summit of the Gila range of mountains and the 32nd mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Ascending.

- S. 68° 45' E., 11.90 chs.
- S. 51° 45' E., 2.10 "
- S. 51° E., 5.00 "

Descending to low point.  
Ascend.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

S. 16 $\frac{1}{4}$ ° E., 4.60 chs.  
 S. 31° E., 3.30 "  
 S. 43 $\frac{1}{2}$ ° E., 3.40 "  
 S. 51 $\frac{1}{4}$ ° E., 7.70 "  
 N. 81° 45' E., 2.00 "

To top of high pinnacle on ridge brs. SE. and NW.

Set an iron post 1 inch dia., surrounded by a mound of stone for 31 $\frac{1}{2}$  mile cor., stamped in cap

31 $\frac{1}{2}$  M W M I R in N. angle  
P L 1915 in S. angle,

from which - a bearing object consisting of a cross and the letters B O cut on a rock pinnacle 20 ft.x30 ft., x 15 ft. high, W. of cor., brs. N. 79° W., 17 lks. dist.

Cor. falls between two large boulders, or rather a crack in rock, on 1st pinnacle west of peak at south end of ridge leading north, and about 3.00 chs. W. of the saddle between this peak and pinnacle.

Another bearing object is chiseled on rock immediately N. of the cor. dimensions of same being 4x8x12 ft. high (bearing and distance not taken) Thence descending.

N. 74 $\frac{1}{4}$ ° E., 3.20 chs.  
 East 4.70 "  
 S. 71° E., 2.70 "  
 S. 38 $\frac{1}{2}$ ° W., .80 "

Thence ascend.

At 16 lks. - Probable old Monument No. 3, but no marks can be discerned on surrounding rocks. Thence steep descent.

Close work Oct. 16, 1915.

Oct. 18, 1915. At 8 a.m., l.m.t., I set off 33° 10' N. on the lat. arc, 9° 19' S. on the decl. arc, and determine a meridian with the solar. Thence continue -

S. 36° W., 10.70 chs.  
 S. 39° 45' W., 4.70 "  
 S. 35 $\frac{1}{2}$ ° E., 7.20 "  
 S. 54° 45' E., 2.50 "  
 S. 43° E., 3.50 "

Set an iron post 3 ins. dia. 18 ins. in ground to rock, surrounded by a mound of stone for 32 mile cor., and angle point on bdy., stamped in cap

32 M W M I R in NE.  
P L A P in SW. angle  
1915 in S., from which

A juniper 18 ins. dia. brs. N. 68 $\frac{1}{2}$ ° W. 207 lks. dist., mkd. 32 M P L A P. B T.

Pine 8 ins. dia. brs. S. 24° 45' W.,

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

69 lks. dist., mkd. 32 M P L A P B T.

No other trees available.

Build a mound of stone 3 ft. base, 2 ft. high, NE. of cor.

Cor. falls on SE. slope 1/8 mile N. of brushy peak.

Land, rough and mountainous.

Soil, rocky, 4th rate.

Dense undergrowth of scrub oak and spanish bayonet.

Scattered cedar and juniper timber with some pine.

Note: Some of the mile and half mile corners heretofore have fallen at angle points of the boundary and some on straight portions thereof. Therefore, I will hereafter distinguish between such by markings on posts and bearing trees, adding the letters A P at angle points, and omitting same when cor. falls on a straight portion of the boundary.

Thence along the summit of the Gila range of mountains and the 33rd mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Descending.

S. 38° E., 4.90 chs.  
S. 7° W., 10.30 "

Low point. Ascend.  
at 75 lks. - Fence brs. N. 60° W.  
and S. 60° E.

S. 42° E., 1.00 "  
N. 69° 45' E., 11.00 "  
S. 71 1/4° E., 5.00 "

Descending.  
To point 10 lks. N. of fence.  
At 40 lks. - Fence brs. N. 55° E.  
and S. 55° W.  
From this angle point, which is  
10 lks. E. of a trail bearing S.  
through a gate in fence, and  
which goes South to Ft. Thomas  
through Paymaster gap, an old  
Monument brs. N. 65° W., 120 lks.  
dist.

S. 43 1/4° E., 7.80 "

Ascending through dense oak brush

Set an iron post 1 inch dia., 18 ins. in ground to rock, for 32 1/4 mile cor., surrounded by a mound of stone, stamped in cap

32 1/4 M W M I R in NE.  
P L in SW.  
1915 in S., from which

A pine 8 ins. dia. brs. S. 50° W.,  
83 lks. dist., mkd. 32 1/4 M P L B T.

A pine 8 ins. dia. brs. N. 60 1/2° W.,  
36 lks. dist., mkd. 32 1/4 M P L B T.

Cor. falls on NW. slope about  
half way up the hill from trail.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Oct. 16, 1915. At apparent noon I set off  $9^{\circ} 25'$  S. on the decl. arc, and observe the sun on the meridian; the resulting lat. is  $33^{\circ} 10'$  N. Thence -

S.  $43\frac{1}{2}^{\circ}$  E., 3.70 chs.  
 S.  $13^{\circ} 45'$  E., 3.60 " To high point. Descend.  
 S.  $67^{\circ}$  E., 4.70 "  
 N.  $53^{\circ}$  E., 16.45 " To rock pinnacle 10 ft. N. of 14 inch pine.  
 S.  $33\frac{1}{2}^{\circ}$  E., 5.45 " To E. portion of rock pinnacle.  
 S.  $31\frac{1}{2}^{\circ}$  E., 3.80 "  
 S.  $48\frac{1}{2}^{\circ}$  E., 2.30 " Set an iron post 3 ins. dia., on rocky ground, surrounded by a mound of earth and stone, for 33 mile cor. and angle point, stamped in cap

33 M W M I R A P in NE.  
 angle

P L in SW. portion  
 1915 in S., from which  
 A pine 14 ins. dia. brs. S.  $8^{\circ} 45'$  E.  
 32 lks. dist., mkd. 33 M P L  
 A P B T.

A juniper 20 ins. dia. brs. S.  $73^{\circ}$  E.,  
 49 lks. dist., mkd. 33 M W M I R  
 A P B T.

Cor. falls 3 ft. E. of S. end of rock pinnacle, 8 ft. N. and S., 4 ft. E. and W., and 7 ft. high. It is the last pinnacle at E. end of a rocky ledge.

No other trees available.

-----  
 Thence along summit of the Gila range of mountains and the 34th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Ascending.

S.  $55^{\circ} 15'$  E., 4.10 chs.  
 N.  $85^{\circ}$  E., 5.00 "  
 S.  $51^{\circ}$  E., 6.50 chs.  
 N.  $83^{\circ} 45'$  E., 2.30 chs.  
 S.  $27^{\circ} 45'$  E., 2.30 chs.  
 S.  $51\frac{1}{2}^{\circ}$  E., 7.00 chs. to highest point of hill. Descend along narrow broken ridge.  
 S.  $17^{\circ} 30'$  E., 12.80 chs. Set an iron post 1 inch dia., 18 ins. in ground to rock, surrounded by a mound of stone for 33 $\frac{1}{2}$  mile cor. stamped in cap

33 $\frac{1}{2}$  M W M I R in NE.  
 P L in SW  
 1915 in S.

Build a mound of stone 3 ft. base,  $1\frac{1}{2}$  ft. high, around cor.

There is a large pine about 2 chs. SE. of cor., but a rock ledge prevents taking a bearing thereto and the only witness to the cor. is therefore the mound of stone surround-

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

ing same.

Cor. falls about 3 ft. W. of rock ledge - the 1st one east of saddle before ascent to high peak. A very large amphitheater falls off abruptly to the west.

S.  $17\frac{1}{2}^{\circ}$  E., 6.10 chs.S.  $43^{\circ}45'$  E., 1.70 "

To extreme east end of hill. W.C. to  $29\frac{1}{2}$  mile cor. at old Monument No.2, brs. N.  $48^{\circ}55'$  W., about 3 miles dist.

N.  $72\frac{1}{2}^{\circ}$  E., 24.50 "

To low divide between two rocky peaks. I build a large monument to mark this point.

N.  $81^{\circ}45'$  E., 7.00 "S.  $87^{\circ}$  E., .70 "

Set an iron post 3 ins. dia., 18 ins. in the ground to rock, surrounded by a mound of stone for the 34 mile cor. and angle point, stamped in cap

34 M W M I R A P in N. angle  
P L in S. portion  
1915 in S., from which

A pine 10 ins. dia. brs. N.  $23^{\circ}$  W., 75 lks. dist., mkd. 34 M W M I R A P B T.

No other trees available.

Build a mound of stone 3 ft. base, 2 ft. high, N. of cor.

Cor. falls on E. side of rocky ledge bearing NW. and SE. for 1.00 ch.; and  $\frac{1}{2}$  ch. NE. and SW., and 40 ft. high. It is about 5.00 chs. W. of a double pinnacled ledge topped peak.

Land, rough and mountainous.

Soil, 4th rate; good grazing.

Timber, an occasional pine and juniper.

Scrub oak brush, mescal and spanish bayonet.

Close work Oct. 18.

Oct. 19, 1915. At 8 a.m., l.m.t., I set off  $33^{\circ}10'$  N. on the lat. arc,  $9^{\circ}43'$  S. on the decl. arc, and determine a meridian with the solar, at the 34 mile cor.

Thence along the summit of the Gila range of mountains and the 35th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Descending 1.25 chs.; thence ascending.

S.  $88\frac{1}{2}^{\circ}$  E., 6.10 chs.

Top of rocky pinnacle.

S.  $35^{\circ}$  E., 3.30 "

Top of rocky pinnacle. Descend.

S.  $61\frac{1}{2}^{\circ}$  E., 1.20 "

From end of this course, Rock Monument, probably No.5, brs. N.  $65^{\circ}57'$  E.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains		
	S. 43° E., 6.80 chs.	Same Monument brs. N.48°57'E., from end of this course.
	S. 38° E., 6.20 "	
	S. 84° E., 5.80 "	
	N.84°45'E., 7.70 "	Same Monument brs. N.3°21'E. from end of this course.
	S. 12° E., 2.90 "	Set an iron post 1 inch dia., 6 ins. in ground to rock, surrounded by a mound of stone, for the 34½ mile cor. and angle point, stamped in cap
		34½ M W M I R A P in NE. angle. P L in SW. portion 1915 in S., from which
		A cedar 5 ins.dia.brs. N.4°45'E., 70 lks. dist., mkd. 34½ M W M I R A P B T.
		A juniper 20 ins.dia.brs. S. 3° 45' E., 105 lks. dist., mkd. 34½ M P L A P B T.
		Same rock monument brs. N.1°23'E.
	S. 73½° E., 3.70 chs.	
	S. 24°45' E., 5.00 "	
	S. 80° E., 13.00 "	
	S. 49° E., 5.00 "	To point in low divide where I build a rock mound 3 ft. base, 2 ft. high. Ascend.
	S. 10½° E., 11.30 "	1.30 on this course, Wire fence brs. E. and W.
	S. 48° W., 2.00 "	Set an iron post 3 ins. dia. 15 ins. in ground to rock, surrounded by a mound of stone for 35 mile cor. and angle point, stamped in cap
		35 M W M I R in E. portion P L A P in W. angle 1915 in S., from which
		A juniper 8 ins.dia.brs. N.27½°E., 110 lks.dist., mkd. 35 M P L A P B T.
		Juniper 16 ins.dia.brs.S.37°45'E., 2.00 chs., mkd. 35 M W M I R A P B T.
		Juniper 10 ins.dia.brs. S.39½°W., 416 lks.dist., mkd. 35 M P L A P B T.
		A pine 8 ins.dia.brs. N.55½°W., 118 lks. dist., mkd. 35 M P L A P B T.

Oct. 19, 1915. At this cor., I set off 9° 47' S. on the decl. arc, and at apparent noon observe the sun on the meridian; the resulting lat. is 33° 09', which is correct.

Cor. falls 15 ft. north of a line joining two rock ledges 15 ft. high, 15 and 20 ft. bases respectively.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Land, rough and mountainous.  
Soil, very rocky, 4th rate.  
Occasional pine and juniper timber with same underbrush  
of scrub oak, tesota, mescal and spanish bayonet.

Thence along the summit of the Gila range of mountains  
and the 36th mile of the S. bdy. of White Mountain  
(or San Carlos) Indian Reservation; descending.

- S. 1 $\frac{1}{2}$ <sup>o</sup> W., 3.70 chs. Low point. Ascend.
- S. 83 $\frac{1}{4}$ <sup>o</sup> W., 3.20 "
- S. 7 $\frac{1}{2}$ <sup>o</sup> W., 7.60 "
- S. 5<sup>o</sup> E., 4.40 "
- S. 29 $\frac{1}{2}$ <sup>o</sup> W., 4.90 "
- S. 3 $\frac{1}{2}$ <sup>o</sup> E., 4.90 "
- S. 24 $\frac{1}{2}$ <sup>o</sup> W., 2.80 "
- S. 14 $\frac{1}{2}$ <sup>o</sup> E., 5.00 "
- S. 36 $\frac{1}{2}$ <sup>o</sup> W., 2.40 "
- S. 12<sup>o</sup> E., 1.10 "

Set an iron post 1 inch dia., 12  
ins. in ground to rock, surrounded  
by a mound of stone for 35 $\frac{1}{2}$  mile  
cor. and angle point, stamped in  
cap

35 $\frac{1}{2}$  M W M I R in E.  
A P P L in W. angle  
1915 in S., from which

A juniper 8 ins. dia. brs. S. 53 $\frac{1}{2}$ <sup>o</sup> E.,  
42 lks. dist., mkd. 35 $\frac{1}{2}$  M W M  
I R A P B T.

A juniper 6 ins. dia. brs. S. 7 $\frac{1}{2}$ <sup>o</sup> W.,  
177 lks. dist., mkd. 35 $\frac{1}{2}$  M P L  
A P B T.

- S. 2 $\frac{1}{2}$ <sup>o</sup> W., 12.00 "
- S. 16 $\frac{1}{4}$ <sup>o</sup> W., 4.90 "
- S. 51<sup>o</sup> 45' W., 2.50 "
- S. 17<sup>o</sup> 45' W., 2.10 "
- S. 52<sup>o</sup> E., 3.90 "
- S. 72<sup>o</sup> 45' E., 4.60 "
- S. 42<sup>o</sup> E., 8.10 "
- S. 61<sup>o</sup> E., 1.90 "

To A.P. 150 ft. NE. of highest  
point of hill; thence descend.

Set an iron post 3 ins. dia. 8 ins.  
in ground to rock, surrounded by a  
mound of stone, for 36 mile cor.,  
also angle point, stamped in cap

36 M W M I R in NE. portion  
P L A P in SW. angle  
1915 in S., from which

A juniper limb 6 ins. dia. brs.  
N. 2 $\frac{1}{4}$ <sup>o</sup> E., 119 lks. dist., mkd.  
36 M W M I R A P B T.

A pine 10 ins. dia. brs. S. 65 $\frac{1}{2}$ <sup>o</sup> E.,  
129 lks. dist., mkd. 36 M W M I R  
A P B T.

A juniper 5 ins. dia. brs. S. 49<sup>o</sup> E.,  
91 lks. dist., mkd. 36 M P L  
A P B T.

A pine 10 ins. dia. brs. S. 81<sup>o</sup> 45' W.,

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

240 lks.dist., mkd. 36 M P L  
A P B T.

Land, rough.  
Soil, rocky, 4th rate.  
Very scattered juniper and pine timber.  
Scrub oak brush, tesota and mesal.

-----  
Thence along the summit of the Gila range of mountains  
and the 37th mile of the S. bdy. of White Mountain  
(or San Carlos) Indian Reservation.

Descending.

- S. 58° E., 5.70 chs.
- N. 70½° E., 9.10 " At 5.00 chs. on this course, lowest point. Ascend.
- N. 29° E., 2.70 " Descending.
- N. 10½° E., 9.40 " To low point. Ascend.
- N. 23° E., 13.10 " Set an iron post 1 inch dia., 8 ins. in ground, surrounded by a mound of stone, for 36½ mile cor., stamped in cap

36½ M A P P L in SE. angle  
W M I R in NW. portion  
1915 in S., from which

A pine 6 ins.dia.brs. N.22°45'E.,  
23 lks.dist., mkd. 36½ M W M I R  
A P B T.

A pine 9 ins.dia.brs. N. 43½° W.,  
31 lks.dist., mkd. 36½ M A P  
W M I R B T.

No other trees available.

- N. 26° E., 1.30 chs. To angle point west of rock ledge 6 ft. high. Descend.
- N. 81° E., 13.00 " To low point. Ascend.
- N. 48° E., 7.80 " Thence descend.
- N. 13° W., 4.90 " To angle point 10 lks. E. of old Monument No.7, a rock monument as reported in original notes 5½ ft. base, 7 ft. high, perfectly preserved, from which the old B.T.s

A juniper 14 ins.dia. (dead) brs.  
N.55°45'W., 61 lks.dist., instead  
of N.40°W., 69 lks. dist. as re-  
ported, mkd. W M I R. B T.

A pine 10 ins.dia.(dead) brs.  
S.85½°W., 136 lks.dist., instead  
of West 133 lks. as reported;  
mkd. W M I R. B T.

on monument  
No marks were found although a  
large volcanic rock about the size  
mentioned and base of Monument  
on NE. side thereof was carefully  
inspected for such. There is no

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

doubt however that this is the original Monument No.7.

I obtain the following bearings from the old monument:

Monument No. 5, previously observed from angle points along the 35th mile, brs. N.40°06'W., instead of N.40°50'W., as reported.

Mon. No. 6 at Paymaster tanks brs. N. 40° 12' W., instead of N. 40° 50' W., as reported, and with distance approximately as reported.

As Monument No. 6 is in nowise near the correct place for boundary, I do not make connection therewith except as follows:

I find Mon. No. 6 to be a rock monument in perfect condition 5 ft. base and 6 ft. high; old stone not found; and from which a juniper 34 ins.dia.brs. N. 25° E., 152 lks. dist., instead of a cedar 34 ins.dia. N. 22½° E., 156 lks.dist. A juniper 22 ins. dia. brs. S. 15° W., 288 lks. dist., instead of S. 15° 10' W., 283 lks. dist., originally reported as a cedar 24 ins. dia. A juniper 22 ins.dia. brs. N. 88° W., 115 lks. dist., instead of a cedar N. 88° W., 107 lks. as reported. All of these trees were found to be marked W M I R B T, none of them however bearing "No 6" as reported.

The distance to the mile cor. (No. 35) was measured as 15.73 chs. approximately bearing N. 78° W., but exact bearing was not obtained.

Note: Paymaster Tank is now dry and is probably usually so, except in very wet seasons. It is about 200 yards south of old Monument No. 6, or about ¼ mile east of 35 mile cor. By following down the left side of wash therefrom for 1½ miles and then around the last hill to the NW. side thereof a good spring of scanty flow is found about 50 ft. above the base of the hill. A little over ½ mile NW. of this spring, in the second ravine, are occasional small pools in the rocks, and water can be obtained by digging in the sandy bed of wash.

Resuming my survey of the boundary at my angle point near Monument No. 7, I continue, descending abruptly.

- N. 3° W., 5.90 chs. Foot of abrupt descent. Ascend gradually.
- N. 25° E., 5.00 "
- N. 22° W., 2.10 " Set an iron post 3 ins. dia. 6 ins. in ground to rock, surrounded by a mound of stone, for 37 mile cor. and also angle point, stamped in cap

37 M W M I R in W. portion  
P L A P in east angle  
1915 in S., from which

A pine 6 ins.dia.brs. N.62½°E.,  
423 lks. dist., mkd. 37 M P L  
A P B T.

A juniper 8 ins.dia.brs. S.54°45'E.,  
352 lks. dist., mkd. 37 M P L  
A P B T.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

A double pine 10 ins.dia.brs.  
S.72½°W., 236 lks. dist., mkd.  
37 M W M I R A P B T.

A juniper limb 6 ins.dia.brs.  
N.16°45'W., 26 lks. dist., mkd.  
37 M W M I R A P B T.

Land, mountainous and rough.  
Soil, rocky, 4th rate.  
No timber except very scattered pine and juniper.

Close work Oct. 19, 1915.

Oct. 20, 1915. At 8 a.m., l.m.t., I set off 33° 09' N. on the lat. arc, and 10° 09' S. on the decl. arc, and determine a meridian with the solar.

Thence I run along the summit of the Gila range of mountains and the 38th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

N. 50° E., 3.90 chs. To top of rocks.  
From this point Mon. No. 7 brs.  
S.15°24'W.  
Mile cor. No. 35 brs. N.72°33'W.  
Mon. No. 6 brs. N.61°08'W.  
Mon. No. 5 brs. N.47°58'W.

N. 87½° E., 2.10 "  
N. 82° E., 2.90 "  
N. 75° E., 3.90 "  
N.81°45'E., 3.70 "  
N. 78½° E., 8.50 "  
S. 88½° E., 10.70 "  
N. 78½° E., 1.40 "  
N. 82½° E., 2.90 "

To rocky top of ledge.  
" "

Thence descend.

Set an iron post 1 inch dia., 6 ins. in ground, surrounded by a mound of stone for 37½ mile cor., also angle point, stamped in cap

37½ M W M I R in NW. angle  
P L A P in SE. portion  
1915 in S., from which

A juniper 7 ins.dia. brs. S.20½°E., 76 lks. dist., mkd. 37½ M P L A P B T.

A pine 30 ins.dia.brs. S.71°45'W., 252 lks. dist., mkd. 37½ M P L A P B T.

Cor. falls about 2.00 chs. E. of top of knoll.

N. 13½° E., 2.60 chs.  
N. 7½° W., 7.90 "  
  
N. 1°10'E., 13.50 "  
N. 23½° E., 3.80 "  
N. 41½° E., 2.50 "  
N.53°45'E., 3.50 "  
S. 50½° E., 2.50 "

Descending.  
Point in saddle between drains E. and W.  
Wire fence brs. E. and W. Ascend.  
To top of hill. Thence descend.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

S. 55½° E., 3.70 chs. Set an iron post 3 ins. dia., 12 ins. in ground to rock for 38 mile cor., also angle point, stamped in cap

38 M W M I R A P in NE. angle  
P L in SW. portion  
1915 in S., from which

A juniper limb 6 ins. dia. brs.  
N. 39° 45' E., 190 lks. dist., mkd.  
38 M W M I R A P B T.

A scrub oak 5 ins. dia. brs.  
S. 32° 45' E., 41 lks. dist., mkd.  
38 M P L A P B T.

An oak limb 10 ins. dia. brs.  
S. 85¼° W., 151 lks. dist., mkd.  
38 M P L A P B T.

An oak 5 ins. dia. brs. N. 29° 45' W.,  
236 lks. dist., mkd. 38 M W M  
I R A P B T.

Land, mountainous.  
Soil, rocky, 4th rate.  
Scattered juniper, cedar and scrub oak timber.  
Cor. falls on flat ridge gradually descending to E.

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Thence along the summit of the Gila range of mountains and the 39th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Continuing descent.

S. 68° E., 8.80 chs.  
S. 88½° E., 12.80 "  
N. 77° E., 18.40 "

At 13.00 chs. - foot of descent.  
Thence ascend.  
Set an iron post 1 inch dia., 8 ins. in ground to rock, for 38½ mile cor. (surrounded by a mound of stone) with cap stamped

38½ M W M I R in N. half  
P L 1915 in S., from which

A juniper 8 ins. dia. brs. S. 82° E.,  
71 lks. dist., mkd. 38½ M P L  
B T.

Juniper 18 ins. dia. brs. N. 59° W.,  
132 lks. dist., mkd. 38½ M  
W M I R B T.

Cor. falls in saddle 4.00 chs.  
W. of foot of rock ledge on volcanic knoll.

N. 77° E., 13.50 chs.  
N. 76° E., 3.30 "

To top of E. end of rocky knoll by an old monument.  
Descending to E. end of the rocky knoll.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

N. 58½° E., 9.50 chs.  
N. 66°45'E., 4.90 "  
S. 86½° E., 8.80 "

Set an iron post 3 ins. dia., 6 ins. in ground to rock surrounded by a mound of stone, for 39 mile cor., stamped in cap

39 M W M I R in N.  
P L 1915 in S.

Build a mound of stone 4 ft. base, 3 ft. high, N. of cor.

Cor. falls on very flat ridge slightly descending to E.

Land, mountainous.  
Soil, rocky, 4th rate.  
No timber except scattered juniper and pine.

Thence along the summit of the Gila range of mountains and the 40th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Descending.

S. 86½° E., 13.20 chs.  
N. 70½° E., 7.80 "  
S. 83° E., 19.00 "

Over nearly level country.  
Set an iron post 1 inch dia., 24 ins. in the ground to rock, for 39½ mile cor., stamped in cap

39½ M W M I R in N.  
P L A P 1915 in S. angle

I build a mound of stone 4 ft. base, 1 ft. high, around the post.

Cor. falls on very flat prairie, gently sloping to SE.

S. 65°35'E., 15.00 chs.  
S. 52½° E., 23.50 "  
N. 77° E., 1.50 "

to point for 40 mile cor. Set an iron post 3 ins. dia., 26 ins. in the ground, stamped in cap

40 M W M I R in N. portion  
A P P L in S. angle  
1915 in S.

Cor. falls on nearly flat prairie about 7.00 chs. West of lowest point.

Land, gently rolling. Raise a mound of stone 3 ft. base, Soil, 2nd and 3rd rate. 2 ft. high, NW. of cor. No timber or undergrowth.

Close work Oct. 20, 1915.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Oct. 21, 1915. At the 40 mile cor., I set off 33° 09' N. on the lat. arc, and 10° 26' S. on the decl. arc, and determine a meridian with the solar.

Thence I run along the summit of the Gila range of mountains, which at this place is flat prairie land, and along the 41st mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

N. 79° 30' E., 25.00 chs. At 7.00 chs. on this course, trail brs. N. and S. Ascend.

S. 67° 30' E., 3.50 "

S. 33 1/4° E., 2.30 " Thence descend.

S. 14 1/2° W., 3.30 "

S. 15 3/8° W., 5.90 " Set an iron post 1 inch dia., 20 ins. in ground to rock, surrounded by a mound of stone for 40 1/2 mile cor. and angle point, stamped in cap

40 1/2 M W M I R A P in E. angle  
P L in W. portion.  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, around post.

S. 14 1/2° W., 26.40 chs. At 5.00 chs. on this course, trail brs. E. and W. Ascend.

S. 27 1/4° E., 5.00 "

S. 8 1/2° W., 8.60 " At 6.60 chs. on this course, wire fence brs. N. 65 1/4° W. and S. 65 1/4° E.

Set an iron post 3 ins. dia. 20 ins. in ground to rock, for 41 mile cor. also angle point, stamped in cap

41 M W M I R in E. portion  
P L A P in W. angle  
1915 in S., from which

A juniper 8 ins. dia. brs. N. 1° W., 215 lks. dist., mkd. 41 M P L A P B T.

A juniper 4 ins. dia. brs. S. 20 1/2° E., 31 lks. dist., mkd. 41 M W M I R A P B T.

No other trees available.

Build a mound of stone 4 ft. base, 3 ft. high, E. of cor.

Land, level and gently rolling.  
Soil, 2nd and 3rd rate.  
Some scattered juniper along last 1/4 mile.

Thence along the summit of the Gila Mountains and the 42nd mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.

Gradually ascending.

S. 38 1/2° W., 6.20 chs. To summit of rocky knoll. Descend.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

S.  $82\frac{1}{2}^{\circ}$  E., 5.50 chs.  
 S.  $39^{\circ}$  E., 5.00 "  
 S.  $14^{\circ}$  E., 23.30 "

To point in saddle. Ascend.  
 Set an iron post 1 inch dia., 10 ins. in ground to rock, surrounded by a mound of stone, for  $41\frac{1}{2}$  mile cor., also angle point, stamped in cap

$41\frac{1}{2}$  M W M I R in E. portion  
 P L A P in W. angle  
 1915 in S.

Build a mound of stone 4 ft. base, 3 ft. high, E. of cor.

Cor. falls on NW. slope of rounded hill, 10.00 chs. from top thereof.

S.  $5\frac{1}{2}^{\circ}$  E., 9.90 chs. To top of hill. Thence nearly level.

S.  $8\frac{1}{2}^{\circ}$  E., 10.00 "

S.  $37\frac{1}{2}^{\circ}$  W., 5.00 "

S.  $58\frac{1}{2}^{\circ}$  W., 8.50 "

S.  $4\frac{1}{2}^{\circ}$  E., 6.60 "

Set an iron post 26 ins. in ground for 42 mile cor. also angle point, stamped in cap

42 M W M I R in E. portion  
 P L A P in W. angle  
 1915 in S.

Build a mound of stone 4 ft. base, 3 ft. high, E. of cor.

Land, rolling.  
 Soil, rocky.  
 No timber.

Cor. falls  $2\frac{1}{2}$  chs. S. of low saddle.

Oct. 21, 1915. At the above cor., I set off  $10^{\circ} 30'$  S. on the decl. arc, and at apparent noon observe the sun on the meridian; the resulting lat. is  $33^{\circ} 08'$  N.

Thence along the summit of the Gila range of mountains and the 43rd mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Ascending.

S.  $3\frac{1}{2}^{\circ}$  E., 12.70 chs. To top of hill. Thence level.

S.  $55^{\circ} 45'$  E., 6.40 " Descend.

S.  $74^{\circ} 45'$  E., 4.00 "

S.  $42^{\circ} 15'$  E., 14.90 "

N.  $64^{\circ}$  E., 2.00 "

Set an iron post 1 inch dia., 20 ins. in ground to rock, surrounded by a mound of stone, for  $42\frac{1}{2}$  mile cor., stamped in cap

$42\frac{1}{2}$  M W M I R in NW.  
 P L in SE.  
 1915 in S.

Build a mound of stone 3 ft. base,  $1\frac{1}{2}$  ft. high, around cor.

N.  $64^{\circ}$  E., 1.70 " To A.P. in saddle. Thence along Trachyte ridge; ascending.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

- S. 75° E., 10.00 chs.
- S. 86½° E., 4.20 "
- S. 54° E., 9.10 "
- S. 29° E., 3.20 "
- S. 47°45' E., 3.60 "
- S. 4° W., 3.20 "
- S. 4½° E., 5.00 "

Descend.

Set an iron post 3 ins. dia., 15 ins. in ground to rock, surrounded by a mound of stone, for 43 mile cor., also angle point, stamped in cap

43 M W M I R in E. portion  
P L A P in W. angle  
1915 in S.

Build a mound of stone 4 ft. base, 3 ft. high, E. of cor.

Land, heavy rolling.  
Soil, rocky, 4th rate.  
Scrub oak, mescal, and spanish bayonet.  
No timber.

Thence along the summit of the Gila range of mountains and the 44th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Descending.

- S. 0°45'W., 3.50 chs.
- S. 19° E., 5.00 "
- S. 8° W., 6.10 "
- S. 69° E., 7.30 "
- S. 43° E., 2.70 "
- S. 59° E., 3.30 "
- S. 49½° E., 12.10 "

To angle point 1.00 ch. N. of saddle.

To top of round Trachyte hill.

Ascending rocky slope.

Descending.

Set an iron post 1 inch dia., 12 ins. in ground to rock, for 43½ mile cor., also angle point, stamped in cap

43½ M W M I R in NE. portion  
P L A P in SW. angle  
1915 in S.

Build a mound of stone 3 ft. base, 2 ft. high, around post.

Cor. falls on E. slope, 2.00 chs. NW. of saddle.

- S. 38½° E., 6.60 "
- S. 9½° W., 5.90 "
- S. 4° E., 5.00 "
- S. 14° W., 6.40 "
- S. 76½° E., 16.10 "

To A.P. on N. end of trachyte hill.

At 12.70 chs. on this course, wire fence brs. N. 40°45' E., and S. 40° 45' W.

Set an iron post 3 ins. dia. 26 ins. in the ground, for 44 mile cor., stamped in cap

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

44 M W M I R in N. portion  
P L A P in SE. angle  
1915 in S.

Build a mound of stone 3 ft. base,  
2 ft. high, N. of cor.

Cor. of wire fence, brs. NE., 5.00  
chs. from cor., and thence goes  
N. 3° W. for one mile or more.

Land, heavy rolling.  
Soil, rocky, 4th rate.  
Scattered scrub oak, tesota, and mescal.  
No timber.

Cor. falls in low saddle on rock stratum.

Close work Oct. 21.

Oct. 22, 1915. At 8 a.m., l.m.t., I set off 33° 07' N.  
on the lat. arc, 10° 47' S. on the decl. arc, and deter-  
mine a meridian with the solar.

Thence I run along the summit of Gila range of mountains  
and the 45th mile of the S. bdy. of the White Mountain  
(or San Carlos) Indian Reservation.

Ascending.

S. 53½° E., 12.80 chs. To top of knoll.  
S. 85½° E., 5.00 "  
N. 77½° E., 22.20 "

Set an iron post 1 inch dia.,  
18 ins. in ground to rock, sur-  
rounded by a mound of stone,  
for the 44½ mile cor., also  
angle point, stamped in cap

W M I R A P in acute angle  
44½ M P L in remaining por-  
tion  
1915 in S., from which

A cross, marked B O, on basalt  
rock 8x8x2 ft. above ground,  
brs. S. 77° W., 27 lks. dist.

Build a mound of stone 3 ft.  
base, 2 ft. high, E. of cor.

N. 59½° W., 6.40 chs.  
N. 32° E., 6.60 "  
N. 15° W., 5.00 "  
N. 31½° W., 8.00 "  
N. 46° E., 13.00 "  
N. 70° E., 1.00 "

Set an iron post 3 ins. dia., 26  
ins. in ground, for 45 mile cor.,  
also angle point, stamped in cap

45 M W M I R in N. portion  
P L A P in SW. angle  
1915 in S.

Build a mound of stone 4 ft. base,  
3 ft. high, N. of cor.

From the cor. - A cedar limb 6

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

ins. dia. brs. S.  $43\frac{1}{2}^{\circ}$  E., 165  
lks. dist., Mkd. 45 M P L A P  
B T.

No other trees available.

Cor. falls in low saddle 1.00  
ch. W. of rock ledge 6 ft. high,  
brs. NE. and SW.

Land, rolling.  
Soil, rocky, 4th rate.  
No timber.

Considerable bear brass, and spanish bayonet.

Oct. 22, 1915. At the above cor., I set off  $10^{\circ} 52'$  S.,  
on the decl. arc, and at apparent noon observe the sun  
on the meridian; the resulting lat. is  $33^{\circ} 07'$  N.

Thence along the summit of the Gila range of mountains  
and the 46th mile of the S. bdy. of the White Mountain  
(or San Carlos) Indian Reservation.

S. $84\frac{1}{2}^{\circ}$ E.,	2.30	chs.	Top of rocky ledge.
S. $83\frac{1}{2}^{\circ}$ E.,	5.00	"	
S. $68\frac{1}{2}^{\circ}$ E.,	5.00	"	
S. $88^{\circ} 45'$ E.,	5.00	"	
N. $54\frac{1}{2}^{\circ}$ E.,	10.00	"	
N. $49\frac{1}{2}^{\circ}$ E.,	5.30	"	To highest rock of ledge.
N. $86^{\circ}$ E.,	2.80	"	
S. $85^{\circ} 45'$ E.,	4.60	"	

Set an iron post 1 inch. dia., 4  
ins. in the ground to rock, sur-  
rounded by a mound of stone, for  
 $45\frac{1}{2}$  mile cor., also angle point,  
stamped in cap

$45\frac{1}{2}$  M W M I R in N. portion  
P L A P in SW. angle  
1915 in S., from which

A cedar limb 4 ins. dia. brs. N.  $19\frac{1}{2}^{\circ}$  W.  
76 lks. dist., mkd.  $45\frac{1}{2}$  M W M I R  
A P B T.

No other trees available.

Build a mound of stone 4 ft. base,  
3 ft. high, N. of cor.

Cor. falls on rocky ledge 5.00 chs.  
E. of a very rocky hill 30 ft.  
higher than the cor.

S. $33^{\circ}$ E.,	2.20	"	
N. $82^{\circ} 45'$ E.,	4.20	"	To A.P. 10 ft. SE. of cedar tree.
S. $77^{\circ}$ E.,	6.30	"	To A.P. 10 ft. NW. of cedar tree.
S. $75\frac{1}{2}^{\circ}$ E.,	6.00	"	
S. $16^{\circ} 45'$ E.,	4.70	"	
S. $15^{\circ} 45'$ E.,	4.60	"	To A.P. on rock 10 ft. W. of a cedar tree.
S. $31\frac{1}{2}^{\circ}$ E.,	12.00	"	Set an iron post 3 ins. dia. 26 ins. in ground, for 46 mile cor., also angle point, stamped in cap

46 M W M I R A P in NE. angle  
P L A P in SW. portion  
1915 in S., from which

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

A cedar limb 10 ins. dia. on 2-ft. tree, brs. S. 6 $\frac{1}{2}$ ° W., 58 lks. dist. mkd. 46 M P L A P B T.

A cedar limb 4 ins. dia. brs. N. 7° E., 181 lks. dist., mkd. 46 M W M I R A P B T.

No other trees available.

Build a mound of stone 3 ft. base, 2 ft. high, NE. of cor.

Land, rough.

Soil, rocky, 4th rate.

Tesota and scrub oak brush. Some scattered cedar and juniper timber.

Thence along the summit of the Gila range of mountains and the 47th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

S. 23° E., 2.70 chs.

S. 39° 45' E., 3.80 "

S. 15° E., 7.00 "

N. 78° E., 8.40 "

At 5.30 chs. on this course, to rock pinnacle.

S. 89 $\frac{1}{2}$ ° E., 2.70 "

S. 69 $\frac{1}{2}$ ° E., 2.20 "

N. 55° 45' E., 2.10 "

N. 66 $\frac{1}{2}$ ° E., 2.80 "

N. 84 $\frac{1}{2}$ ° E., 1.40 "

N. 65° E., 2.80 "

S. 88 $\frac{1}{2}$ ° E., 4.10 "

Set an iron post 1 inch dia., 4 ins. in ground to rock, surrounded by a mound of stone, for 46 $\frac{1}{2}$  mile cor., also angle point, stamped in cap

46 $\frac{1}{2}$  M W M I R A P in N. angle  
P L 1915 in S. portion.

Raise a mound of stone 4 ft. base, 2 ft. high, around cor.

About three miles N. of here is Slaughter Camp, now occupied as headquarters by J. W. Mettise, a stockman who has a lease on the reservation, and water in large quantities is found in tanks up and down the creek, and also a well of good water just below the camp headquarters.

About one-half mile above this camp is the old bearing tree, now dead, marking the position of Monument No. 8, which however is a long distance from the "Summit of the Gila Mountains".

Land, rough.

Soil, rocky, 4th rate.

Close work Oct. 22.

Oct. 23, 1915. At 8 a.m., l.m.t., I set off 33° 07' N. on the lat. arc, 11° 8' S. on the decl. arc, and determine a meridian with the solar.

Thence I continue along the summit of the Gila range of

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

mountains and the 47th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation, (last half).

N.  $63\frac{1}{2}^{\circ}$  E., 8.00 chs.  
N.  $34\frac{1}{2}^{\circ}$  E., 3.40 "  
N.  $30\frac{1}{2}^{\circ}$  E., 2.70 "  
N.  $53^{\circ}$  E., 6.20 "

For approximate location of the gate in fence which runs northerly from a point about  $\frac{1}{4}$  mile west of Slaughter camp, I place a flag on the south post thereof which I sight from line whenever opportunity permits, the bearing from this cor. being N.  $17^{\circ} 28'$  W.

S.  $63^{\circ}$  E., 4.90 "  
S.  $87\frac{1}{2}^{\circ}$  E., 4.40 "  
N.  $65^{\circ}$  E., 1.50 "  
N.  $75\frac{1}{2}^{\circ}$  E., 4.80 "  
S.  $81^{\circ}$  E., 2.10 "  
N.  $65\frac{1}{2}^{\circ}$  E., 2.00 "

From this point flag on gate brs. N.  $19^{\circ} 32'$  W.

From this point flag on gate brs. N.  $21^{\circ} 10'$  W.

Set an iron post 3 ins. dia., for the 47 mile cor., also angle point, stamped in cap

47 M W M I R A P in NW. angle  
P L in SE. portion  
1915 in S., from which

A 5-inch limb, on branching cedar brs. N.  $58\frac{1}{2}^{\circ}$  W., 25 lks. dist., mkd. 47 M W M I R A P B T.

No other tree available.

Build a mound of stone 3 ft. base, 2 ft. high, NW. of cor.

A round conglomerate pinnacle  $2\frac{1}{2}$  ft. in dia., and 4 ft. high, brs. S.  $37^{\circ}$  E., 30 lks. dist. (unmarked).

Another pinnacle 2 ft. x 2 ft. x 8 ft. high, brs. S.  $23\frac{1}{2}^{\circ}$  W., about 2.00 chs. dist. (unmarked)

Land, rough and mountainous.  
Soil, rocky 4th rate.  
Tosota and scrub oak brush.  
Scattered cedar and juniper timber.

Flag on gate brs. N.  $22^{\circ} 06'$  W.

Thence along the summit of the Gila range of mountains and the 48th mile of the S. bdy. of White Mountain (or San Carlos) Indian Reservation.

N.  $53^{\circ} 45'$  E., 14.40 chs. To near top of rocky hill.  
N.  $70\frac{1}{2}^{\circ}$  E., 3.10 " From this point flag on gate brs. N.  $26^{\circ} 45'$  W.

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

N. 28½° E., 6.20 chs.  
 N. 39° E., 11.80 "  
 N. 43¼° E., 4.50 "

To point in saddle.  
 Set an iron post 1 inch dia., 8 ins. in ground, surrounded by a mound of stone, for 47½ mile cor. also angle point, stamped in cap

47½ M W M I R in NW. portion  
 P L A P in SE. angle  
 1915 in S.

Build a mound of stone 4 ft. base, 2 ft. high, around cor.

Oct. 23. At apparent noon I set off 11° 13' S. on the decl. arc, and observe the sun on the meridian; the resulting lat. is 33° 07' N., which is correct.

N. 47¼° E., 1.90 "  
 S. 57¼° E., 1.30 "  
 S. 81¼° E., 10.70 "  
 S. 32¼° E., 5.00 "  
 S. 40° 45' E., 3.90 "  
 S. 68¼° E., 7.20 "

To rock monument 4 ft. base, 5 ft. high, at the summit of Slaughter Mountain, and which is likely Mon. No. 9, answering thereto in general description perfectly. No trace of marks or old cor. I am told by Mr. Mettise that this cor. was taken away bodily to the summit of one of the twin peaks some two miles north of here, this being done for the purpose of moving the line so as to put the "Hat Ranch" off of the reservation as set forth in my account thereof after description of old Mon. No. 11, on the 63rd mile. From this point flag on gate brs. N. 36° 09' W.

S. 29° 45' E., 1.60 "  
 S. 1° 45' E., 8.10 "  
 S. 46° 45' W., .30 "

Set an iron post 3 ins. dia. among large boulders on west end of ledge, surrounded by a mound of stone for 48 mile cor., stamped in cap

48 M W M I R in SE.  
 P L in NW.  
 1915 in S., from which

A juniper 20 ins. dia., brs. S. 1½° W. 249 lks. dist., mkd. 48 M W M I R B T.

A large rock 8 ft. high, x4x4 ft. top of which is one foot above top of post, and NW. and alongside same I mark with a cross and "B O" neither bearing or distance being taken on account of its close proximity.

No other trees available.  
 Build a mound of stone 3 ft. base

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

2 ft. high, SE. of cor.

Land, rough and mountainous.

Soil, rocky, 4th rate.

No timber, except an occasional juniper.

Deadman tank brs. S. 50° E., about 2 miles, and this is the place alluded to in Riecker's notes, where ten or twelve persons were killed a year previous by the Apaches, although his statement made it appear that such occurred near Mon. No. 8, instead of SE. of Mon, No. 9.

Thence along the summit of the Gila range of mountains and the 49th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

S. 46°45' W., 8.10 chs.

S. 33°45' W., 4.60 "

S. 8° W., 12.00 " - 10.00 chs. on this course -  
to saddle.

S. 20°30' W., 6.40 "

S. 3° W., 8.90 "

Set an iron post 1 inch dia.,  
for 48½ mile cor., stamped  
in cap

48½ M W M I R in E.

P L in W.

1915 in S., from which

A cedar 12 ins. dia. brs.

S. 48½° E., 26 lks. dist., mkd.

48½ M W M I R B T.

A cedar 14 ins. dia. brs.

S. 19°45' W., 113 lks. dist.

mkd. 48½ M P L B T.

Close work Oct. 23, 1915.

Oct. 25 - Moved camp.

Oct. 26, 1915. At 1 p.m., l.m.t., I set off 33° 07' N. on the lat. arc, 12° 16' S. on the decl. arc, and determine a meridian with the solar.

Thence I run

S. 3° W., 0.20 chs.

S. 8½° E., 1.50 "

S. 22½° W., 3.70 "

S. 14° E., 3.60 "

S. 4° E., 4.60 "

S. 32½° W., 11.30 "

S. 39° W., 4.40 "

S. 35½° W., 10.70 "

To edge of cliff.

Set an iron post 3 ins. dia., 24  
ins. in ground, for 49 mile cor.,  
also angle point, surrounded by a  
mound of stone, stamped in cap

49 M W M I R A P in SE. angle

P L in NW. portion.

1915 in S.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Build a mound of stone 4 ft. base, 3 ft. high, SE. of cor.

Cor. falls on SW. slope.

Land, rough and rolling.

Soil, rocky 3rd and 4th rate.

Scattered spanish bayonet, mescal and scrub oak brush.

No timber.

Thence along the summit of the Gila range of mountains and the 50th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

Descending.

S.  $18\frac{1}{2}^{\circ}$  W., 7.90 chs.

S.  $59\frac{1}{2}^{\circ}$  E., 21.00 "

S.  $34^{\circ}$  W., 11.10 "

At 7.00 chs. on this course, saddle. Thence ascend.

Set an iron post 1 inch dia., 24 ins. in ground to rock, surrounded by a mound of stone, for  $49\frac{1}{2}$  mile cor., stamped in cap

$49\frac{1}{2}$  M W M I R in SE.

P L in NW.

1915 in S.,

Build a mound of stone 4 ft. base, 3 ft. high, SE. of cor.

Close work Oct. 26.

Oct. 27, 1915. At 1 p.m., l.m.t., I set off  $33^{\circ} 06'$  N. on the lat. arc,  $12^{\circ} 37'$  S. on the decl. arc, and determine a meridian with the solar.

Thence I continue along the last half of the 50th mile of S. bdy.

S.  $34^{\circ}$  W., 9.90 chs.

S.  $4^{\circ}$  E., 2.90 "

S.  $1^{\circ} 45'$  E., 7.00 "

S.  $75^{\circ}$  E., 13.40 "

S.  $41\frac{1}{2}^{\circ}$  E., 3.90 "

N.  $82\frac{1}{2}^{\circ}$  E., 2.90 "

Set an iron post 3 ins. dia., 12 ins. in ground to rock, for 50 mile cor., also angle point, surrounded by a mound of stone, stamped in cap

50 M W M I R in N. portion

A P P L in S. angle

1915 in S., from which

A cedar 20 ins. dia. brs. N.  $75^{\circ}$  W., 285 lks. dist., mkd. 50 M W M I R A P B T.

No other trees available.

Build a mound of stone 4 ft. base, 3 ft. high, N. of cor.

Land, heavy rolling.

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

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Spanish bayonet, mescal, tesota, and cactus undergrowth.  
No timber except an occasional cedar or juniper tree.

Close work Oct. 27, 1915.

Oct. 28, 1915. At the 50 mile cor., I set off 33° 06' N. on the lat. arc, 12° 53' S. on the decl. arc, and determine a meridian with the solar.

Thence I run along the summit of the Gila Mountains and the 51st mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

- S. 62½° E., 2.30 chs.
- S. 16° 45' E., 8.00 "
- S. 67½° E., 4.20 "
- S. 33° 45' E., 5.00 "
- S. 40° E., 9.00 "
- S. 76½° E., 4.50 "
- S. 8° 45' E., 5.00 "
- S. 28½° E., 2.00 "

Set an iron post 1 inch dia., 10 ins. in ground, ~~to~~ rock, for 50½ mile cor., also angle point, stamped in cap

50½ M W M I R in NE. portion  
P L A P in SW. angle  
1915 in S., from which

A cedar 6 ins. dia. brs. S. 5¼° E., 68 lks. dist., mkd. 50½ M P L A P B T.

A juniper limb 6 ins. dia. brs. S. 62½° E., 248 lks. dist., mkd. 50½ M W M I R A P B T.

- S. 22¼° E., 7.60 "
- S. 12° 45' W., 5.00 "
- S. 28° 45' W., 4.70 "
- S. 32° E., 4.10 "
- N. 79½° E., 7.60 "
- S. 26° E., 2.90 "
- S. 57° 45' E., 3.00 "
- S. 3° W., 5.10 "

Set an iron post 3 ins. dia., 18 ins. in ground to rock, for 51 mile cor., surrounded by a mound of stone, stamped in cap

51 M W M I R in E.  
P L in W.  
1915 in S., from which

An 8 inch limb on a 2 ft. juniper brs. N. 77¼° E., 142 lks. dist., mkd. 51 M W M I R B T.

No other trees available.

Build a mound of stone 3 ft. base, 2 ft. high, E. of cor.

Cor. falls about 5.00 chs. N. of a low saddle, and 6.00 chs. E. of rocky spur ledge to S., and on S. slope.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

Thence along the summit of the Gila range of mountains and the 52nd mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

S. 3° W., 19.80 chs.  
S. 67½° W., 4.00 "  
South 4.10 "  
S. 11° 45' E., 5.00 "  
S. 9° 45' W., 7.10 "

Set an iron post 1 inch dia., 22 ins. in ground to rock, surrounded by a mound of stone, for 51½ mile cor., also angle point, stamped in cap

51½ M W M I R in E. portion  
A P P L in W. angle  
1915 in S., from which

A cedar limb 6x10 ins. brs. S. 17° W.  
212 lks. dist., mkd. 51½ M P L  
A P B T.

No other trees available.

Build a mound of stone 4 ft. base,  
3 ft. high, E. of cor.

Mt. Turnbull brs. S. 89° W.

Old Mon. No. 2, brs. N. 54° 41' W.

Thence I continue -

S. 14° W., 2.90 " To top of knoll, near large cedar.

Close work Oct. 27.

Oct. 28, At 8 a.m., l.m.t., I set off 33° 04' on the lat. arc, 12° 52' S. on the decl. arc, and determine a meridian with the solar.

N. 79½° E., 4.20 "  
S. 57½° E., 8.90 "  
S. 11½° E., 9.80 "  
S. 4½° W., 7.00 "  
S. 26° 45' E., 7.20 "

To point in saddle.

To near top of round hill.

Along nearly level land.

Ascending slightly.

Up steeper ascent.

Set an iron post 3 ins. dia., 24 ins. in the ground to rock, surrounded by a mound of stone, for 52 mile cor., also angle point, stamped on cap

52 M W M I R in E. portion  
A P P L in W. angle  
1915 in S.

Raise mound of stone 3 ft. base,  
2 ft. high, E. of cor.

Land, rolling.

Soil, gravel and rock, 3rd and 4th rate.

Undergrowth of Spanish bayonet, tesota and mescal.

Cor. falls on rocky point about 7.00 chs. N. of top of ridge, which brs. NW. from highest hill in vicinity.

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

Thence I run along the summit of the Gila range of mountains and the 53rd mile of the S. bdy, of White Mountain (or San Carlos) Indian Reservation.

S. 25 $\frac{1}{2}$ ° E.,	4.20	chs.	Continuing ascent.
S. 24 $\frac{1}{2}$ ° W.,	2.60	"	To top of hill.
S. 12 $\frac{1}{2}$ ° E.,	5.00	"	Along level ridge.
S. 13° W.,	7.30	"	To top of peak.
S. 11° E.,	2.40	"	
S. 30 $\frac{1}{2}$ ° E.,	3.60	"	Descending slightly.
N. 83 $\frac{1}{2}$ ° E.,	2.00	"	Descending rapidly.
S. 57° E.,	12.90	"	6.00 chs. on this course, bottom of descent in saddle. Thence ascend.

Set an iron post 1 inch dia., 10 ins. in the ground, to rock, surrounded by a mound of stone, for 52 $\frac{1}{2}$  mile cor., stamped on cap

52 $\frac{1}{2}$  M W M I R in E. half  
P L in SW. half  
1915 in S., from which

A 14-inch limb on 28-inch cedar, brs. S. 53 $\frac{1}{2}$ ° E., 126 lks., mkd. 52 $\frac{1}{2}$  M P L B T.

A 12-inch limb on 18-inch cedar brs. S. 21 $\frac{1}{2}$ ° W., 81 lks., mkd, 52 $\frac{1}{2}$  M P L B T.

S. 57° E.,	.60	"
N. 67° 45' E.,	2.90	"
S. 83° E.,	6.70	"
N. 46° W.,	6.00	"

At this point, on Oct. 28, 1915, at apparent Noon, I set off E 2° 56' S. on the decl. arc, and observe the sun on the meridian, the resulting lat. is 33° 04'.

N. 19° E.,	6.50	"
N. 65 $\frac{1}{2}$ ° E.,	4.40	"
N. 87 $\frac{1}{2}$ ° E.,	8.70	"
N. 40° 15' E.,	4.20	"

To point in saddle.  
Set an iron post 3 ins. dia., 6 ins. in ground to rock, surrounded by a mound of stone, for 53 mile cor., also angle point, stamped in cap

A P  
53 M W M I R  $\Delta$  in NE. angle  
P L in SW. portion  
1915 in S., from which

A cedar 10 ins. dia. brs. N. 63 $\frac{1}{2}$ ° E., 38 lks., mkd. 53 M W M I R A P B T.

A cedar 14 ins. dia. brs. S. 81° 45' E., 270 lks., mkd. 53 M P L A P B T.

A cedar 8 ins. dia. brs. S. 9 $\frac{1}{2}$ ° W., 148 lks., mkd. 53 M P L A P B T.

No other trees available.

Raise a mound of stone 4 ft. base,

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

3 ft. high, N. of cor.

Cor. falls 3.00 chs. SE. of saddle of 50 lks. W. of a rocky ledge.

Land, heavy rolling.

Soil, rocky, 3rd and 4th rate.

Dense undergrowth of bear grass, Spanish Bayonet and tesota.

Scattered cedar and juniper timber.

-----  
Thence along the summit of the Gila range of mountains and the 54th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

N.  $81\frac{1}{2}^{\circ}$  E., 5.00 chs. Gradually ascending.  
S.  $68^{\circ}45'$  E., 4.50 chs. Up steep ascent.  
S.  $63^{\circ}45'$  E., 1.10 chs. To top of hill. Thence descend.  
N.  $81^{\circ}$  E., 2.50 chs.  
N.  $62^{\circ}$  E., 5.00 chs.  
N.  $7^{\circ}45'$  W., 10.90 chs.  
N.  $24\frac{1}{2}^{\circ}$  E., 5.00 chs. To point in saddle.  
N.  $38^{\circ}$  E., 5.00 chs.  
N.  $68\frac{1}{2}^{\circ}$  E., 1.00 chs. Set an iron post 1 inch dia., 10 ins. in ground, to rock, surrounded by a mound of stone, for  $53\frac{1}{2}$  mile cor., stamped in cap

$53\frac{1}{2}$  M W M I R in N. portion  
P L A P in SE. angle  
1915 in S.

Raise a mound of stone 3 ft. base, 2 ft. high, around cor.

Cor. falls 5.00 chs. NE. of saddle and about 5.00 chs. N. of the end of a very deep ravine, course E. for 15.00 chs.; thence S.

N.  $75^{\circ}$  E., 7.50 chs. **Ascending.**  
N.  $6\frac{1}{4}^{\circ}$  E., 6.00 chs.  
N.  $40\frac{1}{4}^{\circ}$  E., 11.90 chs. to top of round hill.  
E.  $44\frac{1}{4}^{\circ}$  E., 3.20 chs. To top of mountain 10 lks. SE. of cedar tree.  
N.  $30^{\circ}$  W. From this point is the remains of an old monument 20 lks. dist.  
S.  $54^{\circ}$  E., 11.40 chs. Descend along steep E. slope of mountain side.

Set an iron post 3 ins. dia., 12 ins. in ground to rock, surrounded by a mound of stone, stamped in cap

54 M W M I R in NE  
P L in SW  
1915 in S.

Raise a mound of stone 4 ft. base, 3 ft. high, N. of cor.

This cor. falls about 10.00 chs. NW. of, and 100 ft. above, saddle on SE. slope of fairly regular rounded mountain, and about 10.00 chs. N. of the end of a deep ravine, course S.  $30^{\circ}$  W.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Land, heavy rolling.  
Soil, 3rd and 4th rate, rocky.  
Undergrowth of bear grass, tesota and Spanish bayonet.  
Occasional cedar or juniper tree.

-----  
Thence along the summit of the Gila range of mountains  
and the 55th mile of the S. bdy. of the White Mountain  
(or San Carlos) Indian Reservation.

S. 54° E., 18.70 chs.  
S.45°45'E., 21.30 "

Set an iron post 1 inch dia.,  
24 ins. in the ground, to rock,  
for the 54½ mile cor., stamped  
in cap

54½ M W M I R in NE.  
P L in SW.  
1915 in S.

The post is surrounded by a  
mound of stone, also raised a  
mound of stone 3 ft. base, 2 ft.  
high, NE. of cor.

From the cor. -

A cedar 24 ins. dia. brs. N.4½°W.  
177 lks. dist., mkd.

Cross on boulder 2x4x2 ft/ above  
ground, and marked "B O" brs.  
S. 50° W., 7 lks. dist.

No other trees available.

Cor. falls on NW. end of rock  
ledge.

Continue on same bearing -

S.45°45'E., 1.90 "  
S.17°45'E., 2.00 "  
S. 6°15'E., 8.30 "  
S. 21° E., 1.70 "  
S. 35° W., 19.90 "  
S.47°45'W., 5.00 "

Ascending rocky ledge.

From this point MT. Turnbull brs.  
N.89°03'W.

Mon. No. 11 brs. S. 48°17' E.,  
about 4 3/4 miles.

Close work Oct. 28, 1915.

Oct. 29. At 8 a.m., l.m.t., I set  
off 33° 3½' N. on the lat. arc,  
and 13° 12' S. on the decl. arc,  
and determine a meridian with  
the solar.

Thence -

S. 61½° W., 1.20 "

Set an iron post 3 ins. dia. 24  
ins. in ground to rock for 55  
mile cor., also angle point,  
stamped in cap

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

55 M W M I R A P in SE. angle  
P L in NW. portion  
1915 in S.

Raise a mound of stone 4 ft. base,  
3 ft. high, SE of cor.

Land, heavy rolling and mountainous.  
Soil, rocky, 3rd and 4th rate.  
Undergrowth of bear grass, tesota, spanish bayonet, and  
an occasional cedar and juniper tree.

Thence along the summit of the Gila range of mountains  
and the 56th mile of the S. bdy. of the White Mountain  
(or San Carlos) Indian Reservation.

- S. 45° 45' W., 3.00 chs.
- S. 23 1/4° W., 8.40 "
- S. 17 1/4° E., 3.40 "
- S. 14 1/4° W., 7.30 "
- S. 0° 45' E., 8.80 "
- S. 3° 45' W., 5.00 "
- S. 28° W., 4.10 "

Set an iron post 1 inch dia., 13  
ins. in ground to rock, surround-  
ed by a mound of stone, for 55 1/2  
mile cor., stamped in cap

55 1/2 M W M I R in SE. half  
P L in NW. half  
1915 in S., from which

A cedar limb 6 ins. dia. brs.  
S. 69 1/4° W., 230 lks. dist., mkd.  
55 1/2 M P L B T.

No other trees available.

Raise a mound of stone 3 ft. base,  
2 ft. high, SE. of cor.

- S. 32° 45' W., 8.90 "
- S. 31 1/4° E., 5.00 "
- S. 3° W., 7.00 "
- S. 20° W., 7.50 "
- S. 78 1/4° W., 4.00 "
- S. 82 1/4° E., 4.80 "
- S. 25° E., 2.80 "

Over nearly level land.

Up steep ascent.

To the summit of rocky knoll.

Set an iron post 3 ins. dia. 14  
ins. in the ground, to rock, sur-  
rounded by a mound of stone, for  
56 mile cor., also angle point,  
stamped on cap

56 M W M I R A P in NE. angle  
P L in SW. portion  
1915 in S.

Raise a mound of stone 4 ft. base,  
3 ft. high, NE. of cor.

Cor. falls on top of rocky ridge,  
1.00 ch. west of rocky point at  
S. end thereof, and country falls  
off very steep to the S. for 1600  
feet.

Land, rough and heavy rolling.  
Soil, rocky, 4th rate.  
Dense undergrowth of tesota, oak brush, spanish bayonet  
and mesal. No timber.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Thence along summit of the Gila range of mountains and the 57th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

- N. 53 1/4° E., 5.50 chs.
- S. 80 1/4° E., 18.10 "
- N. 76 1/4° E., 4.80 "
- S. 85° 45' E., 5.30 "
- N. 71 1/4° E., 3.40 "
- N. 57 1/4° E., 2.90 "

Set an iron post 1 inch dia., 6 ins. in ground to rock, surrounded by a mound of stone, for 56 1/2 mile cor., stamped in cap

56 1/2 M W M I R in N. half  
P L 1915 in S. half

Raise mound of stone 3 ft. base, 2 ft. high, N. of cor.

- N. 72 1/4° E., .30 "

Top of hill.  
 1.53 lks. further on this same bearing, or N. 72 1/4° E., 1.83 lks. from the 56 1/2 mile cor., is the remains of an old monument, probably No. 10. This is on a little lower ground, and not strictly on the water-shed, but nearly so. The remains of this old mound of stone shows every evidence of having been the monument above described. This probable Mon. No. 10 consists of the remains of a mound of stone, widely scattered. No other hill anywhere in the vicinity answers the description, except one about 1 1/2 miles NE. which is covered with rock ledges on top, but the bearing is very different from Monument line from what this should be and it is nearly two miles dist. from the summit of the Gila Mountains, along which line was supposed to have probably been run. I find no marks upon rocks as evidence that this was old Monument No. 10. Returning to the Angle Point near 56 1/2 mile cor., which was 30 lks. N. 72 1/4° E., therefrom, at the top of a mountain, thence I run

- S. 25° W., 2.40 "
- S. 21° 45' W., 5.50 "
- S. 4 1/4° E., 19.30 "
- S. 20° E., 4.20 "
- S. 69 1/4° E., 3.00 "
- S. 59° E., 5.30 "

Descending over rocks.  
 At 13.30 chs. on this course, is lowest point in saddle.

Set an iron post 3 ins. dia. 14 ins. in ground to rock, surrounded by a mound of stone, for 57 Mile cor., also angle point, stamped in cap

57 M W M I R in NE. portion  
A P P L in SW. angle,  
1915 in S., from which

A cross on malpais rock 3x3x4 ft. above ground, and marked "B O" brs.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

S. 46 1/4° E., 66 lks. dist.

Land, rough and rolling.  
Soil, rocky, 4th rate.  
Undergrowth of tesota, spanish bayonet and oak brush  
and bear grass.  
No timber.

Thence I run along the summit of the Gila Mountains and  
the 58th mile of the S. bdy. of the White Mountain  
(or San Carlos) Indian Reservation.

- S. 44 1/4° E., .90 chs. Along nearly level ridge; very steep on S.
- S. 16° 45' E., 6.30 "
- S. 52° 45' E., 3.50 "
- East 3.00 "
- S. 64 1/2° E., 4.20 "
- S. 55° E., 5.00 "
- S. 26° E., 4.30 "
- S. 42° 45' E., .90 "

Thus far from the cor., the line falls along ridge, which falls off very abruptly to the S. for about 1500 ft. nearly perpendicularly

- N. 87° E., 5.00 "
- N. 70 1/2° E., 6.90 "

Descending to point for 57 1/2 mile cor.  
Set an iron post 1 inch dia., 22 ins. in the ground to rock, surrounded by a mound of stone, for 57 1/2 mile cor., also angle point, stamped in cap

57 1/2 M A P W M I R in N. angle  
P L 1915 in S. portion, from which -

A juniper 6 ins. dia. brs.  
N. 51 1/4° W., 101 lks. dist., mkd.  
57 1/2 M W M I R A P B T.

A juniper 6 ins. dia. brs. S. 11 1/2° E.  
98 lks. dist., mkd. 57 1/2 M P L  
A P B T.

Cor. falls half <sup>way</sup> down sloping ridge.

- N. 58° E., 18.20 "

To near the E. end of a flat knoll covered with scattered cedar and juniper.

- S. 69° 45' E., 5.10 "
- S. 75° 45' E., 12.00 "
- S. 42 1/4° E., 4.70 "

Set an iron post 3 ins. dia., 16 ins. in the ground to rock, surrounded by a mound of stone, for 58 mile cor., also angle point, stamped on cap

58 M W M I R in NE. portion  
A P P L in SW. angle  
1915 in S.

Raise mound of stone 3 ft. base, 2 ft. high, NE. of cor.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Cor. falls in saddle about 3.00 chs. NW. of pasture fence, also 20.00 chs. N. of a rounded knoll, and 3/8 mile W. of pass where road and trail goes over same to spring and leads S. to the town of Pima.

Land, rough.

Soil, rocky, 4th rate.

Undergrowth of tesota, spanish bayonet and mescal.

Scattered juniper and cedar timber with occasional mesquite.

Thence I run along the summit of the Gila Mountains and the 50th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

S. 38½° E., 5.00 chs. At 2.80 chs. on this course fence (pasture fence) brs. S. 89° W. and N. 89° E. for 8.00 chs. Then turns to SE,

S. 21° 45' E., 10.00 "

S. 9½° W., 5.00 "

S. 8½° W., 9.90 " Ascending over trachyte xxx and malpais rocks.

S. 1½° W., 9.40 "

S. 56½° E., 0.70 " Set an iron post 1 inch dia., 16 ins. in ground to rock, surrounded by a mound of stone, for 58½ mile cor., also angle point, stamped in cap

58½ M W M I R in NE. angle  
A P P L in SW. portion

from which -

A cedar 10 ins. dia. brs., N. 65½° W. 174 lks. dist., mkd. 58½ M P L A P B T.

A juniper limb 20 ins. dia. brs. S. 80° 45' E., 146 lks., mkd. 58½ M W M I R A P B T.

S. 43° 45' E., 4.40 " To top of hill.

N. 86½° E., 3.20 " Descending hill.

N. 55° 45' E., 5.90 "

N. 45½° E., 15.30 " To point in saddle. At this point I raise a rock monument 3½ ft. base, and 3 ft. high.

Close work Oct. 29.

Oct. 30, 1915. At 8 a.m., l.m.t., I set off 33° 03' N. on the lat. arc, 13° 52' N. on the decl. arc, and determine a meridian with the solar.

Thence I run

N. 45° E., 11.20 " At 6.40 chs. on this course, the remains of a road which is practically impassable, but is a good trail, brs. NW. and SE., from Pima

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

to a point on Bonita Creek.

Set an iron post 3 ins. dia., 16 ins. in ground to rock, surrounded by a mound of stone, for 59 mile cor., also angle point, stamped in cap

59 M W M I R in NW. portion  
A P P L in SE. angle  
1915 in S.

Raise mound of stone 4 ft. base, 3 ft. high, NW. of cor.

Land, heavy rolling.  
Soil, rocky, 4th rate.  
Undergrowth of bear grass, mescal, Spanish bayonet and scrub oak.  
No timber.

Cor. falls 5.00 chs. NE. of trail and road to springs one mile SE. of this point.

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Thence along the summit of the Gila range of mountains and the 60th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

N. 77 $\frac{1}{4}$ ° E.,	3.50	chs.	Ascending slightly.
S. 72° E.,	3.90	"	To fence, brs. S. 57° E. and N. 57° W.
N. 88° E.,	5.00	"	
S. 76 $\frac{1}{4}$ ° E.,	9.60	"	
N. 73 $\frac{1}{4}$ ° E.,	6.60	"	
N. 81° 45' E.,	2.80	"	To top of rocky ledge, brs. NE. and SW.
S. 53° E.,	7.40	"	To point 15 ft. E. of highest point of ridge.
S. 7 $\frac{1}{2}$ ° E.,	1.20	"	Set an iron post 1 inch dia., 4 ins. in ground to rock, surrounded by a mound of stone, for the 59 $\frac{1}{2}$ mile cor., stamped in cap

59 $\frac{1}{2}$  M W M I R in E.  
P L in W.  
1915 in S., from which

a cross on rock ledge mkd. "B O" brs. S. 10° E., 4 lks.

Raise a mound of stone 3 ft. base, 2 ft. high, E. of cor.

Cor. falls 30 ft. SE. of a rock ledge 20 ft. long E. and W., and 8 ft. high.

S. 23° E.,	5.00	"	Descending slightly.
S. 10 $\frac{1}{2}$ ° E.,	3.10	"	Ascending to rocky point. From this point a fine spring of pure water of very large flow, brs. S. 2° E., about $\frac{1}{2}$ mile, and is the regular watering place of hundreds of cattle, which graze upon the reservation and land south thereof.

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

North of this point for many miles the grazing is excellent in quality and quantity, whereas, south of the boundary line it is very poor for many miles in every direction.

S. 77° 45' E., 8.70 chs. To high rocky point.  
S. 20 1/2° E., 16.40 " To point in saddle 200 ft. below last point.

S. 5° 45' E., 4.60 "  
S. 43° E., 2.20 " Set an iron post 3 ins. dia., 4 ins. in the ground to rock, surrounded by a mound of stone, for 60th mile cor., also angle point, stamped in cap

60 M W M I R A P in NE. angle  
P L in SW. portion,

from which -

A juniper 9 ins. dia. brs. N. 7° E., 103 lks. dist., mkd. 60 M W M I R A P B T.

No other trees available.

Raise mound of stone 3 ft. base, 2 ft. high, NE. of cor.

Land, rough and mountainous.  
Soil, rocky, 4th rate.  
Undergrowth of tesota, oak, mescal and bear grass, with an occasional scattered juniper and cedar tree.  
Cor. falls on flat rocky ground 20 ft. W. of rocky ledge which is 9 ft. high, and faces west.

Thence along the summit of the Gila range of mountains and the 61st mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

S. 62 1/2° E., 2.00 chs.  
S. 44° E., 7.70 "  
S. 26° E., 10.40 "  
S. 52 1/2° E., 11.60 ". At this point; on Oct. 30, 1915, I set off 13° 56' S. on the decl. arc, and at apparent noon observe the sun on the meridian; the resulting lat. being 33° 02'.

S. 14 1/2° E., .80 "  
S. 55 1/2° E., 7.50 " Set an iron post 1 inch dia., 3 ins. in the ground to rock, surrounded by a mound of stone, for 60 1/2 mile cor., also angle point, stamped in cap

60 1/2 M W M I R in NE. portion  
A P P L in SW. angle  
1915 in S.

Raise a mound of stone 3 ft. base, 2 ft. high, NE. of cor.

From the cor. -

A juniper 20 ins. dia. brs. N. 88 1/2° E.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains		
	161 lks., mkd. 60½ M W M I R A P B T.	
	No other trees available.	
	Cor. falls 60 ft. W. of rocky outcrop at foot of very steep slope from peak 100 yds. SE.	
S. 33½° E.,	6.30 chs.	Ascending 200 ft. over very rocky land.
S. 61°45' E.,	2.70 "	Ascent is less steep.
S. 54½° E.,	3.00 "	
S. 40½° E.,	1.30 "	
S. 17°45' E.,	3.60 "	
S. 49½° E.,	4.00 "	
S. 63° E.,	5.80 "	To top of rocky peak.
S. 12½° E.,	2.70 "	Nearly level land.
S. 42° E.,	9.70 "	4.00 chs. on this course, is sad- dle in rocky ridge.
S. 32½° E.,	.90 "	Set an iron post 3 ins. dia., 26 ins. in ground, for 61 mile cor., also angle point, stamped in cap
		61 M W M I R A P in NE. angle P L in SW. portion 1915 in S., from which
		A juniper 22 ins. dia. brs. S. 74° 45' E., 244 lks. dist., mkd. 61 M W M I R A P B T.
		No other trees available.
		Raise a mound of stone 3 ft. base, 2 ft. high, NE. of cor.
		Land, rough and mountainous, lying most of the way along a rocky ridge, gradually ascending. Soil, none. Rocks and ledges. Scrub oak brush, tesota and mescal. No timber, except an occasional juniper or cedar tree.

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Thence along the summit of the Gila range of mountains and the 62nd mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.		
S. 56½° E.,	5.00 chs.	Descending over rocks and ledges.
S. 35° E.,	5.10 "	Ascending over rocks and ledges.
S. 10½° E.,	8.00 "	To point on NW. point of rocky ledge. Looking to the S. about 15 miles, a north and south road, south of the Gila River, and probably a section line, would intersect this line about 200 ft. east of the present station.
S. 52½° E.,	4.40 "	
S. 54°45' E.,	1.10 "	This station is about 60 ft. east of a north and south road, previ- ously alluded to.
S. 74° E.,	3.50 "	To point in saddle.
S. 42½° E.,	5.00 "	On rocky point.
S. 16½° E.,	5.00 "	On flat ridge.
S. 63° E.,	2.90 "	Set an iron post 1 inch dia., 12

Survey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

ins. in ground to rock, surrounded by a mound of stone, for 61½ mile cor., stamped in cap

61½ M W M I R in NE. portion  
P L in SW.  
1915 in S., from which

A juniper 6 ins. dia. brs.  
N. 70° 45' W., 75 lks. dist., mkd.  
61½ M P L B T.

A juniper 24 ins. dia. brs.  
N. 52° 45' E., 212 lks. dist., mkd.  
61½ M W M I R B T.

Cor. falls in flat land on the W. edge of a bunch of scattered junipers.

- S. 49° 45' E., 5.00 chs.
- S. 69° 45' E., 4.60 "
- N. 50° 45' E., 4.50 "
- N. 85½° E., 9.80 "
- S. 73½° E., 3.50 "
- S. 59½° E., 3.00 "
- S. 9½° E., 2.30 "
- S. 25½° E., 1.60 "
- S. 39° 45' E., 1.50 "
- S. 75½° E., 2.00 "
- S. 14° E., 2.20 "

To point on rock ledge N. of very deep rocky canyon, course SW.

At 5.00 chs. on this course, begin steep ascent of mountain. Ascend 200 ft. up very steep mountain side.

Ascend 200 ft. up very steep mountain side.

Set an iron post 3 ins. dia., 7 ins. in ground to rock, surrounded by a mound of stone, for 62 mile cor., also angle point, stamped in cap

62 M W M I R in E. portion  
A P P L in W. angle  
1915 in S.

Raise a mound of stone 3 ft. base, 2 ft. high, E. of cor.

Cor. falls about 2.00 chs. N. of the highest point of mountain.

Land, very rough and mountainous.  
Soil, rocky, 4th rate.  
Occasional dense undergrowth of scrub oak.  
A few scattered cedar and juniper trees.

Thence I run along the summit of the Gila range of mountains and the 63rd mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation.

- S. 11½° E., 2.25 chs. To Monument No. 11.  
This point while it answers perfectly to the general description thereof given by Riecker, which is "One of the steepest and highest peaks and is the center of a separate group of mountains ris-

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

ing from above its surroundings" in no wise agrees in bearing and distance with that given from Mon. No. 10, nor does anything exist which in anyway seems to correspond even remotely to Monuments 12 and 13 in appearance, bearing or distance from this monument.

A rock monument 6 ft. high and 5 ft. base, occupies the highest point and which, if not the original monument No. 11, is probably at the same place. No trace of marks could be found on surrounding rocks. This monument was used as a signal for Bryce Station in the primary triangulation of the U. S. Geological Survey and the bronze triangulation tablet marking the station is S. 31 1/2 E., 20 lks. dist. therefrom. From this point there is nothing visible which would appear to answer the description of Monuments 12 and 13, and as the boundary line must somewhere in the vicinity leave the crest of the Gila Mountains, which from here have a general direction of S. 30° E., I temporarily discontinue line at this point and endeavor if possible to locate Monuments Nos. 12, 13, 14, 15 and 16 from the general description thereof, this reconnaissance extending over a period of about one week.

Close work Oct. 30, 1915.

I met Mr. J. W. Mettise, who has a lease on reservation, his grazing district being roughly described as lying between Mon. No. 8 on the west, and from the trail west of Mon. No. 11, northward to Bonita Creek. He showed me the old bearing tree to Monument No. 8, but no other signs of the corner were found. This tree has been generally regarded by stockmen as being on the reservation line. It is however probably a mile distant from the crest of the divide or the summit of the Gila Mountains. Mr. Mettise states that all monuments east of this point were destroyed by parties whose interests centered in the Hat Ranch, also that the stone on Slaughter Mountain (Mon. No. 9) was carried bodily over to and placed on one of the Twin Buttes a couple of miles NE. of its proper location, and is probably there at present. He also states that Riecker's description of the position of Mon. No. 8 as being near the site of the Apache Massacre is incorrect, same being some two miles SE. of Slaughter Mountain or more than four miles from Mon. No. 8.

Mr. "Topsy" Johnson who has resided on Bonita Creek for over twenty years and who has a fruit and cattle ranch below and adjoining the Hat Ranch, upon being questioned, stated:

"It is common knowledge that all monuments East of Slaughter Mountain were moved by one Parks, who at one time owned the Hat Ranch; buying it for \$53,000, selling off most of the cattle, and then, by trickery, the ranch itself to an El Paso outfit for \$83,000. He states that a man by the name of Ben Park tore down Mon. No. 15 in 1897, and came down therefrom to Jim Harris' camp at "The tanks" and talked about it. Harris is said to be now living at Springville.

The county surveyor, name unknown, was surveying in 1896 for Albert Warren, who had a lease on the reservation in the vicinity and pointed out to Johnson a stone just above a cottonwood tree bearing marks "W M", which he said was at Mon. No. 14. He ran out the line through

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

the upper field of the Hat Ranch and found all monuments. He said the monuments had all been torn down but he found them all. The "I R" was cut off the stone by Geo. Olney, about 1890."

Mr. Johnson was requested to show me this stone and was unable to do so. A very thorough search was made for it, and the cottonwood bearing tree, for some distance above the point indicated to me by Mr. Johnson, and for about two miles below, but no trace whatever could be found. Furthermore, if the point indicated by Johnson was correct the bearing from it to Mon. No. 15 would be about East  $2\frac{1}{2}$  miles, instead of N.  $57^{\circ} 21' E.$  a similar distance. One circumstance only would indicate the possibility of Johnson's indicated position being correct, and that is the presence of "some cliff dwellings which are in the perpendicular wall on east side of canyon and somewhat south of this monument". If this were the original position of the corner, then there would have been little need to destroy the corners, as the Hat Ranch buildings would have been south of the reservation, although the grazing land goes very much further northward.

From the position shown me by Johnson the position of the central one of these three cliff dwellings brs. S.  $55^{\circ} E.$ , 10.90 chs.

Further, I attempt to establish Riecker's station 473, shown on page 58 of his notes as filed in the General Land Office. On a high point sloping in all directions, and northerly from Mon. No. 15, which is now standing, I find a rock monument 4 ft. base, 5 ft. high, which I conclude may be at the station mentioned and is certainly closely in the vicinity thereof as proven by the following bearings which I take therefrom:

Mon. No.	brs.	Bearing	Distance	Riecker's value
11		S. $64^{\circ} 33' W.$	$9\frac{1}{2}$ miles	S. $65^{\circ} 38' W.$
"	9	N. $76^{\circ} 53' W.$	$14\frac{1}{2}$ "	
"	12	S. $51^{\circ} 33' W.$	6 "	S. $48^{\circ} 01' W.$
"	13	S. $41^{\circ} 45' W.$		S. $30^{\circ} 15' W.$
"	14	S. $30^{\circ}$ to $40^{\circ} W.$		S. $17^{\circ} 40' W.$
"	15	S. $12^{\circ} 20' E.$		S. $9^{\circ} 27' E.$
"	16	Hidden by No. 15		S. $11^{\circ} 30' E.$

Monuments 12, 13 and 14 are not visible as prominent objects, or identifiable, from this position, nor from Monuments 15 and 11, both of which are undoubtedly identified, therefore the bearings to No. 11 and No. 15 only can be considered.

From calculation, the point from which my bearings would have to be taken to coincide with those given by Riecker, would be about 460 ft. further E., and 950 ft. further N. This place is so much lower that everything S. and SW. thereof is invisible. I am therefore forced to conclude that the difference in our bearings is due to the result of some incorrect computation by Riecker, and his observations must have been taken from a place very near, and probably at, this monument, owing to its prominent location. From this point, Mon. No. 16 is entirely hidden by the mountain upon which Mon. 15 is erected. Also Mon. No. 14 would not only be hidden by the rolling hills in its vicinity but as it would be also in a deep canyon with perpendicular walls, which a few chains back from the

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

creek are several hundred feet high, it can on no account be visible from anywhere in this vicinity, and furthermore the bearing thereto is from 15° to 30° too far east, and very much than that if it were in the position claimed by Johnson and near the prominent cliff dwellings. I am therefore forced to conclude that as at least two or more of Riecker's bearings could not have possibly been taken from this point, and for topographic reasons from no other point either, he obtained his bearings from some kind of computation which I am unable to discover and which was erroneous, and this conclusion is further strengthened by the fact that the angle given between Mon. No. 15 visible, and Mon. No. 16 invisible, is practically correctly computed. The probability is that some stations were correctly sighted from one end of the base which determined them, and incorrectly from the other end thereof. This is certainly true in the case of Mon. No. 11, which has a bearing given as South from Station 707.66 which station is some 6 miles north of Mon. No. 11, and on ground so low that Mon. No. 11 was not visible therefrom, owing to nearer and almost equally high peaks in its vicinity. The result of these investigations proves the unreliability of any locations made by Riecker from intersections on peaks, except in the case where these were isolated from those of similar appearance such that no error in sighting from different points could result.

The care exercised by Riecker, however, was such that the relative location of some of his points is correct. For example, he gives distance between Mon. Nos. 15 and 16 as S. 16° 50' E., 100.77 chs., while an approximate triangulation executed by me shows same to be S. 17° 04' E., 98.58 chs., a reasonable close agreement. The hill on which Mon. No. 16 is situated is undoubtedly identified by me from its general description, although the position of the monument was not, no marks being discovered, but the position selected by me cannot be more than a few links in error, if the monument was on the highest point, as it presumably was. Mon. No. 17 was positively identified as was also Mon. No. 15, and yet the distance and bearing from Mon. No. 16 to Mon. No. 17 as obtained by me N. 20° 25' E., 218.22 chs., differs greatly from that given by Riecker - N. 36° 22' E., 268.54 chs.

From the foregoing it appears that Monuments Nos. 12, 13 and 14 are not recoverable, and therefore a restoration of the boundary should be either by proportional distances, or as no vested rights are involved, an attempt should be made to place the boundary as nearly as possible where it was called for in the original intent which established it.

The following computation shows the resulting bearing of Mon. No. 15 from Mon. No. 11, as computed from Riecker's notes:

			North	South	East
Mon. 11 to Mon. 12	S. 70° 03' E.,	232.72		79.40	218.75
" 12 " "	13 S. 48° 19' E.,	167.12		111.14	124.81
" 13 " "	14 N. 55° 15' E.,	194.65	110.95		159.93
" 14 " "	15 N. 57° 21' E.,	187.11	100.95		157.54
Net result			21.36		661.03

which corresponds to a bearing of N. 88° 09' E.

Resurvey

South Boundary of White Mountain (or San Carlos) Indian Reservation

I now return to Station No. 11 and find the true bearing is N. 76° 05' E. As before mentioned there is nothing to the eastward of Mon. 11, which in any way fulfills the description of Monuments Nos. 12 and 13, nor can Mon. No. 14 be found along Bonita Creek, and to establish by proportional distances would require a line passing over exceedingly rugged country with angle points in unfavorable and not easily recovered locations. Therefore as the water shed of the Gila Mountains lies in the general direction of the boundary as given by Riecker, I follow same for the present.

Nov. 5, 1915. At 1 p.m., I set off 33° 01' on the lat. arc, 15° 31' S. on the decl. arc, and determine a meridian with the solar at old Monument No. 11, heretofore described.

Thence I continue along the 63rd mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation, following the summit of the Gila Mountains for the present, but before leaving this point I take the following bearings:

Mt. Turnbull brs. S. 83° 37' W.

Supposed position of Mon. No. 10 brs. N. 53° 13' W.

Mon. No. 9 brs. N. 37° 26' W.

Mon. No. 15 brs. N. 76° 05' E.

S. 31½° E.,	00.20	chs.	To brass tablet of U. S. Geological survey.
S. 60½° E.,	4.30	"	
S. 53½° E.,	10.10	"	At 5.00 chs. on this course, is foot of rocky bluff. Thence asc.
S. 48½° E.,	23.15	"	Set an iron post 1 inch dia., 12 ins. in ground to rock, for 62½ mile cor., stamped in cap

62½ M W M I R in NE.  
P L in SW.  
1915 in S.

Raise a mound of stone 3 ft. base, 2 ft. high, NE. of cor.

S. 50½° E., 7.70 " At this point the Gila Range turns about S. 30° E., but as there is a spur trending to the eastward and in the general direction of a "Proportional boundary" I follow same, as now noted.

N. 73½° E., 11.20 " Along rocky and nearly level summit.

N. 77½° E.,	1.60	"
S. 64½° E.,	10.00	"
S. 87° 45' E.,	3.50	"
N. 48° 45' E.,	6.00	"

Set an iron post 3 ins. dia., 14 ins. in ground to rock, surrounded by a mound of stone, for the 63 mile cor., also angle point, stamped in cap

63 M W M I R in NW. portion  
A P P L in SE. angle  
1915 in S.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

Raise a mound of stone 3 ft. base, 2 ft. high, NW. of cor.

Land, rough and mountainous.  
Soil, rocky, 4th rate.  
Dense undergrowth of scrub oak, mescal, tesota and Spanish bayonet.  
No timber.

Cor. falls NE. of highest point of ridge about 5.00 chs. dist., and about 5.00 chs. SW. of the end of ridge at about same level between two rock outcrops.

Thence along the 64th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation, along a spur eastward from the Gila range of mountains.

N. 57 1/2° E., 5.00 chs.  
N. 21 1/2° E., 11.36 "  
N. 78 1/2° E., 15.80 "  
S. 65 1/2° E., 7.84 "

Along very steep descent.  
Continuing very steep descent.

Set an iron post 1 inch dia., 6 ins. in ground, to rock, surrounded by a mound of stone, stamped in cap

63 1/2 M W M I R in NE.  
P L in SW.  
1915 in S., from which

A pine 6 ins. dia. brs. N. 5° E., 10 lks. dist., mkd. 63 1/2 M W M I R B T.

A pine 10 ins. dia. brs. S. 65 1/2° E. 91 lks. dist., mkd. 63 1/2 M P L B T.

Cor. falls 15 ft. NE. of highest point of ridge, 1/4 mile NE. of a natural gateway through rocky ledge on E. side of mountain.

S. 65 1/2° E., .80 "  
N. 65° E., 9.40 "  
S. 87 1/2° E., 5.65 "  
N. 43° E., 2.80 "  
N. 83° 45' E., 7.10 "  
S. 88° 45' E., 1.10 "  
S. 33 1/2° E., 5.00 "

Thence through heavy timber.  
Ascending to rocky ledge.

Leave heavy pine timber, thence through scattered pine, over jagged tops of rock ledges.

S. 31° 45' E., 8.15 "

Descending very steep S. slope.

Set an iron post 3 ins. dia., 22 ins. in ground to rock, surrounded by a mound of stone, for 64 mile cor., also angle point, stamped on cap

64 M W M I R A P in NE. angle  
P L in SW. portion  
1915 in S., from which

A pine 8 ins. dia. brs. N. 15 1/2° E., 180 lks. dist., mkd. 64 M W M I R A P B T.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

A pine 5 ins. dia., brs. S. 37° E.,  
351 lks. dist., mkd. 64 M W M I R  
A P B T.

A pine 14 ins. dia. brs. S. 35° E.,  
358 lks. dist., mkd. 64 M P L A P  
B T.

A pine 6 ins. dia., brs. N. 54½° W.,  
29 lks. dist., mkd. 64 M P L A P  
B T.

Raise a mound of stone 4 ft. base,  
3 ft. high, NE. of cor.

Land, rough and mountainous.  
Soil, rocky, 4th rate.  
Undergrowth, scrub oak, tesota and mescal.  
Timber, Pine, cedar and juniper.

Close work Nov. 5.

Nov. 6, 1915. Rain all day.

Nov. 8, 1915. At 8 a.m., l.m.t., I set off 33° 01'  
on the lat. arc, 16° 20' S. on the decl. arc, and  
determine a meridian with the solar at the 64 mile cor.

Thence along the 65th mile of the S. bdy. of the White  
Mountain (or San Carlos) Indian Reservation, along a  
spur eastward from the Gila range of mountains.

- S. 36° E., 4.00 chs.
- S. 22 1/8° E., 4.90 "
- S. 67½° E., 6.35 "
- N. 23° E., 8.92 "
- S. 88½° E., 1.30 "
- N. 54° E., 2.50 "
- N. 6° 45' W., 1.50 "
- North 5.03 "
- N. 79½° E., 3.10 "
- N. 27° E., 4.40 "

To trunk of dead tree on rocky  
almost inaccessible crag.

Set an iron post 1 inch dia., 20  
ins. in the ground, ~~fix~~ to rock,  
surrounded by a mound of stone, for  
64½ mile cor., stamped in cap

64½ M P L in SE.  
W M I R in NW.  
1915 in S., from which

A pine 4 ins. dia. brs. N. 42° W., 35  
lks. dist., mkd. 64½ M W M I R  
B T.

A pine 5 ins. dia. brs. N. 64½° E.,  
29 lks. dist., mkd. 64½ M P L  
B T.

- N. 27° E., 1.00 "
- N. 63° E., 5.90 "
- N. 52½° E., 2.70 "
- N. 58½° E., 3.70 "
- N. 20½° E., 2.00 "

Boundary

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

- N. 83°45' E., 2.00 chs.
- N. 19½° E., 6.00 "
- N. 6½° E., 1.60 "
- N. 8° E., 2.70 "
- N. 80°45' E., 11.30 "
- S. 76°45' E., 1.10 "

To top of rocky hill.  
Set an iron post 3 ins. dia.,  
3 ins. in ground to rock, sur-  
rounded by a mound of stone,  
for 65 mile cor., also angle  
point, stamped on cap

65 M W M I R in N.  
A P P L 1915 in S.,

from which -

A cedar 12 ins.dia., brs. S.26½°E.  
71 lks. dist., mkd. 65 M A P  
P L B T.

A cedar 30 ins. dia.brs. N. 3° E.,  
120 lks. dist., mkd. 65 M W M  
I R A P B T.

A cedar limb 12 ins.dia.brs.  
N. 40° E., 87 lks.dist., mkd.  
65 M W M I R A P B T.

A pine 5 ins.dia.brs. S.84½°E.,  
165 lks. dist., mkd. 65 M P L  
A P B T.

Land, very rough and mountainous.  
Soil, rocky, 4th rate.  
Undergrowth of scrub oak, tesota and mescal.  
Scattered pine, cedar and juniper timber.

Cor. falls 1.00 ch. SE. of top of hill, and ¼ mile NW. of  
a prominent rock ledge.

Thence I run along the 66th mile of the S. bdy. of the  
White Mountain (or San Carlos) Indian Reservation, along  
a spur eastward from the Gila range of mountains.

- N. 89° E., 2.00 chs.
- N.27°45'E., 14.30 "
- N.57°45'E., 2.50 "
- N. 48½° E., 2.00 "
- N. 59° E., 5.00 "

Down steep NE. slope 11 chs.  
Thence ascending.

On Nov. 8, 1915. At apparent noon  
I set off 16° 25' S. on the decl.  
arc, and determine a meridian  
with the solar; the resulting  
lat. is 33° 01' , which is about  
correct.

- N. 32½° E., 3.10 "
- S. 78½° E., 11.10 "

Set an iron post 1 inch dia.,  
for 65½ mile cor., also angle  
point, stamped on cap

65½ M W M I R A P in N. angle  
P L 1915 in S. portion

from which -

A pine 18 ins.dia.brs.N.36°E.,  
158 lks. dist., mkd. 65½ M W M

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

I R A P B T.

A pine 6 ins. dia. brs. S.  $89\frac{1}{4}^{\circ}$  E.,  
157 lks. dist., mkd. 65 $\frac{1}{2}$  M P L  
A P B T.

Cor. falls about about  $\frac{1}{2}$  ch. E.  
of divide. About  $\frac{3}{4}$  mile below  
here and to the south, and 15  
chs. above junction of canyons,  
is a permanent spring of good  
water, the only known water in  
this vicinity.

N.  $81\frac{1}{4}^{\circ}$  E., 2.60 chs.N.  $65^{\circ}$  E., 12.20 "N.  $80^{\circ}22'$  E., 5.40 "N.  $64^{\circ}33'$  E., 18.80 "From this point Mon. No. 11 brs.  
S.  $80^{\circ}55'$  W.

Ascending.

Ascending very steep W. slope.

Set an iron post 3 ins. dia., 7  
ins. in the ground, to rock, sur-  
rounded by a mound of stone, for  
66 mile cor., stamped on cap

66 M W M I R in NW.

P L in SE.

1915 in S., from which

A pine 7 ins. dia. brs. N.  $66^{\circ}45'$  W.  
174 lks. dist., mkd. 66 M W M I R  
B T.

No other trees available.

Cor. falls near top of ridge  
which brs. N.  $40^{\circ}$  W. and S.  $40^{\circ}$  E.,  
and nearly midway bet. ~~xxx~~ high  
points SE. and the end of the  
ridge NW.

Land, rough and mountainous.

Soil, rocky, 4th rate.

Scattered pine, juniper and cedar, with some scrub oak  
brush. Good grazing land.

Thence along the 67th mile of the S. bdy. of the White  
Mountain (or San Carlos) Indian Reservation, continu-  
ing along the water-shed, previously described.

N.  $64^{\circ}43'$  E., .60 chs.S.  $48^{\circ}45'$  E., 5.70 "S.  $38^{\circ}$  E., 14.10 "S.  $57^{\circ}45'$  E., 8.30 "S.  $77^{\circ}$  E., 2.20 "S.  $69\frac{1}{4}^{\circ}$  E., 5.00 "S.  $76^{\circ}$  E., 1.10 "S.  $69\frac{1}{2}^{\circ}$  E., 3.00 "

To top of ridge.

To top of rocky point.

Begin steep ascent.

To rocky point.

To top of level rocky point.

Set an iron post 1 inch dia., 12  
ins. in ground to rock, surround-  
ed by a mound of stone, for 66 $\frac{1}{2}$   
mile cor., also angle point,  
stamped in cap

66 $\frac{1}{2}$  M W M I R A P in NE.

P L in SW.

1915 in S.

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

Raise mound of stone 3 ft.  
base, 2 ft. high, NE. of cor.

Cor. falls 1.00 ch. E. of rocky  
gap on rocky ledge and  $\frac{1}{4}$  mile  
W. of SE. end of mountain.

S. 80 $\frac{1}{2}$ ° E., 6.20 chs.  
S. 81° E., 5.50 chs.  
S. 67° 45' E., 3.20 "  
East 3.10 "

Ascending slightly.

To SE. end of hill. This is on  
a very prominent point. No signs  
of Mon. No. 12 could be found  
after diligent search, but the  
bearing to this point from  
Riecker's station No. 473 agrees  
with that given by him to Mon.  
No. 12, and while I do not accept  
it as such there is some probab-  
-ity it may be that point.

N. 25° E., 3.40 "

Descending along side hill to  
saddle.

S. 72° 40' E., 18.60 "

Descending abruptly to point for  
67 mile cor.

Set an iron post 3 ins. dia., 12  
ins. in ground to rock, surround-  
ed by a mound of stone, for 67  
mile cor., stamped in cap

67 M W M I R in NE.  
P L in SW.  
1915 in S., from which

A pine 16 ins. dia. brs. N. 57° 45' E.  
93 lks. dist., mkd. 67 M W M I R  
B T.

A pine 12 ins. dia. brs. S. 3 $\frac{1}{2}$ ° W.,  
131 lks. dist., mkd. 67 M P L  
B T.

A pine 6 ins. dia. brs. S. 8° W.,  
37 lks. dist., mkd. 67 M P L  
B T.

A pine 6 ins. dia. brs. N. 46 $\frac{1}{2}$ ° W.,  
63 lks. dist., mkd. 67 M W M I R  
B T.

Cor. falls about 2.00 chs. NW. of  
saddle on steep slope.

Land, rough and mountainous.  
Soil, rocky, 4th rate. - Good grazing.  
Some scattered cedar pine and juniper timber.  
Tesota, Spanish bayonet, and scrub oak brush.

Close work Nov. 8.

Nov. 9 - 1915.

Thence along the 68th mile of the S. bdy. of the White  
Mountain (or San Carlos) Indian Reservation, along the  
divide or water-shed of the spur eastward from the Gila  
Mountains, previously described.

At 8 a.m., l.m.t., I set off 33° 01' N. on the lat. arc,  
16° 38' S. on the decl. arc, and determine a meridian  
with the solar.

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

S. 72° 40' E., 2.54 chs. To point in saddle by a cattle trail which crosses divide at this point, and I here raise a rock monument 3 ft. base, 3 ft. high, E. of trail.

S. 73° 45' E., 10.24 " Up steep ascent to peak.  
 S. 16½° E., 8.42 " Along steep descent of ridge.  
 S. 29½° E., 7.80 " Along nearly level ridge to rocky point.

S. 51° 45' E., 11.00 " Descending slightly 5.00 chs.; then ascending to the point for the 67½ mile cor. also angle point. Set an iron post 1 inch dia., 8 ins. in ground to rock, surrounded by a mound of stone, stamped on cap

67½ M W M I R A P in N. angle  
 P L 1915 in S. portion

from which -

A pine 5 ins. dia. brs. N. 6¼° W., 32 lks. dist. ~~x12x1kax1ax1~~, mkd. 67½ M W M I R A P B T.

A pine 5 ins. dia., brs. S. 6¼° W., 53 lks. dist., mkd. 67½ M P L A P B T.

Cor. falls near end of prominent ridge ¾ of a chain W. of the highest point.

S. 79° E., 1.60 chs. To rocky point.  
 N. 81½° E., 3.90 " Descending.  
 S. 51½° E., 2.00 "  
 S. 57° 45' E., 14.00 " Descending abruptly 8.00 chs. Then ascending.

S. 53° E., 7.30 "  
 S. 84° E., 2.70 "  
 S. 88½° E., 1.00 "

Ascending to rocky point. This angle point is on the summit of a high timbered peak answering most nearly to that of Mon. No. 13 as seen from Riecker's station 473 and which agrees closely with the bearing Riecker gives thereto. Furthermore the bearing from here to Mon. 15 is within 4° of that obtained from Riecker's original notes, and the distance I subsequently obtain of 389.85 chs. agrees closely with Riecker's value of 381.76 chs., - a closer agreement than has in several instances occurred between certainly identified monuments. No signs of a former monument however were discernible.

Set an iron post 3 ins. dia., 26 ins. in ground, for Angle Point on the S. bdy. of White Mountain (or San Carlos) Indian Reservation, stamped in cap

67 M 72.50 chs. A P W M I R  
 in N. angle  
 P L 1915 in S., from which

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

A pine 12 ins. dia. brs. N. 57 1/2° W.,  
65 lks. dist., mkd. 67 M 72.80  
A P W M I R B T.

A pine 5 ins. dia. brs. N. 3° E.,  
43 lks. dist., mkd. 67 M 72.80  
A P W M I R B T.

From this point I take bearings  
as follows:

The center of a very high rock  
pinnacle 25 miles dist., brs.  
S. 1° 03' W.

A high prominent point on the  
Gila range brs. S. 22° 55' W.

A high point or peak on an off-  
shoot from the Gila range brs.  
S. 50 1/2° W., about 2 1/2 miles dist.

Mon. No. 11 brs. N. 86° 35' W.

The House of Worship of cliff  
dwellings, N. 41° 07' E.

In description of Mon. No. 13,  
Riecker states "From which Mon.  
No. 14 brs. N. 55° 02' E." Then  
in the description following he  
gives "From Mon. No. 13 to Mon. No.  
14, N. 55° 15' E., etc., 194.65 . .  
from which Mon. No. 15 brs. N. 55°  
02' E. " Then in the next line  
he says "From Mon. No. 14 to Mon.  
No. 15, N. 57° 21' E., 187.11 chs.  
I do not understand these two  
bearings given in each case but  
it would seem evident that he in-  
tended to run in a straight line  
between Mons. 13 and 15, and no  
reason being apparent for deflect-  
ing the line at Mon. 14, I run  
straight towards Mon. No. 15 on a  
transit line with double fore  
and back sights, descending over  
very steep NE. slope, through  
cedar, pinon, etc., with a bear-  
ing of N. 59° 49' E., in a straight  
line towards Monument No. 15 on  
the east side of Bonita creek,  
as established by Riecker in the  
survey of 1883. Descending along  
steep NE. side of mountain.

7.50 chs. To point for 68 mile cor.,  
Set an iron post 3 ins. dia., 26  
ins. in the ground, stamped in cap

68 M W M I R in NW.  
P L in SE.  
1915 in S., from which

A pine 6 ins. dia. brs. S. 3° E.,  
54 lks. dist., mkd. 68 M P L B T.

A cedar limb 6 x 10 ins., brs.  
N. 62 1/2° W., 59 lks. dist., mkd.  
68 M W M I R B T.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

A pine 14 ins.dia.brs. N.  $5\frac{1}{4}^{\circ}$  W.,  
117 lks. dist., mkd. 68 M W M I R  
B T.

A cedar 10 ins.dia.brs. S.  $23\frac{1}{2}^{\circ}$  E.,  
65 lks. dist., mkd. 68 M P L B T.

Cor. falls on steep NE. slope 200 ft.  
below top of hill.

Land, mountainous and rocky.  
Soil, rocky, 4th rate.  
Scrub oak, mescal and tesota undergrowth.  
Heavy pine and cedar timber on last  $12\frac{1}{2}$  chs. of mile.

Nov. 9, 1915. At this point I set off  $16^{\circ} 42'$  S. on  
the decl. arc, and at apparent noon observe the sun  
on the meridian; the resulting lat. is  $33^{\circ} 0'$ .

Thence I run

N.  $59^{\circ} 49'$  E, along the 69th mile of the South bdy. of  
the White Mountain (or San Carlos) Indian Reservation,

Continuing steep descent of NE. slope of hill, through  
pine and cedar timber, and scrub oak.

30.00 Leave timber brs. SE. and NW.

40.00 Set an iron post 1 inch dia., 26 ins. in ground, for  
 $68\frac{1}{2}$  mile cor., stamped in cap

$68\frac{1}{2}$  M W M I R in NW.  
P L in SE.  
1915 in S., from which

A cedar 6 ins.dia. brs. N.  $21\frac{1}{2}^{\circ}$  E., 118 lks. dist.  
Mkd.  $68\frac{1}{2}$  M W M I R B T.

A pine 12 ins. dia. brs. S.  $12\frac{1}{4}^{\circ}$  E., 71 lks. dist.  
Mkd.  $68\frac{1}{2}$  M P L B T.

Cor. falls 25 lks. W. of a drain, course N.  $20^{\circ}$  E.,  
which in  $2\frac{1}{2}$  chs. enters ravine, course E.

40.25 Small drain, course NE.

42.20 Spur ridge, brs. N. 1.00 ch.

45.13 Wash, course N.  $23^{\circ}$  E., 20 lks. wide.

49.00 Spur, ridge, brs. N. 1.00 chs.

56.00 Canyon, course SE., 30 lks. wide. in bottom.

Ascend S. slope.

71.50 Ridge, brs. E. and W. Descend NE. slope.

78.00 Gulch, 50 lks. wide, course E.

Ascend SE. slope.

80.00 Set an iron post 3 ins. dia., 10 ins. in ground to rock,  
for 69 mile cor., stamped on cap

2521

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

69 M W M I R in NW.  
P L in SE.  
1915 in S., from which

A pine 20 ins. dia. brs. N. 21½° E., 83 lks. dist.  
mkd. 69 M W M I R B T.

A pine 6 ins. dia. brs. S. 39½° E., 188 lks. dist.  
mkd. 69 M P L B T.

A cedar limb 8 ins. dia. brs. S. 45° E., 40 lks. dist.  
mkd. 69 M P L B T.

A pine 8 ins. dia. brs. S. 62½° W., 339 lks. dist.  
mkd. 69 M W M I R B T.

Cor. falls in large amphitheater in quartzite rock  
on SE. slope, 50 ft. above ravine and 1 ch. W.  
of short ravine which brs. S. 30° E., in rock  
ledges.

Land, rough and mountainous.  
Soil, rocky; 3rd and 4th rate.  
Undergrowth, Scrub oak, mesquite and tesota.  
Timber. Scattered pine and cedar.  
Good grazing.

Thence

N. 59° 49' E. along the 70th mile of the South bdy. of  
the White Mountain (or San Carlos) Indian Reservation.

Ascending SE. slope.

4.67 Spur brs. S., 2.00 chs.

Descend E. slope.

17.47 Slope changes to NE.

21.10 Gulch, course E., 30 lks. wide.

Ascend S. slope.

28.31 Spur ridge brs. E.

Descend NE. slope.

33.50 Gulch, course SE., 50 lks. wide.

Ascend SW. slope.

35.65 Wire fence, brs. N. and S.

40.00 Set an iron post 1 inch dia., 24 ins. in the ground to  
rock, for 69½ mile cor., in a mound of stone, stamped  
on cap

69½ M W M I R in NW.  
P L in SE.  
1915 in S.

Raise a mound of stone 3 ft. base, 2 ft. high, NW. of  
cor.

43.23 Ridge, brs. SE. and NW.

Descend NE. slope.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

52.00 Wash, course N., 20 lks. wide.

Ascend NW. slope.

55.60 Spur brs. N., 3.00 chs.

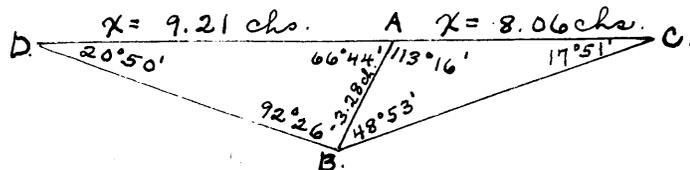
Descend NE. slope.

62.28 On W. bank of Bonita Creek 80 ft. above bed of stream  
I build a rock monument 3 ft. base, 3 ft. high, to  
mark point on line.

62.32 At this point direct measurement becomes impossible.

I therefore set two flags on line, the first flag "A" in bed of Bonita Creek, and the second flag "D" on summit of the slope on E. side of Bonita Creek. I measure a base from A. to B. of 328 lks. to the northward. After measuring the angle "C" at this point, I measure the angles at "A" "B" and "D" between each of the other points, the resulting triangles formed being as follows:

"C" 17° 51'  
"A" 113° 16'  
"B" 48° 53'



In the triangle A-B-D, the angles are as follows:

"A" 92° 26'  
"B" 48° 53'  
"D" 20° 50'

In the first triangle formed, A-B-C, the required distance A-C is equal to  $A-B \times \sin B \div \sin C$

or by logarithms:

A-B = 0.515874  
 $\sin B = 9.877010$   
 $\sin C = 9.486467$   
 $\frac{0.906417}{0.906417} = 8.06 \text{ chs.} = \text{added to } 62.32 = 70.38$

70.38 A point in bed of Bonita Creek.

November 9, 1915. At this point, observe Polaris at 4h 51.9m p.m., l.m.t., and 4h 56.9m p.m., l.m.t., with telescope direct and reversed and mark the points upon the ground about 5.00 chs. N. of my station, the resulting azimuths of Polaris at these instants of time are 1° 20.6' E. and 1° 20.4' E. of north respectively.

From the middle point I measure the angle to my back-sight at flag "C", and find the same to be 120° 10'. This corresponds to a bearing of S. 59° 50' W., or the correct bearing of my line at this point.

Close work Nov. 9.

Nov. 10- Rain all day.

Nov. 11, I resume work at this point, as follows:

From the point which is 70.38 chs. on the 70th mile

Resurvey of  
 South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
	I measure back 5.53 chs., or to a point 64.85 chs.
64.85	Foot of perpendicular bluff 80 ft. high, of conglomerate rock.
	Thence forward on line to the triangulation point in bed of creek.
65.45	Edge of bank of stream.
70.38	Flag "A" in bed of Bonita Creek.
	in the triangle A-B-D, the required distance
	$A-B = A-B \times \sin B + \sin D,$
	or by logarithms :
	A-B = 0.515874
	Sin B = 9.999606
	Sin D = <u>9.551024</u>
	A-D = 0.964458 = 9.21, which added to 70.38 chs. =
79.59	79.59 chs. - Flag "D" on top of bluff on E. side of Bonita Creek.
	I continue measurement however from Flag "A" as far as possible.
77.35	Bonita Creek, 20 lks. wide, course S. 30° W., water about 6 ins. deep; clear and pure.
79.04	Foot of 60-ft. perpendicular conglomerate bluff brs. N. 60° E. and S. 60° W.
79.59	Flag "D" at point of triangulation, on E. bluff of Bonita Creek.
	Seeing that the true point for the 70th mile cor. will fall in unsafe place, at
79.65	Set an iron post 3 ins. dia., 8 ins. in ground to rock, for W.C. to the 70 mile cor., stamped in cap
	70 M W M I R in NW. P L in SE 1915 in S W C in NE
	Raise a mound of stone 4 ft. base, 3 ft. high, around post.
	From the cor. -
	A pine 8 ins. dia. brs. N. 64½° E., 287 lks. dist. Mkd. 70 M P L W C B T.
	A pine 8 ins. dia., brs. S. 25° E., 79 lks. dist. Mkd. 70 M P L W C B T.
	Cor. falls on first bench of bluff 70 ft. above Bonita Creek, and 50 lks. W. of the spur canyon about 3.00 chs. long from the S.
	This bench is 60 ft. below the top of bluff, 2.00 chs.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
	SE., and about 20 lks. SE. of the extreme point of spur canyon 70 ft. above creek.
	From the W.C. a cabin brs. N. $7\frac{1}{4}^{\circ}$ W., <sup>on W. side of Creek</sup> about 10.00 chs.
80.00	True place for cor. falls in unsafe place, in the short spur of ravine, course N.  Land, rough and broken. Soil, rocky; 3rd rate. Undergrowth, none. Timber, Scattered cedar and juniper. Very large sycamore trees along creek.
-----	
	From true point for 70th mile cor., I run N. $59^{\circ} 50'$ E. along the 71st mile of the South bdy. of the White Mountain (or San Carlos) Indian Reservation. Ascending SW. slope.
9.00	Rock spur brs. N., 1.00 ch.  At this point the bluffs are so broken and rough, that direct measurement or triangulation is impracticable. I therefore take distance by stadia, the distance being 6.95 chs. To point on N. bank of conglomerate canyon, course W., thence by chaining.
29.66	Top of ridge brs. E. and W. Descend NE. slope.
40.00	True place for $70\frac{1}{2}$ mile cor. falls in unsafe place in wash, course W., 20 lks. wide.
41.00	Set an iron post 1 inch dia., 14 ins. in the ground to rock, surrounded by a mound of stone, for W.C. to the $70\frac{1}{2}$ mile cor., stamped in cap  70 $\frac{1}{2}$ M W M I R in NW. P L in SE. W C in SW. 1915 in S., from which  A cedar limb 4 ins. dia. brs. S. $61^{\circ}$ E., 45 lks. dist. Mkd. 70 $\frac{1}{2}$ M P L W C B T.  A cedar 6 ins. dia. brs. S. $68\frac{1}{2}^{\circ}$ W., Mkd. 70 $\frac{1}{2}$ M W M I R W C B T.
41.50	Spur brs. NW.
42.50	Draw, course NW.
46.00	Spur brs. NW.
48.50	Wash, course NW.
56.90	Thence along NW. slope.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains	
66.90	Descend N. slope.
72.50	Wash, course NW., 20 lks. wide. Ascend SW. slope.
80.00	Set an iron post 3 ins. dia., 12 ins. in ground to rock, surrounded by a mound of stone, for 71 mile cor., stamped in cap  71 M W M I R in NW. P L in SE. 1915 in S.  Raise mound of stone 3 ft. base, 2 ft. high, NW. of cor.  Cor. falls near top of ridge on NW. slope.  Land, heavy rolling. Soil, rocky; 4th rate; good grazing. Undergrowth, none. Timber, Scattered cedar.
-----	
	N. 59° 51' E. along the 72nd mile of the South bdy. of the White Mountain (or San Carlos) Indian Reservation.  Ascending SW. slope.
3.00	Slope changes to NW.
13.00	Spur, brs. NW. Descend NE. slope.
27.50	Wash, course W., 20 lks. wide. Ascend S. slope.
40.00	Set an iron post 1 inch dia., 6 ins. in ground to rock, surrounded by a mound of stone, for 71½ mile cor., stamped in cap  71½ M W M I R in NW. P L in SE. 1915 in S.  Cor. falls on SW. end of point of red rock bluff, which brs. SW.
40.36	Rocky spur brs. SW. Descend SE. slope.
55.00	Gulch, course SW., 50 lks. wide. Ascend steep W. slope.
60.64	Ascend ridge, brs. SW.
80.00	Set an iron post 3 ins. dia., 6 ins. in ground to rock, surrounded by a mound of stone, for the 72 mile cor., stamped on cap  72 M W M I R in NW. P L in SE. 1915 in S., from which  A pine 10 ins. dia. brs. S. 25½° E., 253 lks. dist. mkd. 72 M P L B T.

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

A mesquite 5 ins. dia. brs. S.  $73\frac{1}{2}^\circ$  W., 101 lks. dist.  
Mkd. 72 M W M I R B T.

No other trees available.

Raise mound of stone 3 ft. base, 2 ft. high, NW. of cor.

Land, Heavy rolling.

Soil, rocky; 4th rate.

Timber, Scattered juniper, mesquite and pine.

N.  $59^\circ 51'$  E. along the 73rd mile of the South bdy. of the White Mountain (or San Carlos) Indian Reservation.

Ascending ridge, brs. SW., and along the SE. slope thereof.

12.10 Descend Steep SE. slope.

15.50 Wash, course S., 20 lks. wide; ascend SW. slope.

34.65 At this point I set flag for triangulation as country from this point becomes so excessively rough and broken that direct measurement is impossible.

On top of bluff I set a flag "A" on line, and measure a base "A-B", 2.72 chs.

The three angles of the triangle as observed are:

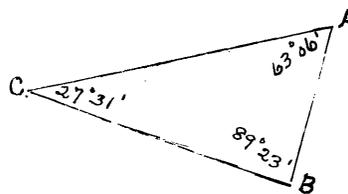
"A"  $63^\circ 06'$

"B"  $89^\circ 23'$

"C"  $27^\circ 31'$

The required distance "A-C" is therefore equal to

$$\frac{A-B \times \sin B}{\sin C}$$



Or by logarithms:

A-B = 0.434569  
Log Sin B 9.999975  
" " C 9.664648

Log A-C = 0.769908 = 5.89 chs., which added to 34.65

chs., or point of triangulation at Flag "C" = 40.54

Flag at point of triangulation "A", or 54 lks. past

true place for  $72\frac{1}{2}$  mile cor., which, falling in unsafe place for cor., at

40.59 Set an iron post 1 inch dia., 13 ins. in the ground to rock, surrounded by a mound of stone, for W.C. to the  $72\frac{1}{2}$  mile cor., stamped in cap

W C in SW.  
 $72\frac{1}{2}$  M W M I R in NW.  
P L in SE.  
1915 in S., from which

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

A pine 8 ins. dia. brs. N. 19 $\frac{1}{2}$ ° W., 25 lks. dist.  
Mkd. 72 $\frac{1}{2}$  M W M I R W C B T.

A cedar brs. S. 18° E., 91 lks. dist.  
Mkd. 72 $\frac{1}{2}$  M P L W C B T.

The remaining distance to the top of the mountain, or at Monument No. 15, is too broken and rough for direct measurement.

I therefore again triangulate by measuring a second base from the Flag "A" northerly to point "D", observing a flag at Mon. No. 15, or "E" from the two ends of the base which is 972 lks. in length.

Three angles of the triangle are as follows:

"A" 68° 25' 20"

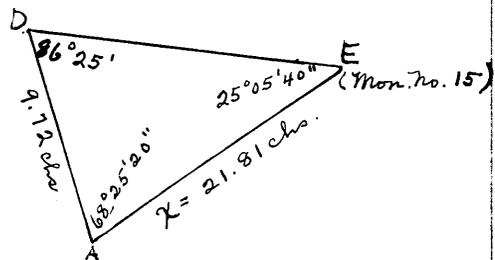
"D" 86° 25'

"E" 25° 05' 40"

and the required distance A-D =  $\frac{A-E \times \sin E}{\sin D}$

Or by logarithms:

A-E	=	2.987666
Log A	=	9.999189
Log Sin E	=	9.627480
		<u>3.328631</u>



The required logarithmic distance A-E therefore equals 3.328631, which equals 21.81 chs., which added to 40.54 = 62.35 chs.

62.35 At Flag "E" which is at old Mon. No. 15.

Close work Nov. 11, 1915.

Although Mon. No. 15 was said to have been destroyed by Ben Parks in 1897, it is now in a good state of preservation either having been rebuilt by some person unknown, or possibly Mon. No. 16 might have been the one destroyed. If this is not the original Mon. No. 15, it is closely in the same position for I find marks upon a rock 1 ft. wide, 2 ft. long, and 1 ft. above ground, S. of MONument - the letters "W M I R". These marks are so faint that only by the most careful examination can they be discerned, and they might well have been overlooked by the party who destroyed the first monument. The number "15" said to have been marked upon the stone described in original notes, could not be deciphered, but there is no doubt that this is the correct point. As the Monument and old marks are in a good state of preservation, I do not set an iron post at this point, but upon a stone 2 ft. high 3 ft. long, and 2 ft. wide, E. of monument, I cut the letters "A P" for angle point. The old stone brs. South 6 lks. from Mon. No. 15. No bearing trees are possible at this point, but I take the following bearings:

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

Angle Point at 67 miles, 72.50 chs., brs. S. 79° 52' W.,  
4 miles, 69.85 chs.

Old Monument No. 11, brs. S. 76° 10' W., about 10 miles  
dist.

Old Monument No. 17, brs. N. 43° 28' E., about 1½ miles  
dist.

Monuments Nos. 15 and 16 are on the same divide or water-  
shed, and it is apparent that I have the choice of  
two methods for reestablishing this portion of the  
boundary, either by a straight line or by following  
the watershed.

As very little difference in area will result from the  
choice of either method, and as in all cases hereto-  
fore the divide has been considered the boundary,  
although Riecker only established station points  
thereon, and considered them as straight lines, I take  
it such was the procedure in this case. Furthermore  
the line establishing the boundary by straight lines  
between the two monuments would be across such a rugged  
country, broken by canyons, and a succession of inacces-  
sible ledges, that no question remains as to which  
method of procedure should be followed.

I therefore run along the balance of the 73rd mile of  
the S. bdy. of the White Mountain (or San Carlos)  
Indian Reservation, along the watershed.

S. 63½° E., 7.30 chs.  
S. 60½° E., 3.70 "  
S. 50½° E., 5.60 "  
S. 52° E., 1.05 "

80.00 Set an iron post 3 ins. dia., 10 ins. ground to rock,  
surrounded by a mound of stone, for 73 mile cor.,  
stamped in cap

73 M W M I R in NE.  
P L in SW.  
1915 in S.

Raise a mound of stone 3 ft. base, 2 ft. high, NE. of  
cor.

Land, rough and mountainous.

Soil, rocky, 4th rate.

Scrub oak, tesota, mesquite and Spanish Bayonet,  
and scattered cedar timber.

Cor. falls 1.00 ch. SE. of rock ledge outcrop.

Thence along the 74th mile of the S. bdy. of the White  
Mountain (or San Carlos) Indian Reservation, along  
the watershed bet. monuments Nos. 15 and 16.

S. 50° E., 13.80 chs. Descending for first 5.00 chs.  
Thence ascending on saddle.  
S. 6° W., 2.80 " Descending.  
S. 19½° W., 2.50 " To top of rocky ledge.  
S. 11½° W., 4.60 " Along steep descent.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

S.  $40\frac{1}{2}^{\circ}$  W., 2.70 chs. Over nearly level ground.  
 S.  $49\frac{1}{2}^{\circ}$  W., 4.80 " Descending abruptly to point in saddle, just N. of trail bearing E. and W.  
 S.  $72\frac{1}{2}^{\circ}$  W., 5.20 " Ascending slightly to low peak.  
 S.  $17\frac{1}{2}^{\circ}$  E., 3.70 " Set an iron post 1 inch dia., 12 ins. in ground to rock, surrounded by a mound of stone, for 73 $\frac{1}{2}$  mile cor., also angle point, stamped on cap

73 $\frac{1}{2}$  M P L A P in N. angle  
 W M I R 1915 in S. portion

Raise mound of stone 3 ft. base, 2 ft. high, S. of cor.

Cor. falls in low saddle a few chains south of trail bearing E. and W.

Nov. 12. At apparent noon, at this point, I set off  $17^{\circ} 33'$  S. on the decl. arc, and observe the sun on the meridian; the resulting lat. is  $33^{\circ} 03'$  N.

S.  $32\frac{1}{2}^{\circ}$  E., 7.20 chs.  
 S.  $17\frac{1}{2}^{\circ}$  E., 4.90 "  
 S.  $13\frac{1}{2}^{\circ}$  E., 4.00 "  
 S.  $6\frac{1}{2}^{\circ}$  W., 8.90 " Up steep ascent to top of rocky ledge.  
 S.  $2\frac{1}{2}^{\circ}$  E., 6.70 " Ascending steep slope to rocky point.  
 S.  $8\frac{1}{2}^{\circ}$  E., 2.80 " "  
 S.  $18^{\circ}$  E., 2.80 " "  
 S.  $52\frac{1}{2}^{\circ}$  W., 2.70 " Set an iron post 3 ins. dia., 26 ins. in the ground, for 74th mile cor., stamped on cap

74 M W M I R in SE.  
 P L in NW.  
 1915 in S., from which

A juniper 8 ins. dia. brs. N.  $81\frac{1}{2}^{\circ}$  E., 148 lks. dist., mkd. 74 M W M I R B T.

A juniper 5 ins. dia. brs. S.  $10^{\circ}$  W., 152 lks. dist., mkd. 74 M W M I R B T.

A juniper 20 ins. dia. brs. S.  $85\frac{1}{2}^{\circ}$  W., 165 lks. dist., mkd. 74 M P L B T.

A juniper 6 ins. dia. brs. N.  $37\frac{1}{2}^{\circ}$  E., 117 lks. dist., mkd. 74 M P L B T.

Land, rough and mountainous.

Soil, rocky; 4th rate.

Timber, Scattered juniper.

Thence along the 75th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation, following the divide or watershed between old monuments Nos. 15 and 16.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

S. 46 $\frac{1}{2}$ ° W., 6.00 chs.  
 S. 11 $\frac{1}{2}$ ° E., 3.20 "  
 S. 38 $\frac{1}{2}$ ° E., 3.40 "  
 S. 57 $\frac{1}{2}$ ° E., 2.70 "  
 S. 65° E., 5.00 "  
 S. 39°52'E., 7.31 "

Diligent search was made at this point and in the vicinity for remains of old Mon. No. 16, but no trace whatever could be found, although it is apparent that a monument has at sometime been built in the vicinity, as many rocks are scattered around which would indicate a monument at one time at this point. It is quite possible that this is the monument which was noted as having been destroyed by Ben Parks in 1897, instead of Monument No. 15. The general description of the hill upon which Mon.No.16 was situated answers the description of this hill exactly. Furthermore the distance and bearing from this point to old Mon. No. 15 agree within  $\frac{1}{4}$ ° in bearing and about 2.00 chs. in distance as given by Riecker. I obtain the distance by a latitude and departure computation of my traverse line, checking same by a local triangulation from a short base. There is no question that this is the point upon which old Monument No.16 should have been erected. I assume it to be the point, and as no remains of old Monument now exist, I set an iron post 3 ins. dia., 6 ins. in ground to rock, surrounded by a mound of stone 5 ft. base, 2 $\frac{1}{2}$  ft. high, stamped on cap

W M I R A P in N. angle  
 P L 1915 in S. portion

from which -

A juniper 18 ins.dia.brs. S.45°E.,  
 90 lks. dist., mkd. A P W M I R  
 B T.

No other trees available.

Mon. No. 15 brs. N.17°03' W.

Mon. No. 17 brs. N.20°25'E., in-  
 stead of N. 36°22' E., 268.54  
 chs.

I subsequently discover from my measurement that this distance is about 50 chs. in error and the bearing is about 17° different from the bearing as determined by me.

From this point I continue along the 75th mile of the S. bdy. of the White Mountain (or San Carlos) Indian Reservation, in a direct

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

line towards old Mon. No. 17, which is plainly visible, and this is the only portion of the S. bdy. as established by me which will coincide with that as established by Riecker in the survey of 1883.

N.20°25'E., 12.39 chs. Descending steep N. slope.  
11.64 chs. on this course, bed of canyon course E.  
Set an iron post 1 inch dia., 12 ins. in ground to rock, surrounded by a mound of stone, for 74½ mile cor., stamped on cap

74½ M W M I R in NW.  
P L in SE.  
1915 in S.

Raise mound of stone 3 ft. base, 2 ft. high, NW. of cor.

Cor. falls about 20 ft. above drain on N. side thereof and near foot of ridge.

50.12 Ridge brs. E. and W. Ascend N. slope.

80.00 Set an iron post 3 ins. dia., 6 ins. in ground to rock, surrounded by a mound of stone, for 75 mile cor., stamped in cap

75 M W M I R in NW.  
P L in SE.  
1915 in S., from which

A juniper 14 ins.dia.brs. S. 26¼° W., 33 lks. dist.  
Mkd. 75 M W M I R B T.

An oak 16 ins.dia.brs. N. 63¼° E., 103 lks. dist.  
Mkd. 75 M P L B T.

No other trees available.

Raise mound of stone 3 ft. base, 2 ft. high, NW. of cor.

Land, mountainous.

Soil, rocky; 4th rate.

Timber, Scattered juniper and scrub oak trees and brush.

Thence

N. 20° 25' E. along the 76th mile of the South bdy. of the White Mountain (or San Carlos) Indian Reservation.

Descending N. slope.

11.80 Gulch, course NE., 50 lks. wide; trail, <sup>in gulch</sup> from Bonita

Creek to Morenci. Ascend over broken SE. slope.

Close work Nov. 14, 1915.

Resurvey of  
South Boundary of White Mountain (or San Carlos) Indian Reservation

South

On Nov. 15, 1915. I resume work at this point and continue along transit line, N. 20° 25' E.

20.55 Top of spur brs. E. Descend NE. slope.

24.00 Wash, course E., 30 lks. wide. Ascend SW. slope.

32.00 Spur brs. E., Descend NE. slope.

37.00 Wash, course E., 10 lks. wide. Ascend S. slope.

40.00 Set an iron post 1 inch dia., 8 ins. in ground to rock, surrounded by a mound of stone, for 75½ mile cor., stamped in cap

75½ M W M I R in NW.  
P L in SE.  
1915 in S.

Raise a mound of stone 3 ft. base, 2 ft. high, W. of cor.

Cor. falls on top of ridge bearing E. and W.

49.00 Ridge, brs. E. and W. Descend NE. slope.

72.32 Thence along W. slope.

80.00 Set an iron post 3 ins. dia., 24 ins. in the ground to rock, surrounded by a mound of stone, for 76 mile cor., stamped in cap

76 M W M I R in NW.  
P L in SE.  
1915 in S., from which

An oak 5 ins. dia. brs. N. 48½° E., 61 lks. dist.  
Mkd. 76 M P L B T.

An oak 4 ins. dia. brs. S. 65½° E., 65 lks. dist.  
Mkd. 76 M P L B T.

No other trees available.

Build a mound of stone 3 ft. base, 2 ft. high, NW. of cor.

Cor. falls 1½ chs. E. of and 20 ft. above drain in ravine course N. 15° E., and about 6 chs. N. of where the same ravine curves from SW.

Land, rough and mountainous.

Soil, rocky; 4th rate.

Timber, Scrub oak; also dense undergrowth of scrub oak brush, mescal and tesota.

Good grazing.

Thence

N. 20° 25' E. along the 77th mile of the South bdy. of the White Mountain (or San Carlos) Indian Reservation.

Ascending slight W. slope.

8.15 Thence along W. slope.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

12.15 Descend NW. slope.

31.25 Canyon, course NE., 30 lks. wide.  
Ascend SE. slope.

40.00 Set an iron post 1 inch dia., 14 ins. in the ground to rock, surrounded by a mound of stone, for 76½ mile cor., stamped in cap

76½ M P L in SE.  
W M I R in NW.  
1915 in S., from which

A cedar 4 ins. dia. brs. S. 38° W., 96 lks. dist.  
Mkd. 76½ M W M I R B T.

No other trees available.

Raise mound of stone 3 ft. base, 2 ft. high, W. of cor.

Cor. falls on SE. slope, 75 ft. above bed of ravine and 2½ chs. NW. thereof.

53.67 Spur brs. E., 10.00 chs.  
Descend N. slope.

64.75 Canyon, course E., 50 lks. wide in bottom.  
Trail in canyon brs. E. and W.  
Ascend steep S. slope.

80.00 Set an iron post 3 ins. dia., 12 ins. in the ground to rock, surrounded by a mound of stone, for 77th mile cor., stamped on cap

77 M P L in SE.  
W M I R in NW.  
1915 in S., from which

A juniper 14 ins. dia. brs. N. 72½° E., 113 lks. dist.  
Mkd. 77 M P L B T.

A pine 6 ins. dia. brs. S. 18½° E., 120 lks. dist.  
Mkd. 77 M P L B T.

A pine 8 ins. dia. brs. S. 59½° W., 183 lks. dist.  
Mkd. 77 M W M I R B T.

A pine 6 ins. dia. brs. N. 25° W., 174 lks. dist.  
Mkd. 77 M W M I R B T.

Cor. falls on steep SE. slope.

Land, very rough and mountainous.  
Soil, Rocky; 4th rate.  
Timber, Scattered pine, juniper and scrub oak. Dense undergrowth of catclaw, scrub oak, tesota and mescal.

Thence

N. 20° 25' E. along the 78th mile of the South Bdy. of the White Mountain (or San Carlos) Indian Reservation.

Ascending steep S. slope.

3.40 Slope changes to SE.

Resurvey of

South Boundary of White Mountain (or San Carlos) Indian Reservation

Chains

5.83 Center of old Mon. No. 17, which is a rock monument in good state of preservation, 4 ft. base, 6 ft. high, marked on flat rock 4 ft. N. of the center of the station "50 + 51.95"; on flat rock S. of the center of the monument "W M I R"; on flat rock about 8 ft. NE. of the center of monument "Greenlee County"; on flat rock about 12 ft. SW. of center of monument "Gra. Co." for Graham County.

This is undoubtedly old Mon. No. 17, as established by Riecker for the SE. cor. of the White Mountain (or San Carlos) Indian Reservation.

From this Monument, <sup>old</sup> Mon. No. 15 brs. S. 43° 30' W., 152.31 chs. I determine this distance as follows:

From my instrument station on line between the 75½ and 76 mile cors., at point 50.31 chs., I measure the angle between Old Mon. No. 15 and Mon. No. 17, and find the same to be 112° 23'. At Mon. No. 17 I measure the angle between this point and my backsight at Station 50.31, heretofore described, and find the angle to be 23° 05'. The third angle, at Mon. No. 15, is measured as 44° 32'. The distance from my point at 75 miles 50.31 chs. to this monument, or 77 miles 5.83 chs., is 115.52 chs.

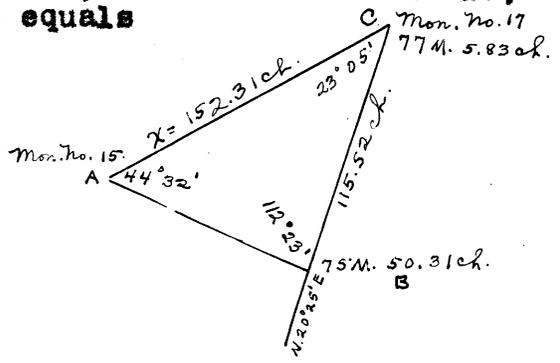
Designating the angles of this triangle as "A" at Mon. No. 15, "B" at point on line, "C" at Mon. No. 17, the required distance A-C equals

$$\frac{B-C \times \sin B}{\sin A}$$

Or by logarithms:

Log C-B	=	2.062657
Sin D 112° 23'	=	9.965981
Log Sin A	=	9.845919

A-C = 2.182719 or 152.31 chs.



This distance as obtained by me agrees exactly with the distance as obtained by Wm. B. Kimmel, U.S. Surveyor, in another triangulation using another base.

As this monument is in a perfect state of preservation and contains a large number of reference points, I do not set an iron post alongside, but I note the following bearings:

Mon. No. 16 brs. S. 20° 25' W.,

Mon. No. 15 brs. S. 43° 30' W.

The SE. cor. of the White Mountain (or San Carlos) Indian Reservation, as established by Wm. F. Kimmel, U. S. Surveyor, in 1913, is only visible by raising a flag above same, which I do, and find the bearing to be N. 20° 47' E., agreeing with that as given by Mr. Kimmel.

Thence from old Mon. No. 17, which is now an angle point on my line, at 77 miles, 5.83 chs., I deflect my line, and continue

N. 20° 47' E. with measurement from the 77 mile cor.

## Resurvey of

## South Boundary of White Mountain (or San Carlos) Indian Reservation

## Chains

Descending slight NE. slope.

10.82 Edge of bluff or ledge brs. N. and S.  
Thence along broken SE. slope.

31.00 Head of wash, course E.  
Ascend SE. slope.

40.00 Set an iron post 1 inch dia., 18 ins. in ground to rock,  
surrounded by a mound of stone, for 77½ mile cor.,  
stamped on cap

77½ M P L in SE.  
W M I R in NW.  
1915 in S. , from which

A cross, marked on a rock 6x12x8 ft. above ground,  
with letters "B O" brs. S. 17° W., 39 lks. dist.

6x10x6 ft.  
Another rock, marked "B O" with cross, brs. N. 39° W.,  
31 lks. dist.

43.63 Intersect the SE. cor. of the White Mountain (or San Car-  
los) Indian Reservation, as established by Wm. B. Kim-  
mel, U. S. Surveyor, in 1913, which is an iron post  
3 ins. dia., set 2 ft. in the ground, stamped on cap,

1913 on S. rim  
W M I R in W.  
P L in E.  
SE COR in NW., from which

A juniper 5 ins. dia. brs. S. 73½° E., 13 lks. dist.  
(As described)

A juniper 4 ins. dia. brs. S. 83½° W., 37 lks. dist.  
(Instead of S. 85½° W.)

Each tree marked W M I R SE COR P L B T.

In addition to other marks, I place on top of cap

77 M 43.63 chs.

I also add the same marks on each bearing tree.

Close work Nov. 15, 1915.

H. L. Baldwin,  
Topographer.

## CERTIFICATE OF ASSISTANTS.

We, the undersigned, hereby certify upon honor that we assisted, to the best of our skill and ability, H. L. Baldwin, Topographer, acting in the capacity of - - - U. S. Surveyor, during the periods and in the capacities stated opposite our several signatures, in surveying all those parts or portions of the boundary of the White Mountain Indian Reservation, including also the surveys of the Base Line through Rgs. 16, 17, 18 E., the exterior boundaries of T. 3 S., Rgs. 18 and 19 E., and the subdivision of T. 3 S., R. 19 E.,

of the Gila and Salt River Base & Meridian, in the State of Arizona

which are represented in the foregoing field notes as having been executed by him, and under his direction; and that said survey has been, in all respects, to the best of our knowledge and belief, well and faithfully executed.

NAME.	PERIOD OF SERVICE.		CAPACITY.
	BEGUN.	ENDED.	
Thos. Behler	Aug. 4,	Aug. 14	Rodman
J. H. Young	Aug. 9,	Aug. 14	Moundman
Raymond Laurence	July 30,	Sept. 10	Chainman
Frank Gasser	Aug. 19,	Oct. 2,	Moundman
Earl McGilvrey	Sept. 10,	Oct. 2	Rodman
Harry Lander, Jr.	Oct. 11,	Oct. 15,	Rodman
Donald McIntosh	Oct. 12,	Dec. 3,	Moundman & Chainman
Billie Kindelay	Sept. 27,	Dec. 3,	Moundman
S. H. Pollard	July 27,	Dec. 3,	Chainman
Frank Gasser	Nov. 21,	Dec. 3,	Moundman
John Devera	Sept. 27,	Dec. 3,	Chainman
Julian B. Downey, Jr.	Oct. 26,	Dec. 3,	Chainman & Rodman
Herbert Forbes	Nov. 17,	Dec. 3,	Rodman
E. K. Blair	March 27	July 30	Rodman
R. B. Mixon	Aug. 3,	Aug. 5,	Moundman
Gaylord Layton	Aug. 20,	Oct. 8,	Chainman & Rodman
Emett McMurren	Oct. 2,	Oct. 9,	Moundman
R. G. Shepardson	Oct. 11,	Oct. 14,	Chainman

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

H. L. Baldwin, Topographer

U.-S.-Surveyor.

FINAL OATH OF UNITED STATES SURVEYOR.

I, H. L. Baldwin, Topographer, U.S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the Commissioner of the General Land Office by A.F. Dunnington, Topographer in Charge of Indian Surveys bearing date of the day of Jan. 6 & Oct. 28, 1915, I have well, faithfully, and truly, in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the boundary of the White Mountain Indian Reservation, including also the surveys of the Base Line through Rgs. 16, 17 and 18 E., the exterior boundaries of T. 3 S., Rgs. 18 and 19 E., and the subdivision of T. 3 S., R. 19 E. of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the Commissioner of the General Land Office and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

H. L. Baldwin
Topographer U.S. Surveyor

Subscribed by said H. L. Baldwin, and sworn to before me
this fifth day of February 1916

Wilbur F. Stone
United States Commissioner
for Colorado.



Wilbur F. Stone
United States Commissioner
District of Colorado.

APPROVAL.

OFFICE OF THE COMMISSIONER OF THE GENERAL LAND OFFICE
OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Washington, D.C., June 12, 1916.

The foregoing field notes of the survey of the amended south boundary of the White Mountain, or San Carlos, Indian Reservation, from the new SW. Cor. to the mouth of Hawk Canyon, and the resurvey of the South Boundary of the White Mountain, or San Carlos, Indian Reservation, from the Initial Point (one mile south of Camp Goodwin) north to the summit of the Gila Mountains, thence southeasterly to the Southeast corner of the reservation -

executed by H.L. Baldwin, Topographer, under direction of A.F. Dunnington, Topographer in Charge of Indian Surveys, January 6, 1915, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

(Signed) Clay Tallman,
U.S. Surveyor General
Commissioner of the General Land Office

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

Commissioner of the General Land Office