

# FIELD NOTES

## OF THE RETRACEMENT OF

Part of Amended South boundary of White Mountain Indian Reservation  
between  
the 11th and 14th mile monuments, and between the 15th and 17<sup>th</sup> mile  
monuments thereon

## OF THE RESURVEY OF

Part of Amended South boundary of White Mountain Indian Reservation  
between the 14th and 15th mile monuments thereon

## AND OF THE SURVEY OF

Parts of the East and West boundaries,

and

Part of the Subdivision Lines

of

Township 4 South, Range 20 East

Of the Gila and Salt River Base and Meridian,

In the State of Arizona

### EXECUTED BY

William E. Hiester, U.S. Surveyor

and

Theodore Vander Meer, U.S. Transitman

In the capacity of U. S. Surveyor, under Special Instructions dated June 23, 1926, issued by the District Cadastral Engineer to govern surveys included in Group No. 141 Arizona, which were approved by the Commissioner of the General Land Office, July 13, 1926, and Assignment Instructions dated November 17, 1928.

Retracement  
Resurvey and Survey commenced March 7, 1929

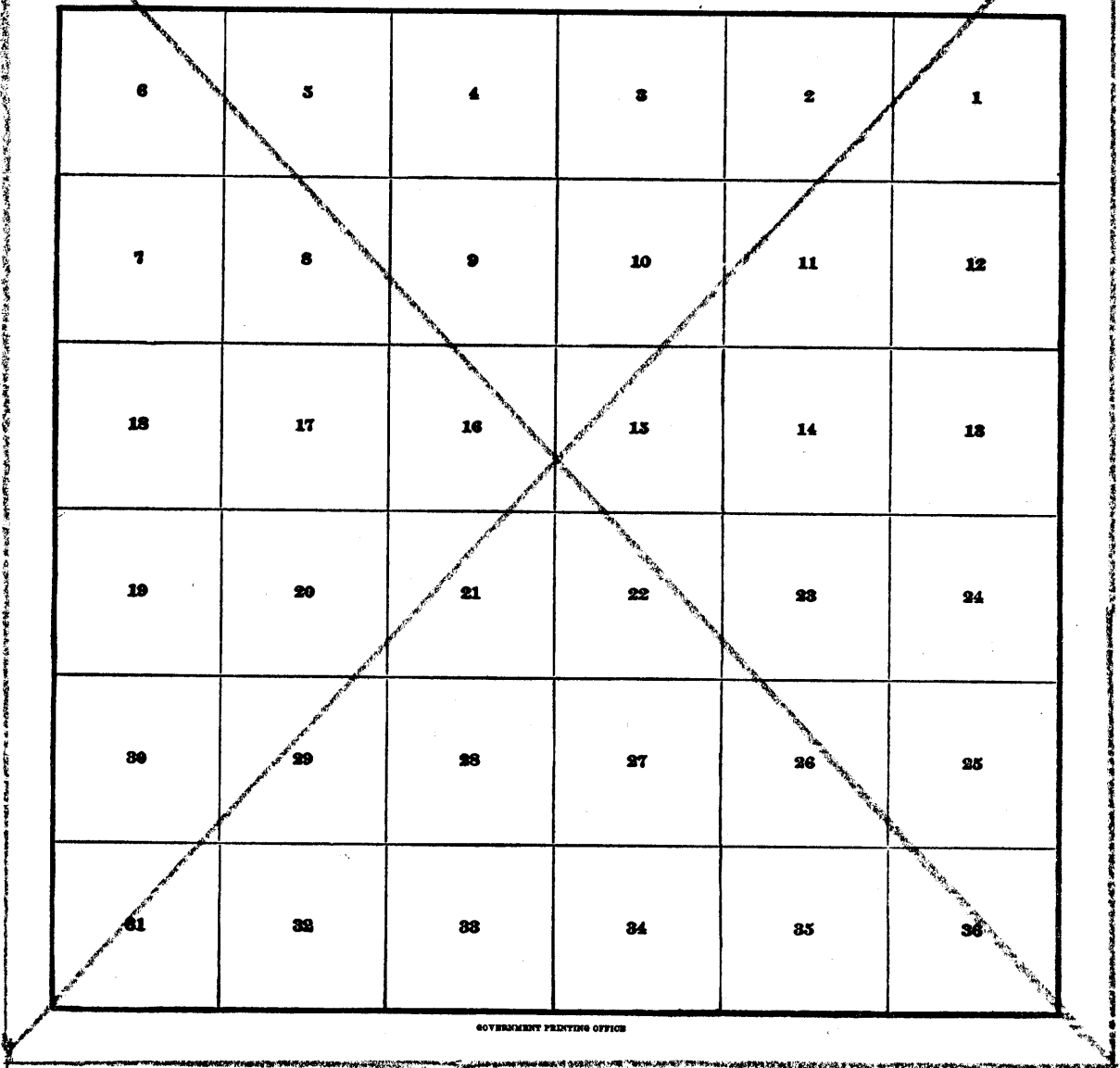
Retracement  
Resurvey and Survey completed March 29, 1929

3877

3877

# INDEX DIAGRAM.

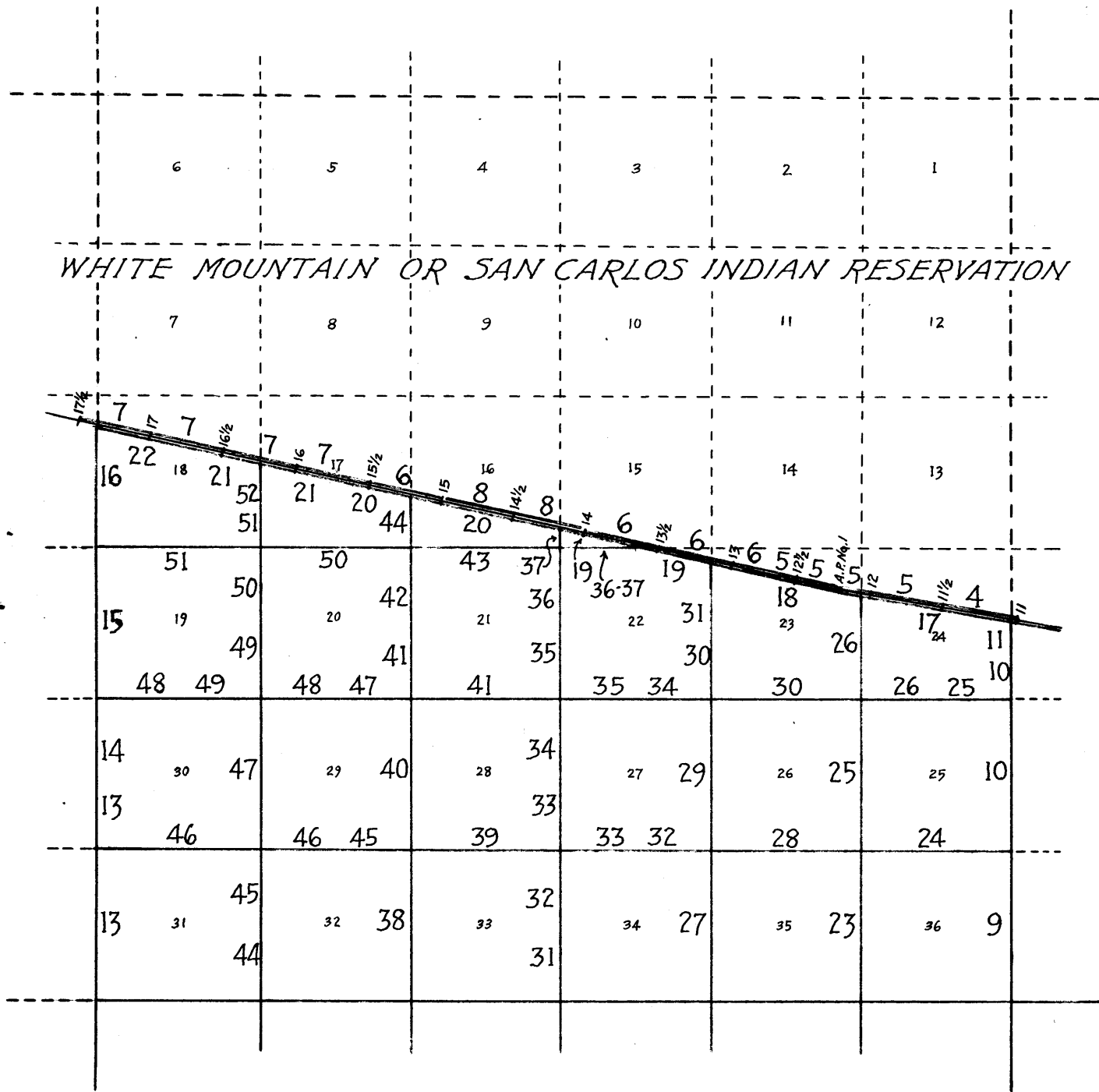
*Township* ..... , *Range* .....



INDEX-DIAGRAM

Township 4 South - Range 20 East

BOOK 3877



Retraced under this group.

Resurveyed under this group.

Surveyed under this group.

Accepted surveys.

Unsurveyed.

Book "H"

Group 141 Arizona

Township 4 South, Range 20 East

DATE DIAGRAM

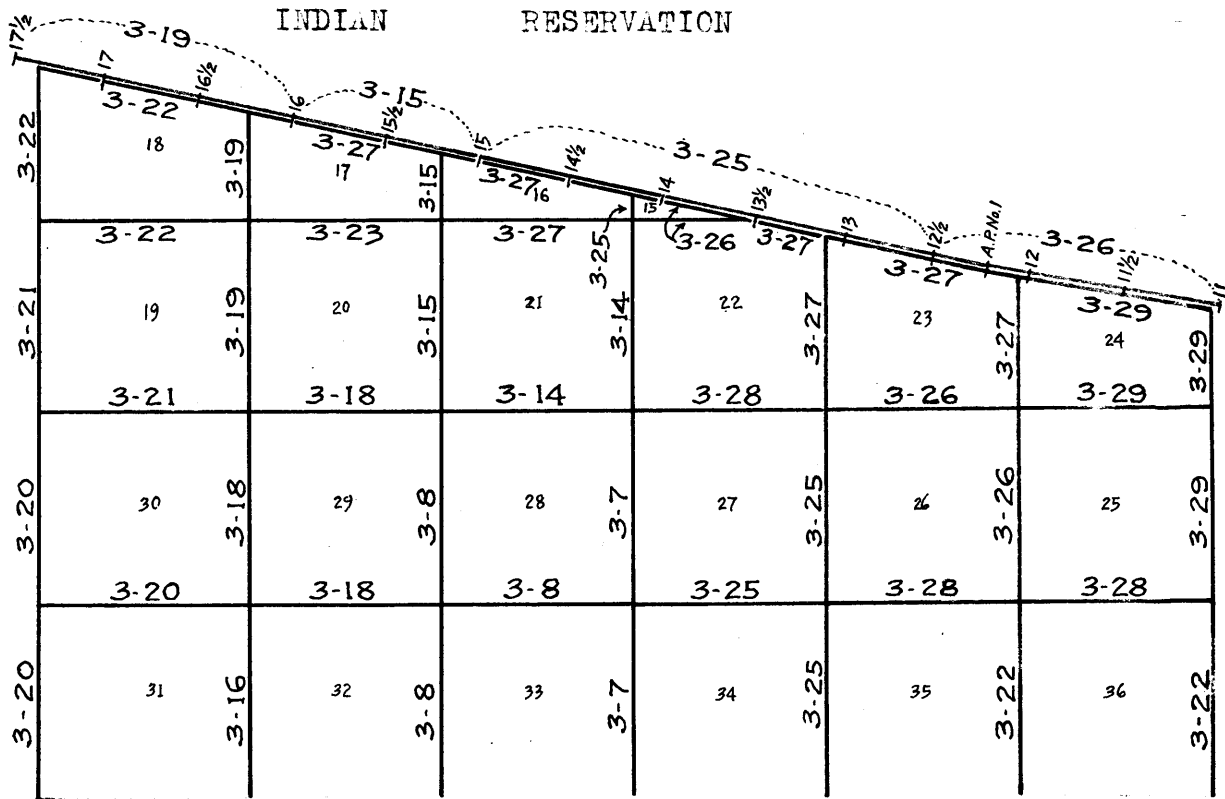
1929

BOOK 3877

WHITE MOUNTAIN

OR

SAN CARLOS



*Surveyed under this group-Notes and Dates in Book "F"*

- Retraced by William E. Hiester, U.S. Surveyor, on dates shown thereon.
- Resurveyed by William E. Hiester, U.S. Surveyor, on dates shown thereon.
- Surveyed by William E. Hiester, U.S. Surveyor, on dates shown thereon.
- Surveyed by Theodore Vander Meer, U.S. Transitman, on dates shown thereon.

Retracements, resurveys and surveys hereinafter described were executed on the dates shown on the diagram on page 2 hereof, by William E. Hiester, U. S. Surveyor, and Theodore Vander Meer, U. S. Transitman, using respectively, Buff and Buff solar transits Nos. 19423 and 9977, each equipped with full vertical circles and Smith solar attachments. Unless otherwise specified, all azimuth determinations were made with the solar attachments.

Examine the adjustments of the instruments and correct all errors; then, to test the solar apparatus by comparing their indications resulting from a. m. and p. m. observations with a meridian established by observation on Polaris, proceed as follows:

Feb. 27, 1929: At camp near center of sec. 28, T. 5 S., R. 21 E., G. and S. R. B. and M., Arizona, latitude  $32^{\circ} 58' N.$ , longitude  $110^{\circ} 12' W.$ , using instrument No. 9977, at 9 h. 02 m., p. m., l. m. t., observe Polaris at western elongation, making four observations, two each with the telescope in direct and reversed positions, and mark the mean point on a stake driven firmly into the ground about 5 chs. N.

Azimuth of Polaris at Western elongation -  $1^{\circ} 16' 43''$ .

Feb. 28, 1929: At 7 h. 00 m., a. m., lay off the azimuth of Polaris,  $1^{\circ} 16\frac{1}{2}'$  to the east, and mark the true meridian with tacked stakes and small flags.

At 8 h. 00 m., a. m., app. t., set off  $32^{\circ} 58' N.$ , on the lat arcs and  $7^{\circ} 57\frac{1}{2}' S.$ , on the decl. arcs, and determine meridians with the solars, which agree within 1' with the true meridian.

At apparent noon, with the lat. arcs unchanged, observe the sun on the meridian; the resulting reading of the decl. arcs is  $7^{\circ} 54\frac{1}{2}' S.$ , which agrees within 1' with the computed decl. of the sun.

At 4 h. 00 m., p. m., app. t., with the lat. arcs unchanged, set off  $7^{\circ} 50' S.$  on the decl. arcs, and determine meridians with the solar attachments, which agree within 1' with the true meridian.

From the foregoing and intermediate tests, conclude that the adjustments of the instruments are satisfactory.

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Unless otherwise specified, all measurements are made with Lallie steel tapes, 5.00 chs. in length compared with a Lufkin standard steel tape, 1.00 ch. in length, and found correct. The measurements are made on the slope, the vertical angles determined with clinometers or transits, and the slope measurements properly reduced to true horizontal distances.

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Retracement of Part of the Amended South Boundary of the White Mountain Indian Reservation, from 11 mile mon. to 14 mile mon., and from 15 mile mon to 17½ mile mon.

- Chains The Amended South Bdy. of the White Mountain Indian Reservation was surveyed northwesterly from a point in sec. 35, T. 4 S., R. 22 E., a distance of 30 miles 42.50 chs. to the junction of Hawk Canyon with the Gila River in sec. 24, T. 3 S., R. 17 E., by P. Contzen, U. S. D. S., in 1898.
- From the initial point of the survey the Reservation Bdy. was run on a bearing of N. 79° 21' W., a distance of 12 miles 16.50 chs. to Angle Point No. 1 on top of Mt. Turnbull, thence N. 77° 48' W., a distance of 8 miles 6.40 chs. to Angle Point No. 2 on Reservation Bdy. at 22.90 ch. station of the 21st mile, thence N. 68° 00' W., a distance of 10 miles 19.60 chs. to terminal mon. of Reservation Bdy.
- Half mile and mile monuments were established alternately on the Reservation Bdy. at 40.00 ch. intervals counting from the Initial monument, in addition to the monuments established at the Angle points and the terminus of the Bdy.
- The following notes describe a retracement of the 12th, 13th, 14th, 16th and 17th miles and east half of the 18th mile, of the Reservation Bdy., executed as a preliminary process to the survey of those subdivision lines of T. 4 S., R. 20 E., as hereinafter described, which are identical in position with the Reservation Bdy.
- No previous retracement or resurvey of this portion of the Reservation Bdy. is of record.
- The description of topographical features is omitted from these retracement notes on that portion of the Reservation Bdy. situated within T. 4 S., R. 20 E., for the reason that said data is hereinafter described in notes of "Survey of Part of the Subdivision Lines of T. 4 S., R. 20 E."
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- The 11th mile mon. of Reservation Bdy. is a granite stone 8 x 3 x 12 ins. above ground, firmly set, marked W M I R A S B on N. face, 11 M on E. face and P L on S face and witnessed by a mound of stone N. of cor., and four bearing trees, one each NE., SE., SW. and NW. of cor., each marked W M I R ASB 11 M B T.
- Thence  
N. 79° 21' W., on random line, on E. half of 12th mile of Reservation Bdy.
- Over mountainous land, thru scattering timber and dense undergrowth. Descend slightly over NW. slope to
- 0.57 Intersect E. bdy. of T. 4 S., R. 20 E., surveyed due North. Closing cor. of T. 4 S., Rs. 20 and 21 E., established at this point of intersection as hereinafter described. Continue line and measurement.
- 37.83 Fall 12 lks. N. 10° 39' E. of the 11½ mile mon., which is a granite stone 10 x 4 x 7 ins. above ground, firmly set, marked W M I R A S B on N. face, 11½ M on E. face and P L on S. face, and witnessed by a mound of stone N. of cor. and witnessed by three bearing trees, one each SE., SW. and NW. of cor., each marked W M I R A S B 11½ M B T.

Retracement of Part of the Amended South Boundary of the White Mountain Indian Reservation, from 11 mile mon. to 14 mile mon., and from 15 mile mon. to 17½ mile mon.

Chains True course and dist. of E. ½ of 12th mile of the Reservation Bdy. are therefore, N. 79° 32' W., 37.83 chs.

N. 79° 21' W., on random line, on W. half of 12th mile of Reservation Bdy.

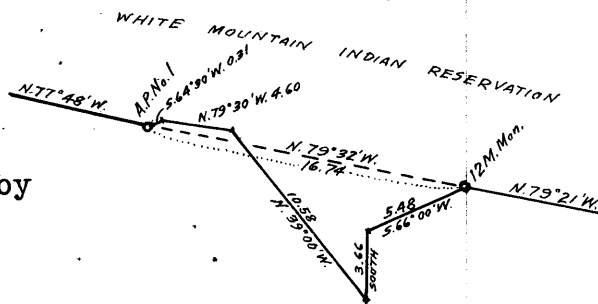
38.73 Intersect the 12th mile mon. which is a granite stone 12 x 12 x 12 ins. above ground, firmly set, marked W M I R A S B on N. face, 12M on E. face, and P L on S. face, and witnessed by a mound of stone N. of cor., and four bearing trees, one each NE., SE., SW. and NW. of cor., each marked W M I R A S B 12M B T.

True course and dist. of W. ½ of 12th mile of Reservation Bdy. are, therefore, N. 79° 21' W., 38.73 chs.

From 12 mile mon. on Reservation Bdy., obtain measurement and bearing to Angle Point No. 1, on the E. ½ of the 13th mile by a traverse around cliffs as described as follows and as shown on the accompanying diagram:

- S. 66° 00' W., 5.48 chs.
- South 3.66 "
- N. 39° 00' W., 10.58 "
- N. 79° 30' W., 4.60 "
- S. 64° 30' W., 0.31 "

to Angle Point No. 1 on top of Mt. Turnbull, which is marked by a triangle (△) chiseled in exposed bedrock and witnessed by a mound of stone S. 79° 21' E., 5 lks. dist. No bearing trees.



The latitude and departure of the traverse are 3.04 chs. N., and 16.46 chs. W., respectively. The true course and dist. of the portion of the E. ½ of 13th mile of Reservation Bdy. from 12 mile mon. to A. P. No. 1 are, therefore, N. 79° 32' W., 16.74 chs.

From A. P. No. 1, N. 77° 48' W., on random line, on part of E. ½ of 13th mile of Reservation Bdy.

23.28 Intersect the 12½ mile mon., which is a malpais stone 18 x 6 x 6 ins., above ground, firmly set, marked W M I R A S B on N. face, 12½M on E. face, and P L on S. face, and witnessed by a mound of stone N. of cor. and three bearing trees, one each NE., SE. and SW. of cor., each marked W M I R A S B 12½M B T.

True course and dist. of the portion of the E. ½ of the 13th mile of Reservation Bdy. from A. P. No. 1 to the 12½M. mon. are, therefore, N. 77° 48' W., 23.28 chs.

From 12½ mile mon., N. 77° 48' W., on random line, on W. ½ of 13th mile.

9.18 Discontinue chaining and triangulate over cliffs as described as follows and as shown on the accompanying diagram.

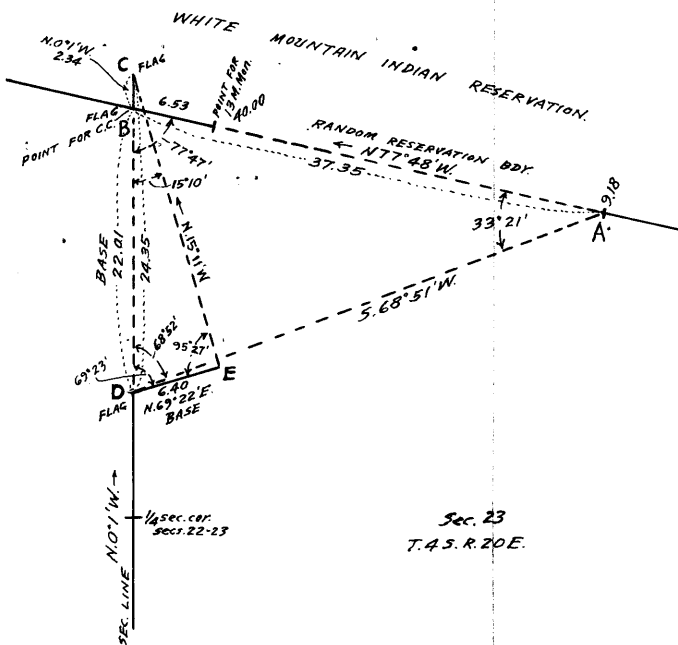
Designate 9.18 ch. station. on diagram as "A".

Set a flag "B" ahead on random line, which bears N. 0° 1' W., from the cor. of secs. 22, 23, 26 and 27.

From flag "B" measure N. 0° 1' W., 2.34 chs. and set flag "C", and set flag "D" at a point S. 0° 1' E., from "B".

From flag "D" measure a base N. 69° 22' E., 6.40 chs. to point "E".

From "E" the flag "C" bears N. 15° 11' W.



Retracement of Part of the Amended South Boundary of the White Mountain Indian Reservation, from 11 mile mon to 14 mile mon., and from 15 mile mon. to 17 $\frac{1}{2}$  mile mon.

- Chains From point "A" the flag "D" bears S. 68° 51' W.  
By solution of triangle C-D-E, the length of C-D = 24.35 chs.  
C-D (24.35 chs.) - B-C (2.34 chs.) = 22.01 chs. length  
of B-D.  
By solution of triangle A-B-D the length of A-B = 37.35  
chs. N. 77° 48' W.  
9.18 chs. + 37.35 chs. = 46.53 chs. the station of flag "B"  
on random line,  
40.00 From flag "B" chain measurement 6.53 chs. S. 77° 48' E. to  
Diligent search in this vicinity fails to reveal any  
trace of the 13 mile mon. Set temp. 13 mile mon.  
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From temp. 13 mile mon.  
N. 77° 48' W., on random line, on E $\frac{1}{2}$  of 14th mile of Re-  
servation Bdy.  
6.53 Triang. flag "B" Continue line and measurement by chain-  
ing.  
36.35 Intersect the 13 $\frac{1}{2}$  mile mon., which is a granite stone 14  
x 4 x 6 ins. above ground, firmly set, marked W M I R  
A S B on N. face, 13 $\frac{1}{2}$ M on E. face, and P. L. on S. face,  
and witnessed by a mound of stone N. of cor. and two  
bearing trees, one each NE. and SW. of cor., each  
marked W M I R A S B 13 $\frac{1}{2}$ M B T.  
True course and dist. of Reservation Bdy. from 12 $\frac{1}{2}$  mile  
mon. to the 13 $\frac{1}{2}$  mile mon. are therefore, N. 77° 48' W.,  
76.35 chs., which gives 38.175 chs. as the true dist.  
for each of the half mile intervals, viz., W $\frac{1}{2}$  of 13th  
mile and E $\frac{1}{2}$  of 14th mile.  
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From 13 $\frac{1}{2}$  mile mon.  
N. 77° 48' W., on random line, on W $\frac{1}{2}$  of 14th mile of  
Reservation Bdy.  
38.57 Fall 10 lks. N. 12° 12' E., from the 14th mile mon., which  
is a conglomerate stone 26 x 12 x 18 ins. above ground,  
firmly set, marked W M I R A S B on N. face, 14M on  
E. face and P L on S. face, and witnessed by two  
bearing trees, one each NW. and SE. of cor., each  
marked W M I R A S B 14M B T.  
True course and dist. of W $\frac{1}{2}$  of 14th mile of Reservation  
Bdy., are, therefore, N. 77° 57' W., 38.57 chs.  
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The 15th mile mon. is a porphyry stone 12 x 7 x 14 ins.  
above ground, firmly set, marked W M I R A S B on N.  
face, 15M on E. face, and P L on S. face, and witness-  
ed by a mound of stone N. of cor. and four bearing  
trees, one each NE. and NW. and two SW. of cor., each  
marked W M I R A S B 15M B T.  
Thence  
N. 77° 48' W., on random line, on E $\frac{1}{2}$  of 16th mile of  
Reservation Bdy.  
39.51 Fall 1 lk. S. 12° 12' W., from the 15 $\frac{1}{2}$  mile mon., which  
is a porphyry boulder in place, 12 x 10 x 3 ft. ex-  
posure above ground, marked on top with a cross (X)  
at cor. point, W M I R A S B to the N., 15 $\frac{1}{2}$ M to the  
E., and P L to the S. of cross, and witnessed by a  
mound of stone N. of boulder, and four bearing trees,  
one each, W. and NW., and two NE. of cor., each mar-  
ked W M I R 15 $\frac{1}{2}$ M B T.  
True course and dist. of E $\frac{1}{2}$  of 16th mile of Reservation  
Bdy. are, therefore, N. 77° 47' W., 39.51 chs.  
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Retracement of Part of the Amended South Boundary of the White Mountain Indian Reservation, from 11 mile mon. to 14 mile mon., and from 15 mile mon. to 17½ mile mon.

Chains From 15½ mile mon.  
 N. 77° 48' W., on random line, on W.½ of 16th mile of Reservation Bdy.  
 39.62 Fall 2 lks. S. 12° 12' W., from the 16th mile mon., which is a granite stone 14 x 3 x 8 ins., above ground, firmly set, marked W M I R A S B on N. face, 16M on E. face, and P L on S. face and witnessed by a md. of stone N. of cor. No bearing trees.  
 True course and dist. of W½ of 16th mile are, therefore, N. 77° 46' W., 39.62 chs.

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From 16th mile mon.  
 N. 77° 48' W., on random line, on E.½ of 17th mile of Reservation Bdy.  
 39.69 Fall 3 lks. S. 12° 12' W., from the 16½ mile mon., which is a granite stone 12 x 6 x 6 ins. above ground, firmly set, marked W M I R A S B on N. face, 16½M on E. face and P L on S. face, and witnessed by a mound of stone N. of cor. No bearing trees.  
 True course and dist. of E½ of 17th mile of Reservation Bdy. are, therefore, N. 77° 45' W., 39.69 chs.

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From 16½ mile mon.,  
 N. 77° 48' W., on random line, on W½ of 17th mile of Reservation Bdy.  
 39.65 Fall 1 lk. N. 12° 12' E. from the 17th mile mon., which is a granite stone 14 x 8 x 16 ins., above ground, firmly set, marked W M I R A S B on N. face, 17 M on E. face, and P L on S. face, and witnessed by a mound of stone N. of cor. No bearing trees.  
 True course and dist. of W. ½ of 17th mile of Reservation Bdy. are, therefore, N. 77° 49' W., 39.65 chs.

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From 17th mile mon.  
 N. 77° 48' W., on random line, on E.½ of 18th mile of Reservation Bdy.  
 29.48 Intersect the W. bdy. of T. 4 S., R. 20 E., surveyed due North. Closing cor. of T. 4 S., Rs. 19 and 20 E., established at this point of intersection as hereinafter described.

Over mountainous land, thru scattering timber and undergrowth. Ascend 10 ft. over NE. slope,  
 31.50 Ridge, bears N. 78° W., and S. 45° E. Thence along top of ridge. Descend 55 ft. to

37.50 Leave top of ridge, bearing NW. and S. 78° E. Descend 20 ft. over SW. slope to

39.97 Fall 1 lk. N. 12° 12' E. from the 17½ mile mon. which is a granite stone 14 x 4 x 5 ins. above ground, firmly set, marked W M I R A S B on N. face, 17½M on E. face, and P L on S. face, and witnessed by a mound of stone N. of cor., and one bearing tree SE. of cor. marked W M I R A S B 17½M B T.

Fence cor. bears west 2 lks. dist., from which fences extend N. 77½° W., and N. 83½° E.  
 True course and dist. of E½ of 18th mile of Reservation Bdy. are, therefore, N. 77° 49' W., 39.97 chs.

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Resurvey of Part of Amended South Boundary of the  
White Mountain Indian Reservation (15th mile).

Chains The following notes describe the resurvey of the 15th mile of the Amended South Boundary of the White Mountain Indian Reservation. The description of the topographical features on this mile are omitted for the reason that same are hereinafter described in notes of "Survey of Part of the Subdivision Lines of T. 4 S., R. 20 E.", this portion of the Reservation Bdy. being identical in position with parts of the subdivision lines thru secs. 15 and 16.

Retracement for Resurvey.

From the 15th mile mon., hereinbefore described, S.  $77^{\circ} 48'$  E., on random line, on W.  $\frac{1}{2}$  of 15th mile of Reservation Boundary.

39.23 Fall 3 lks. N.  $12^{\circ} 12'$  E. of the point of original location of the  $14\frac{1}{2}$  mile mon.

True course and dist. of W.  $\frac{1}{2}$  of 15th mile of Reservation Bdy. are, therefore, N.  $77^{\circ} 45'$  W., 39.23 chs.

Thence

S.  $77^{\circ} 48'$  E., on random line, on E.  $\frac{1}{2}$  of 15th mile of Reservation Bdy.

39.24 Fall 1 lk. N.  $12^{\circ} 12'$  E. of the 14th mile mon.

True course and dist. of E.  $\frac{1}{2}$  of 15th mile of Reservation Bdy. are, therefore, N.  $77^{\circ} 47'$  W., 39.24 chs.

RESURVEY.

From the 14th mile mon., hereinbefore described.

N.  $77^{\circ} 47'$  W., on true line, on E.  $\frac{1}{2}$  of 15th mile of Reservation Bdy.

Over mountainous land, thru scattering timber and undergrowth.

39.24 Intersect the point of original location of the  $14\frac{1}{2}$  mile mon., determined from the three bearing trees, and the mound of stone N. of cor. point.

A cedar post, 4 ins. square, 40 ins. long, marked  $14\frac{1}{2}$ M on one face is lying on the ground alongside the mound of stone.

No trace of the marked stone described in the record can be found.

Reconstruct this Bdy. mon. at original point of location as follows:

Reset the cedar post, 28 ins. in the ground and alongside same set an iron post, 3 ft. long, 1 in. in diam., 28 ins. in the ground, for  $14\frac{1}{2}$  mile monument of the Reservation Bdy., with brass cap marked

$14\frac{1}{2}$ M  
W M I R

S 16  
T 4 S R 20 E  
1929

from which the original bearing trees:

An oak, 12 ins. diam., bears N.  $56\frac{1}{2}^{\circ}$  E., 124 lks. dist., marked WMIR ASB  $14\frac{1}{2}$ M B T.

An oak, 10 ins. diam., bears S.  $23\frac{1}{2}^{\circ}$  E., 74 lks. dist., marked WMIR ASB  $14\frac{1}{2}$ M B T.

An oak, 14 ins. diam., bears S.  $81\frac{1}{4}^{\circ}$  E., 127 lks. dist., marked WMIR ASB  $14\frac{1}{2}$ M B T.

Thence

N.  $77^{\circ} 45'$  W., on true line, on W.  $\frac{1}{2}$  of 15th mile of W.M.I.R. Bdy. Over mountainous land, thru scattering timber and undergrowth.

39.23 Intersect the 15th mile mon., hereinbefore described. Land, mountainous.

Soil, gravelly loam and adobe, 2nd rate.

Timber, oak, locust, pinion, cedar and juniper.

Undergrowth, scrub oak, manzanita, mountain mahogany, wild cherry, cactus, mesquite, catclaw and sotol.

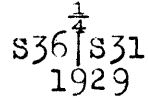
Survey of Part of East Boundary of Township 4 South, Range 20 East

Chains

From the cor. of Ts. 4 and 5 S., Rs. 20 and 21 E., established under this Group, described in Book "C". North, on true line, bet. secs. 31 and 36.

Over mountainous land; through scattering timber and undergrowth.

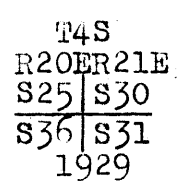
- Asc. 22 ft. over S. slope.
- 1.00 Spur, slopes SW.
- Asc. 31 ft. over SW. slope.
- 7.30 Spur, slopes W.
- Desc. 60 ft. over NW. slope.
- 9.90 Head of ravine, course W.
- Asc. 20 ft. over SW. slope.
- 12.30 Spur, slopes NW.
- Desc. 170 ft. over NE. slope.
- 17.50 Ravine, course NW.
- Asc. 76 ft. over SW. slope.
- 23.00 Short spur, slopes W.
- Desc. 104 ft. over NW. slope.
- 27.10 Draw, course SW.
- Asc. 90 ft. over S. slope.
- 31.20 Spur, slopes SW.
- Desc. 74 ft. over NW. slope.
- 38.50 Ravine, dry wash, 40 lks. wide, course SW.
- Asc. 15 ft. along E. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked



from which

- A juniper limb, 6 ins. diam., bears N.2°E., 6 lks. dist., marked  $\frac{1}{4}$  S31 BT.
- A juniper limb, 10 ins. diam., bears N.2°W., 5 lks. dist., marked  $\frac{1}{4}$  S36 BT.

- Asc. 345 ft. over broken SE. slope.
- 62.00 High spur, slopes SW.
- Desc. 119 ft. over NW. slope.
- 70.10 Gulch, course SW. carrying seep of water.
- Asc. 126 ft. over S. slope.
- 74.90 Fence of goat corral, bears E. and W.
- 76.38 S. side of goat shed, faces S.
- 78.00 Cabin bears 2 chs E.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 27 ins. in the ground, for cor. of secs 25, 30, 31 and 36, with brass cap marked



No bearing trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.

Land: mountainous. Soil: adobe and loam, 3rd rate. Timber: cedar, pinon, juniper. Undergrowth: oak, catclaw, mesquite, cactus, sotol.

## Survey Of Part of East Boundary of T.4 S., R.20 E.

Chains

- North, on true line, bet. secs. 25 and 30.  
Over rolling land; through scattering undergrowth.  
Asc. 338 ft. over S. slope.
- 1.00 Trail, bears NW. and SE.
- 18.00 Spur, slopes SW.  
Enter mountainous land; thru scattering timber.  
Asc. 154 ft. along W. slope.
- 29.00 Ravine, course SW.  
Asc. 423 ft. over S. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., on exposed bedrock with rock marked with cross (+) deposited beside, and supported by a mound of stone, 5 ft. base, 2½ ft. high, for ¼ sec. cor., with brass cap marked

$$\begin{array}{c} \frac{1}{4} \\ \text{S25} | \text{S30} \\ \hline 1929 \end{array}$$

No bearing trees available.

- Asc. 224 ft. over S. slope.
- 45.60 Spur, slopes SW.  
Asc. 596 ft. along W. side of spur.
- 54.50 Butte, 30 ft. high, bears 20 lks. West.
- 63.34 Spur, slopes SW.  
Asc. 221 ft. over S. slope.
- 65.50 Top of cliff, 150 ft. high, faces S.
- 66.00 Top of ridge, bears NW. and SE.  
Desc. 110 ft. along E. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 16 ins. in the ground; deposit a stone, marked with cross (+) beside post and raise a mound of stone, 3 ft. base, 1 ft. high, around post, for cor. of secs. 19, 24, 25 and 30, with brass cap marked

$$\begin{array}{c} \text{T4S} \\ \text{R20E R21E} \\ \hline \text{S24} | \text{S19} \\ \hline \text{S25} | \text{S30} \\ \hline 1929 \end{array}$$

from which

- A cedar, 15 ins. diam., bears S. 85½° W., 337 lks. dist., marked T4S R20E S25 BT.
- A cedar, 18 ins. diam., bears N. 35½° W., 250 lks. dist., marked T4S R20E S24 BT.

Land: rolling and mountainous.  
Soil: adobe and loam, 3rd rate.  
Timber: cedar, pinon.  
Undergrowth: oak, mesquite, catclaw, mahogany, cactus, sotol, sage

- North, on true line, bet. parts of secs. 19 and 24.  
Over mountainous land; through scattering timber and undergrowth.
- Asc. 50 ft. along E. slope.
- 3.80 Head of ravine, course SE.  
Asc. 97 ft. over S. slope.
- 9.50 Ridge, bears E. and W.  
Desc. 104 ft. over NE. slope.
- 13.80 Rocky spur, slopes NE.

Survey of Part of East Boundary of T.4 S., R.20 E.

Chains  
13.93

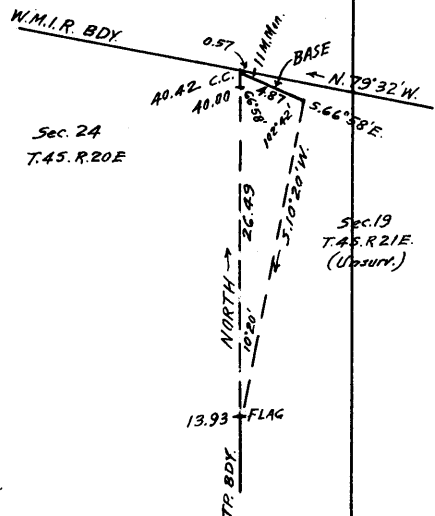
Top of cliff, 250 ft. high, bearing E. and W., facing N. Discontinue chaining at this point, and triangulate the measurement of remainder of the line as described as follows, and as shown on the accompanying diagram, Set a flag at this point.

From the point of intersection of the Tp. bdy. with the Amend- ed S. bdy. of the White Mountain- Indian Reservation, due North from flag and N.79°32'W. from the 11th mile mon. of the Res- ervation Bdy., measure a base S.66°58'E., 4.87 chs.

A longer base is impracticable. From SE. end of base the flag bears S.10°20'W.

From NW. end of base the vertical angle to flag is + 28 1/4°

All angles checked by deflection and all bearings checked by direct reading of the solar.



Distance chained to flag	= 13.93 chs. North.
Dist. triangulated to WMIR Bdy.	= 26.49 " "
Total length of line	= 40.42 " "
Return chaining to 1/4 sec.cor.	= 0.42 " South.
Distance to 1/4 sec.cor.	= 40.00 chs. North.

- 25.00 (Approx.) Bottom of ravine, course NE. About 700 ft. below 13.93 ch. station. Desc. gradually over E. slope.
- 32.00 (Approx.) Spur, slopes NE. Desc. about 130 ft. over NW. slope to

40.00 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the ground, for 1/4 sec.cor., with brass cap marked

1/4  
S24 | S19  
1929

from which  
a cedar, 5 ins. diam., bears S.63°E., 53 lks. dist., marked 1/4 S19 BT  
a wild cherry, 6 ins. diam., bears S.72 3/4°W., 15 lks. dist., marked 1/4 S24 BT

Continue line and measurement by chaining. Desc. slightly over NW. slope to

40.42 Intersect the South bdy. of the White Mountain Indian Reservation at a point 57 lks. N.79°32'W. from the 11 mile mon. thereon, hereinbefore described. At point of intersection, set an iron post, 3 ft. long, 3 ins. in diam., 30 ins. in the ground, for closing cor. of Ts.4 S., Rs.20 and 21 E., with brass cap marked,

WMIR  
S24 | S19  
R20E | R21E  
T4S  
C C  
1929

from which  
a white oak, 10 ins. diam., bears S.14 1/2°E., 98 lks. dist., marked T4S R21E S19 CC BT  
a wild cherry, 6 ins. diam., bears N.83 1/2°W., 100 lks.

Survey of Part of East Boundary of T.4 S., R.20 E.

Chains

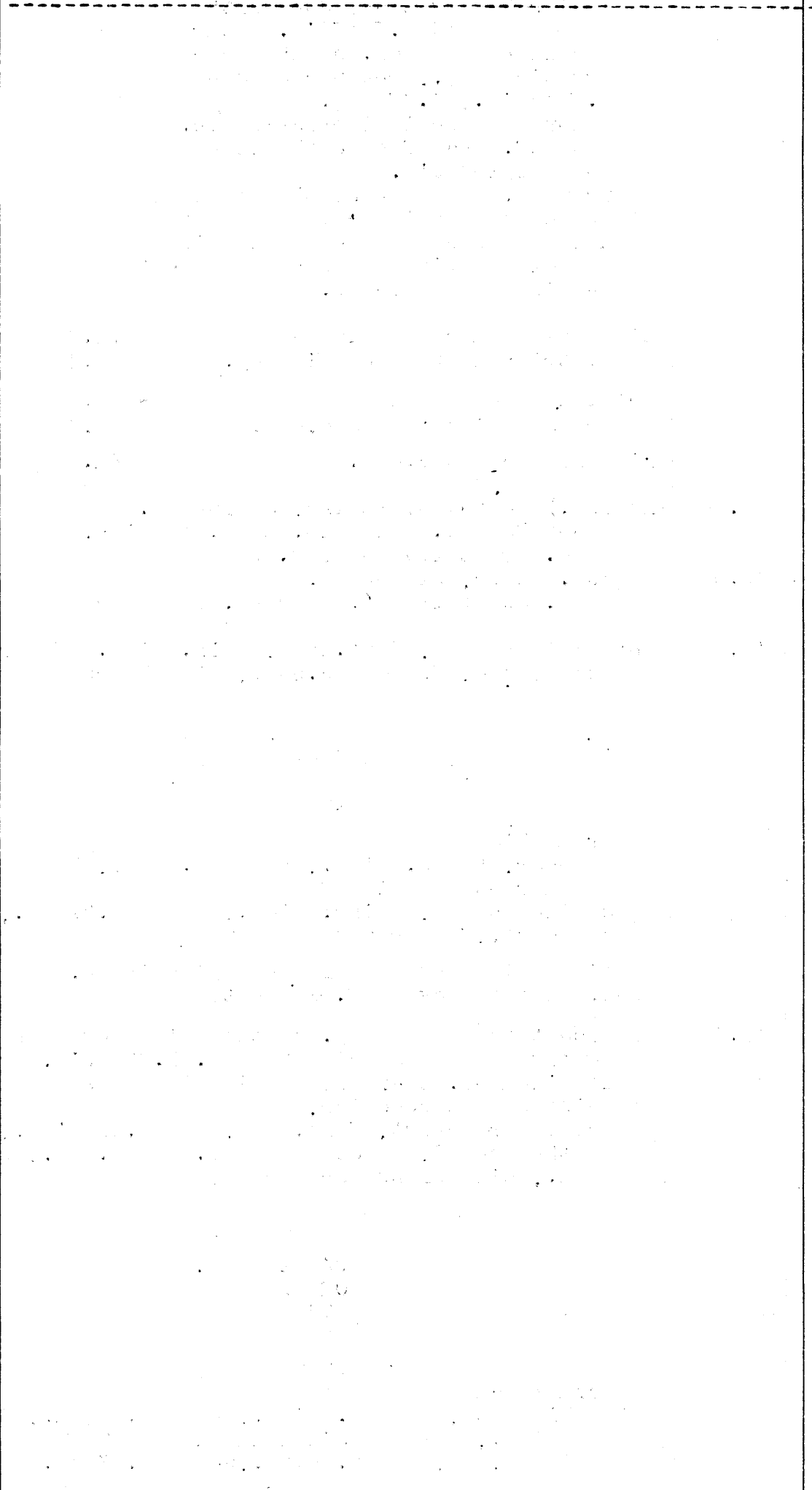
dist., marked T4S R20E S24 CC BT

Land, mountainous.

Soil, sandy and rocky, 3rd rate.

Timber, oak, cedar, pinion, juniper and pine.

Undergrowth, scrub oak, cherry, catclaw, mesquite, mountain mahogany, yucca, cactus, sagebrush & bear grass.



Survey of Part of West Boundary of T.4 S., R.20 E.

Chains. From the cor. of T.4 and 5 S., R.19 and 20 E., established under this group as described in Book "F", North, on true line, bet. secs. 31 and 36. Over mountainous land, thru scattering timber and dense undergrowth.

6.20 Desc. 220 ft. over N. slope. Ravine, course NW.  
Asc. 150 ft. over SW. slope.

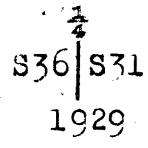
13.50 Small spur, slopes W.  
Desc. 210 ft. over NW. slope.

20.10 Gulch, course SW.  
Asc. 380 ft. over S. slope.

27.50 Spur, slopes SW.  
Desc. 220 ft. over NW. slope.

33.00 Ravine, course NW.  
Asc. 220 ft. over SW. slope to

40.00 Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the ground to bedrock, and raise a mound of stone around post, for  $\frac{1}{4}$  sec. cor., with brass cap marked,



from which,  
a white oak, 10 ins. diam., bears S. 22 $\frac{1}{2}$ ° E., 191 lks. dist., marked  $\frac{1}{4}$  S31 BT  
a white oak, 8 ins. diam., bears S. 6 $\frac{3}{4}$ ° W., 250 lks. dist., marked  $\frac{1}{4}$  S36 BT

Asc. 188 ft. over SW. slope.

47.00 Ridge, bears NW. and SE. Spur, slopes W. from this point.  
Desc. 239 ft. over N. slope.

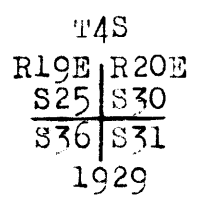
52.50 Head of gulch, course NE.  
Desc. 136 ft. over E. slope to

61.50 Head of ravine, course E.  
Desc. 22 ft. over E. slope to

67.00 Spur, slopes NE.  
Desc. 219 ft. over N. slope.

72.70 Head of ravine, course NE.  
Desc. 110 ft. over E. slope to

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in the ground, for cor. of secs. 25, 30, 31 and 36, with brass cap marked



No bearing trees available.  
raise a mound of stone, 5 ft. base, 2 $\frac{1}{2}$  ft. high, W. of cor.

Land, mountainous.  
Soil, adobe and loam, 3rd rate.  
Timber, oak, pinion and cedar.  
Undergrowth, scrub oak, manzanita, mountain mahogany, mesquite, cactus, catclaw, bear grass and spanish bayonet.

North, on true line, bet. secs. 25 and 30.  
Over mountainous land, thru scattering timber and dense undergrowth.  
Desc. 40 ft. over E. slope.

## Survey of Part of the West Boundary of T.4 S., R.20 E.

Chains	
1.70	Spur, slopes NE. Desc. 322 ft. over NW. slope.
15.10	Wash, 35 lks.wide, course NW. Asc. 326 ft. over SW. slope.
27.70	Ridge, bears NW. and SE. Desc. 287 ft. over N. slope.
37.00	Head of ravine, course NE. Asc. 20 ft. over SE. slope to
40.00	Set an iron post, 3 ft.long, 1 in. diam., 30 ins.in the ground, for $\frac{1}{4}$ sec. cor., with brass cap marked,  $\frac{1}{4}$ $\begin{array}{c} \text{S25}   \text{S30} \\ \hline 1929 \end{array}$ from which, a cedar, 6 ins.diam., bears N.26 $\frac{1}{2}$ °E., 42 lks. dist., marked $\frac{1}{4}$ S30 BT a pinion, 7 ins.diam., bears N.37 $\frac{1}{2}$ °W., 82 lks. dist., marked $\frac{1}{4}$ S25 BT
42.50	Descend slightly over E. slope to Small spur, slopes NE. Desc. 255 ft. over N. slope.
49.50	Ravine, course NE. Thence along E. slope.
54.00	Small spur, slopes E. Desc. 158 ft. over NE. slope.
59.80	Wash, 20 lks.wide, course NW. Water in pools.
62.00	Same wash, course NE. Thence along E. slope.
65.00	Small spur, slopes NE. Desc. 85 ft. over N. slope.
67.60	Wash, 30 lks.wide, course E. Asc. 35 ft. over S. slope.
69.00	Small spur, slopes E. Desc. 10 ft. over NE. slope.
73.00	Ravine, course E. Asc. 150 ft. over SE. slope to
80.00	Set an iron post, 3 ft.long, 2 ins.in diam., 22 ins.in the ground to bedrock, deposit a stone marked with a cross (X) at base of post, and raise a mound of stone around post, for cor.of secs.19,24,25 and 30, with brass cap marked,  $\begin{array}{c} \text{T4S} \\ \text{R19E R20E} \\ \hline \text{S24}   \text{S19} \\ \hline \text{S25}   \text{S30} \\ \hline 1929 \end{array}$ from which, a cedar, 5 ins. diam., bears N.49 $\frac{1}{2}$ °E., 218 lks. dist., marked T4S R20E S19 BT a pinion, 3 ins.diam., bears S.38 $\frac{1}{2}$ °W., 153 lks. dist., marked BT only. No other bearing trees available.  Land, mountainous. Soil, adobe and loam, 2nd rate. Timber, oak, cedar, pinion and juniper. Undergrowth, scrub oak, manzanita, mountain mahogany, mesquite, cactus, catclaw, bear grass, sotol and mescal.



Survey of Part of the West boundary of T.4 S., R.20 E.

BOOK 3877

- Chains North, on true line, bet. secs. 19 and 24.  
Over mountainous land, thru scattering timber and dense undergrowth.  
Asc. gradually over E. slope.
- 1.20 Trail, bears NE. and SW.
- 2.00 Ridge, bears NE. and SW.  
Desc. 268 ft. over N. slope.
- 11.20 Ravine, course NE.  
Desc. 81 ft. over E. slope.
- 18.60 Same ravine, course NW.  
Desc. 156 ft. over W. slope.
- 32.50 Same ravine, course NE.
- 35.40 Same ravine, course NW.  
Asc. 31 ft. over SW. slope to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 30 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked,

$\frac{1}{4}$   
S24 | S19

1929

from which,  
a pinion, 5 ins. diam., bears N.  $31^{\circ}$  E., 53 lks.  
dist., marked  $\frac{1}{4}$  S19 BT  
a laurel, 4 ins. diam., bears S.  $59^{\circ}$  W., 44 lks.  
dist., marked  $\frac{1}{4}$  S24 BT

- 43.20 Desc. 52 ft. over W. slope.  
Small spur, slopes NW.  
Desc. 144 ft. over N. slope.
- 49.00 Trail, bears NW. and SE.
- 49.20 Creek, 3 lks. wide, course NW., in bottom of Kelly Canyon.  
Leave dense, and enter scattering undergrowth.  
Asc. 244 ft. over SW. slope.
- 59.20 Ridge, bears NW. and SE.  
Desc. 317 ft. over NW. slope.
- 69.70 Wash, 20 lks. wide, course NW. in bottom of Mitchell Canyon.  
Asc. 189 ft. over SW. slope to
- 80.00 Set an iron post, 3 ft. long, 2 ins. in diam., 28 ins. in the ground, for cor. of secs. 13, 18, 19 and 24, with brass cap marked

T4S  
R19E | R20E  
S13 | S18  
S24 | S19

1929

from which,  
a pinion, 4 ins. diam., bears N.  $76^{\circ}$  E., 88 lks.  
dist., marked T4S R20E S18 BT  
a pinion, 4 ins. diam., bears S.  $55\frac{1}{2}^{\circ}$  E., 161 lks.  
dist., marked T4S R20E S19 BT  
a pinion, 7 ins. diam., bears S.  $73\frac{3}{4}^{\circ}$  W., 187 lks.  
dist., marked T4S R19E S24 BT  
a pinion, 9 ins. diam., bears N.  $7\frac{1}{2}^{\circ}$  W., 85 lks.  
dist., marked T4S R19E S13 BT

Land, mountainous.  
Soil, adobe and loam, 2nd rate.  
Timber, oak, pinion, cedar and juniper.  
Undergrowth, scrub oak, manzanita, mountain mahogany,  
mesquite, cactus, catclaw, laurel, wild cherry,  
sotol and mescal.

Survey of Part of the West boundary of T.4 S.,R.20 E.

Chains

North, on true line, bet. parts of secs.13 and 18.  
Over mountainous land, thru scattering timber and under-  
growth.

Asc. slightly over SW. slope.

0.10 Spur, slopes NW.  
Desc. 176 ft. over NE. slope.

7.20 Wash, 15 lks.wide, course NW.  
Asc. 177 ft. over SW. slope.

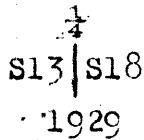
17.00 Ridge, bears NW. and SE.  
Desc. 50 ft. over N. slope.

19.30 Ravine, course NW.  
Desc. along W. slope.

25.90 Spur, slopes NW.  
Desc. 173 ft. over N. slope.

30.30 Wash, 20 lks.wide, course NW.  
Asc. 226 ft. over SW. slope to

40.00 Set an iron post, 3 ft.long, 1 in.in diam., 18 ins.in  
the ground to bedrock, and raise a mound of stone  
around post, for  $\frac{1}{4}$  sec.cor., with brass cap marked,



from which,

a pinion, 5 ins. diam., bears N.  $45\frac{3}{4}^{\circ}$  E., 79 lks.  
dist., marked  $\frac{1}{4}$  S18 BT

a pinion, 12 ins.diam., bears N.  $45^{\circ}$  W., 69 lks.  
dist., marked  $\frac{1}{4}$  S13 BT

Asc. slightly over W. slope.

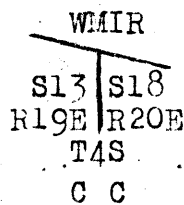
41.30 Ridge, bears NW. and SE.  
Desc. 110 ft. over NE. slope.

46.50 Ravine, course NW.  
Asc. 129 ft. over broken SW. slope.

59.80 Ridge, bears NW. and SE.  
Desc. 25 ft. over NE. slope to

63.36 Intersect the Amended South Bdy. of the White Mountain  
Indian Reservation at a point 10.49 chs. S.  $77^{\circ}49'$  E.  
from the  $17\frac{1}{2}$  mile mon. thereof, hereinbefore described.

at point of intersection,  
set an iron post, 3 ft.long, 3 ins.in diam., 22 ins.  
in the ground to bedrock, and raise a mound of stone  
around post, for closing cor. of Ts.4 S.,Rs.19 and  
20 E., with brass cap marked,



1929

from which

a pinion, 4 ins.diam., bears S.  $61^{\circ}$  E., 171 lks.  
dist., marked T4S R20E S18 CC BT

a pinion, 5 ins.diam., bears S.  $21^{\circ}$  W., 264 lks.  
dist., marked T4S R19E S13 CC BT

Land, mountainous.

Soil, rocky, 3rd rate.

Timber, oak, pinion and cedar.

Undergrowth, scrub oak, mesquite, catclaw, mountain mahogany,  
cactus, mescal, sotol and bear grass.

Survey of Part of the Subdivision Lines of  
Township 4 South, Range 20 East.

BOOK 3877

Chains The following notes describe the survey of the subdivision lines of that part of T. 4 S., R. 20 E., situated outside the White Mountain Indian Reservation, including a line thru said township identical in position with the Amended South Boundary of said reservation, which is designated as a subdivision line by reason of the establishment thereon of closing corners and quarter-section corners referring to the subdivisions of T. 4 S., R. 20 E.

-----  
From the closing cor. of T. 4 S., Rs. 20 and 21 E., heretofore described.

N. 79° 32' W., on true line, thru sec. 24, along E $\frac{1}{2}$  of 12th mile of the Amended South Bdy. of the White Mountain Reservation.

Over mountainous land, thru scattering timber and dense undergrowth.

Desc. slightly over NW. slope.

0.50 Ravine, course N. Asc. 410 ft. over NE. slope.

16.00 Spur, slopes NE. Desc. 90 ft. over N. slope.

23.00 Gulch, course NE. Asc. 538 ft. over E. slope to

37.26 Intersect the 11 $\frac{1}{2}$  mile mon. of the W M I R Bdy., hereinbefore described.

Thence

N. 79° 21' W., on true line, continuing measurement from C C of T. 4 S., Rs. 20 and 21 E., along W $\frac{1}{2}$  of 12th mile of W.M.I.R.Bdy. Asc. 167 ft. over E. slope to 40.54 (Midpoint in departure bet. C. C. of T. 4 S., Rs. 20 and 21 E., and C. C. of Secs. 23 and 24).

Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground to bedrock, deposit a stone marked with a cross (X) at base of post, and raise a mound of stone around post, for  $\frac{1}{4}$  sec. cor. of sec. 24 only, with brass cap marked:

W M I R  
 $\frac{1}{4}$  S 24  
1929

41.40 No bearing trees available. Asc. 17 ft. over E. slope Spur, slopes NE. Desc. 80 ft. over NW. slope.

46.00 Head of ravine, course NE. Asc. 580 ft. over NE. slope

73.80 Top of small rocky hill. Desc. 40 ft. over W. slope.

75.20 Head of ravine, course NE. Asc. 15 ft. over NE. slope to

75.99 Intersect the 12 mile mon. of W. M. I. R. Bdy., hereinbefore described.

Thence,

N. 79° 32' W., on true line, continuing measurement from C. C. of T. 4 S., Rs. 20 and 21 E., along E $\frac{1}{2}$  of 13th mile of W. M. I. R. Bdy.

Measurement by traverse line around cliffs, as hereinbefore described.

Ascend about 320 ft. over cliffs, facing E., to

81.08 Intersect the subdivision line, bet. secs. 23 and 24, surveyed N. 0° 1' W. This point of intersection and point for closing cor. of said secs. falls on face of cliff and is inaccessible, therefore establish witness cor. to closing cor. of said secs. at a point 3.14' chs. S. 0° 1' E., as hereinafter described.

Land, mountainous.

Soil, gravelly loam, 2nd rate.

Timber, oak, pinyon, pine, cedar, juniper and locust.

Undergrowth, scrub oak, locust, mountain mahogany, cat-claw and manzanita.

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Survey of Part of the Subdivision Lines of  
Township 4 South, Range 20 East.

Chains	<p>From true point for C. C. of secs. 23 and 24. N. <math>79^{\circ} 32'</math> W., on true line, thru sec. 23, along the <math>E\frac{1}{2}</math> of 13th mile of W. M. I. R. Bdy. Measurement to A. P. No. 1, by traverse hereinbefore de- scribed. Over mountainous land, thru scattering timber and under- growth. Over cliffs facing E., on the E. side of Mt. Turnbull. Asc. 220 ft. to 5.00 (Approx.) Top of cliffs, bearing N. and SW., facing E. and SE. Ascend 160 ft. over SE. slope to. 11.65 Intersect A. P. No. 1 of W. M. I. R. Bdy., on top of Mt. Turnbull, hereinbefore described. Thence N. <math>77^{\circ} 48'</math> W., on true line, continuing measurement from true point for C. C. of secs. 23 and 24, along <math>E\frac{1}{2}</math> of 13th mile of W. M. I. R. Bdy. Desc. 56 ft. over NW. slope to. 13.70 Top of cliff, 180 ft. high, facing W. From foot of cliff descend 100 ft. over NW. slope. 30.00 Ascend 40 ft. over NE. slope 33.00 Descend 40 ft. over N. slope to 34.93 Intersect the <math>12\frac{1}{2}</math> mile mon. of W. M. I. R. Bdy., herein- before described. Continue line and measurement, along <math>W\frac{1}{2}</math> of 13th mile of W. M. I. R. Bdy. Descend along N. slope to 40.10 Foot of cliff facing NE. 40.72 (Midpoint in departure bet. C.C. of secs. 23 and 24 and C. C. of secs. 22 and 23.). True point for <math>\frac{1}{4}</math> sec. cor. of sec. 23 only, falls on face of cliff where it is inaccessible and cannot be monumented, therefore establish witness cor. at 3.26 chs. N. <math>77^{\circ} 48'</math> W. 42.33 Top of cliff, bears NW. and SE., facing NE. Ascend 50 ft. over NE. slope to 43.98 Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in ground to bed rock, deposit a stone marked with a cross (X) at base of post and raise a mound of stone around post, for witness cor. to <math>\frac{1}{4}</math> sec. cor. of sec. 23 only, with brass cap marked</p> <div style="text-align: center;"> <p style="margin-left: 100px;">W M I R</p> <p style="margin-left: 150px;">W C</p> <p style="margin-left: 100px;"><math>\frac{1}{4}</math> S. 23 1929</p> </div> <p>No bearing trees available. Ascend slightly over NE. slope. 44.00 Top of high spur from Mt. Turnbull, sloping NW. Thence thru dense undergrowth on top of spur. 44.11 Triangulation point. Continue chaining to 44.40 Top of cliff, bearing NW. and SE., 180 ft. high facing SW. Discontinue chaining. Measurement from 44.11 ch. station to point for closing cor. of secs. 22 and 23, by triangulation hereinbefore described. Leave top of spur and descend approximately 1200 ft. over cliffs on broken SW. slope to point for C. C. 73.10 Reestablished point for 13 mile mon. of W. M. I. R. Bdy. (Not monumented). Continue line and measurement, along <math>E\frac{1}{2}</math> of 14th mile of W. M. I. R. Bdy. 81.46 Intersect the subdivision line bet. secs. 22 and 23, sur- veyed N. <math>0^{\circ} 1'</math> W. This point of intersection and point for closing cor. of said secs. falls on precipi- tous SW. slope where it is impracticable to monument the C. C., therefore, establish witness cor. at 10 lks. S. <math>0^{\circ} 1'</math> E., as hereinafter described.</p>
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Survey of Part of the Subdivision Lines of  
Township 4 South, Range 20 East.

Chains	<p>Land, mountainous. Soil, gravelly loam and adobe, 2nd and 3rd rate.. Timber, oak, locust, cedar and juniper. Undergrowth, scrub oak, locust, catclaw, manzanita and cactus.</p> <p>-----</p> <p>From true point for C. C. of secs. 22 and 23. N. 77° 48' W., on true line, thru sec. 22, along E. <math>\frac{1}{2}</math> of 14th mile of W. M. I. R. Bdy. Over mountainous land, thru scattering timber and dense undergrowth. Descend 80 ft. over SW. slope.</p> <p>1.90 Wash, 20 lks. wide, course NW. Ascend 110 ft. over NE. slope.</p> <p>15.50 Point of spur, slopes N. Desc. 100 ft. over NW. slope.</p> <p>19.35 Desc. 80 ft. over N. slope.</p> <p>23.10 Asc. 50 ft. over NE. slope.</p> <p>25.60 Spur, slopes N. Desc. 115 ft. over NW. slope to</p> <p>29.82 Intersect the 13 <math>\frac{1}{2}</math> mile mon. of W. M. I. R. Bdy., hereinbefore described. Thence, N. 77° 57' W.; on true line, continuing measurement from C. C. of secs. 22 and 23, along W <math>\frac{1}{2}</math> of 14th mile of W. M. I. R. bdy. Desc. 190 ft. over NW. slope to</p> <p>35.87 Intersect the subdivision line bet. secs. 15 and 22, surveyed N. 89° 41' E. Closing cor. of said secs. established at this point of intersection as hereinafter described.</p> <p>Land, mountainous. Soil, gravelly loam and adobe, 2nd rate. Timber, oak, cedar, pinon and juniper. Undergrowth, scrub oak, manzanita, catclaw, mesquite, cactus, mountain mahogany, wild cherry and sotol.</p> <p>-----</p> <p>From C. C. of secs. 15 and 22. N. 77° 57' W., on true line, thru sec. 15, along W <math>\frac{1}{2}</math> of 14th mile of W. M. I. R. bdy. Over mountainous land, thru scattering timber and dense undergrowth. Desc. 166 ft. over NW. slope to</p> <p>5.35 (40.00 chs. in East departure from C. C. of secs. 15 and 16). Set a granite stone 28 x 12 x 10 ins., 20 ins. in the ground, for <math>\frac{1}{4}</math> sec. cor. of sec. 15 only, marked <math>\frac{1}{4}</math> S on S. face. No iron post available. No bearing trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, S. of cor. Desc. 100 ft. over broken NW. slope.</p> <p>15.00 Wash, 20 lks. wide, course N. Asc. 200 ft. over NE. slope.</p> <p>20.60 Spur, slopes NW. Desc. 388 ft. over W. slope to</p> <p>32.52 Intersect the 14 mile mon. of W. M. I. R. Bdy., hereinbefore described. Thence N. 77° 47' W., on true line, continuing measurement from C. C. of secs. 15 and 22, along E <math>\frac{1}{2}</math> of 15th mile of W. M. I. R. Bdy. Desc. 30 ft. over W. slope.</p> <p>33.90 Wash, 15 lks. wide, course N. Asc. 100 ft. over E. slope.</p> <p>39.80 Spur, slopes NE. Desc. 81 ft. over NW. slope.</p> <p>42.10 Ravine, course NE. Asc. 100 ft. over NW. slope to</p> <p>46.26 Intersect the subdivision line bet. secs. 15 and 16, surveyed N. 0° 2' W. Closing cor. of said secs. established at this point as hereinafter described.</p> <p>Land, mountainous. Soil, gravelly loam, and adobe, 2nd rate. Timber, oak, pinion and cedar. Undergrowth, scrub oak, mesquite, catclaw, manzanita, cactus, mountain mahogany and sotol.</p> <p>-----</p>
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Survey of Part of the Subdivision Lines of  
Township 4 South, Range 20 East.

Chains From C. C. of secs. 15 and 16,  
N.  $77^{\circ} 47'$  W., on true line, thru sec. 16, along the  $E\frac{1}{2}$  of  
15th mile of the W. M. I. R. Bdy.  
Over mountainous land thru scattering timber and under-  
growth. Asc. 14 ft. over NE. slope.

5.00 Spur, slopes NE. Desc. 122 ft. over NW. slope.  
9.70 Ravine, course NE. Asc. 51 ft. over NE. slope.  
12.40 Spur, slopes N. Desc. 77 ft. over NW. slope.  
15.90 Wash, 15 lks. wide, course NE. Asc. 188 ft. over E. slope.  
22.90 Spur, slopes NE. Desc. 30 ft. over NW. slope to  
25.50 Intersect the  $14\frac{1}{2}$  mile mon. of W. M. I. R. Bdy., herein  
before described.

Thence

N.  $77^{\circ} 45'$  W., on true line, continuing measurement from  
C. C. of secs. 15 and 16, along  $W\frac{1}{2}$  of 15th mile of  
W. M. I. R. Bdy.

Desc. gradually over NW. slope.

26.90 Ravine, course NE. Asc. 160 ft. over NE. slope to  
40.94 (Mid point in departure bet. C. C. of secs. 15 and 16,  
and C. C. of secs. 16 and 17.)  
Set an iron post, 3 ft. long, 1 in. in diam., 30 ins. in  
the ground for  $\frac{1}{4}$  sec. cor. of sec. 16, only, with  
brass cap marked,

W M I R

$\frac{1}{4}$  S 16  
1929

from which

A white oak, 4 ins. diam., bears S.  $45\frac{1}{4}^{\circ}$  E., 24  
lks. dist., marked  $\frac{1}{4}$  S 16 B T.

A white oak, 5 ins. diam., bears S.  $28^{\circ}$  W., 59  
lks. dist., marked  $\frac{1}{4}$  S 16 B T.

Asc. 244 ft. over NE. slope.

50.10 Small ravine, course NE. Asc. 52 ft. over E. slope.  
53.30 Ridge, bears NW. and SE. Desc. 244 ft. over SW. slope to  
64.73 Intersect the 15 mile mon. of W. M. I. R. Bdy., herein-  
before described.

Thence

N.  $77^{\circ} 47'$  W., on true line, continuing measurement from  
C. C. of secs. 15 and 16, along  $E\frac{1}{2}$  of 16th mile of  
W. M. I. R. Bdy.

Desc. 481 ft. over SW. slope to

81.89 Intersect the subdivision line bet. secs. 16 and 17, sur-  
veyed N.  $0^{\circ} 2'$  W. Closing cor. of said secs. estab-  
lished at this point as hereinafter described.

Land, mountainous.

Soil, gravelly loam and adobe, 2nd rate.

Timber, oak, locust, pinion, cedar and juniper.

Undergrowth, scrub oak, manzanita, mountain mahogany,  
wild cherry, cactus, mesquite, catclaw and sotol.

-----

From C. C. of secs. 16 and 17.

N.  $77^{\circ} 47'$  W., on true line, thru sec. 17, along  $E\frac{1}{2}$  of  
16th mile of W. M. I. R. Bdy.

Over mountainous land, thru scattering timber and under-  
growth. Desc. 101 ft. over SW. slope.

3.80 Ridge, bears NE. and N.  $78^{\circ}$  W. Thence along top of  
ridge. Desc. 85 ft. to

9.20 Leave top of ridge, bearing NW. and S.  $78^{\circ}$  E. Desc. 203  
ft. over SW. slope.

18.20 Ravine, course SW. Asc. 25 ft. over SE. slope.

19.50 Spur, slopes SW. Desc. 41 ft. over W. slope to

Survey of Part of the Subdivision Lines of  
Township 4 South, Range 20 East.

Chains  
 22.35 Intersect the 15 $\frac{1}{2}$  mile mon. of the W. M. I. R. Bdy. here-  
 inbefore described.  
 Thence,  
 N. 77° 46' W., on true line, continuing measurement from  
 C. C. of secs. 16 and 17, along W. $\frac{1}{2}$  of the 16th mile  
 of W. M. I. R. Bdy.  
 Desc. 520 ft. over SW. slope to  
 40.96 (Midpoint in departure bet. C. C. of secs. 16 and 17, and  
 C. C. of secs. 17 and 18.)  
 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in  
 the ground, and raise a mound of stone around post,  
 for  $\frac{1}{4}$  sec. cor. of sec. 17, only, with brass cap  
 marked

W M I R.  
 $\frac{1}{4}$  S 17  
 1929

from which  
 A cedar, 10 ins. diam., bears S. 72 $\frac{3}{4}$ ° E., 39  
 lks. dist., marked  $\frac{1}{4}$  S 17 B T.  
 A cedar, 14 in. diam., bears S. 66° W., 248  
 lks. dist., marked  $\frac{1}{4}$  S 17 B T.  
 Desc. 280 ft. over SW. slope.  
 55.30 Wash, 30 lks. wide, course NW. Enter rolling land.  
 Asc. 30 ft. over NE. slope to  
 61.97 Intersect the 16th mile mon. of W. M. I. R. Bdy. herein-  
 before described.  
 Thence  
 N. 77° 45' W., on true line, continuing measurement from  
 C. C. of secs. 16 and 17, along the E $\frac{1}{2}$  of 17th mile  
 of W. M. I. R. Bdy.  
 Asc. 24 ft. over NE. slope.  
 66.10 Low ridge, bears NW. and SE. Descend along S. slope.  
 78.00 Spur, slopes S. Enter mountainous land.  
 Descend 48 ft. over SW. slope to  
 81.92 Intersect the subdivision line bet. secs. 17 and 18 sur-  
 veyed N. 0° 3' W.  
 Closing cor. of said secs. established at this point as  
 hereinafter described.  
 Land, mountainous and rolling.  
 Soil, gravelly loam, 3rd rate.  
 Timber, cedar.  
 Undergrowth, catclaw, palo verde, oak, canutillo, cactus,  
 mescal and Spanish bayonet.

-----

From C. C. of secs. 17 and 18.  
 N. 77° 45' W., on true line, thru sec. 18, along E $\frac{1}{2}$  of  
 17th mile of the W. M. I. R. Bdy.  
 Over mountainous land, thru scattering timber and under-  
 growth. Desc. 140 ft. over SW. slope.  
 10.00 Wash, 20 lks. wide, course NW. Asc. 83 ft. over NE. slope.  
 14.00 Small spur, slopes N. Desc. 58 ft. over NW. slope to  
 19.74 Intersect the 16 $\frac{1}{2}$  mile mon. of W. M. I. R. Bdy., herein-  
 before described.  
 Thence  
 N. 77° 49' W., on true line, continuing measurement from  
 C. C. of secs. 17 and 18, along W $\frac{1}{2}$  of 17th mile of  
 W. M. I. R. Bdy.  
 Desc. gradually over N. slope to  
 39.10 Head of ravine, course NE. Asc. 40 ft. over NE. slope to  
 40.93 (40.00 chs. in west departure from C. C. of secs. 17 and  
 18).

Survey of Part of the Subdivision Lines of  
Township 4 South, Range 20 East.

Chains Set an iron post, 3 ft. long, 1 in. in diam., 8 ins. in the ground to bed rock, and raise a mound of stone around post, for  $\frac{1}{4}$  sec. cor. of sec. 18, only, with brass cap marked

W M I R .  
/

$\frac{1}{4}$  S 18  
1929

from which,  
A pinion, 5 ins. diam., bears S.  $28\frac{3}{4}^{\circ}$  E., 213 lks. dist., marked  $\frac{1}{4}$  S 18 B T.  
A pinion, 4 ins. diam., bears S.  $8\frac{1}{2}^{\circ}$  E., 214 lks. dist., marked  $\frac{1}{4}$  S 18 B T.

Asc. slightly over NE. slope.

41.20 Ridge, brs. N. and SE. Desc. 95 ft. over W. slope.  
46.30 Wash, 20 lks. wide, course N. Asc. 142 ft. over NE. slope.  
53.10 Ridge, bears NW. and SE. Desc. 84 ft. over SW. slope to  
59.39 Intersect the 17 mile mon. of W. M. I. R. Bdy., hereinbefore described. Continue line and measurement from C. C. of secs. 17 and 18, along  $E\frac{1}{2}$  of 18th mile of W. M. I. R. Bdy. Desc. 146 ft. over SW. slope.  
68.50 Wash, 20 lks. wide, course NW. Asc. 96 ft. over NE. slope.  
73.80 Ridge, bears NW. and SE. Desc. 161 ft. over SW. slope.  
80.50 Wash, 15 lks. wide, course NW. Asc. 106 ft. over NE. slope to.  
88.87 Intersect the West boundary of T. 4 S., R. 20 E., surveyed due North. Closing cor. of T. 4 S., Rs. 19 and 20 E., established at this point of intersection as hereinbefore described.

Land, mountainous.  
Soil, gravelly loam, 2nd rate.  
Timber, oak, pinion and cedar.  
Undergrowth, scrub oak, manzanita, mesquite, catclaw, cactus, Spanish bayonet and sotol.

Boundaries of that Portion of Township 4 South, Range 20 East, situated outside the White Mountain Indian Reservation.

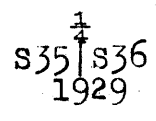
Latitudes, departures and closing errors.

Line designated	True course	Dist- ance.	Latitudes		Departures	
			N.	S.	E.	W.
South Boundary	S. $89^{\circ} 56' W.$	487.18		.56		487.18
West Boundary	North	303.36	303.36			
Subdivision lines along Am- ended South Bdy of White Moun- tain Indian Reservation.	S. $77^{\circ} 49' E.$	69.13		14.59	67.57	
	S. $77^{\circ} 45' E.$	39.69		8.42	38.79	
	S. $77^{\circ} 46' E.$	39.62		8.40	38.72	
	S. $77^{\circ} 47' E.$	39.51		8.36	38.61	
	S. $77^{\circ} 45' E.$	39.23		8.32	38.34	
	S. $77^{\circ} 47' E.$	39.24		8.30	38.35	
	S. $77^{\circ} 57' E.$	38.57		8.05	37.72	
	S. $77^{\circ} 48' E.$	99.63		21.05	97.38	
	S. $79^{\circ} 32' E.$	16.74		3.04	16.46	
	S. $79^{\circ} 21' E.$	38.73		7.16	38.06	
	S. $79^{\circ} 32' E.$	37.26		6.77	36.64	
East boundary	South	200.42		200.42		
Convergency					.24	
Totals			303.36	303.44	486.88	487.18
				303.36		486.88
Error in latitude				0.08		
Error in departure						0.30



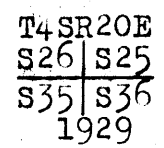
Survey of  
Part of the Subdivision Lines of T.4 S., R.20 E. BOOK 3877

- Chains
- From the cor. of secs. 1, 2, 35 and 36, on the S. bdy. of the Tp., established under this Group, described in Book "F".
  - N.0°01'W., bet. secs. 35 and 36.
  - Over mountainous land; thru scattering timber and brush.
  - Along E. slope.
  - 3.00 Spur, slopes NE.  
Desc. 482 ft. over NW. slope.
  - 19.30 Gulch, trace of water, course NE.  
Asc. 70 ft. over SE. slope.
  - 23.00 Spur, slopes E.  
Desc. 120 ft. over N. slope.
  - 27.80 North Goodwin Creek, 10 lks. wide, course SE.  
Asc. 50 ft. over S. slope.
  - 33.00 Spur, slopes SE.  
Along E. slope.
  - 40.00 Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked



from which  
 A sycamore, 10 ins. diam., bears N.11 $\frac{1}{2}$ °E., 254 lks. dist., marked  $\frac{1}{4}$  S36 BT.  
 A black walnut, 10 ins. diam., bears N.1°W., 387 lks. dist., marked  $\frac{1}{4}$  S35 BT.

- Desc. 53 ft. over NE. slope.
- 42.50 Gulch, wash, 40 lks. wide, course SE.  
Asc. 210 ft. over S. slope.
- 54.70 Spur, slopes W.  
Desc. 50 ft. over NW. slope.
- 57.80 Same gulch, course SW.  
Asc. 40 ft. over SE. slope.
- 61.10 Spur, slopes SE.  
Desc. 30 ft. over NE. slope.
- 62.70 Same gulch, course SE.  
Asc. 396 ft. over SW. slope.
- 77.00 Short spur, slopes W.  
Desc. slightly along W. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for cor. of secs. 25, 26, 35 and 36, with brass cap marked



from which  
 A cedar, 14 ins. diam., bears N.49 $\frac{1}{2}$ °W., 48 lks. dist., marked T4S R20E S26 BT.  
 No other bearing trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.

Land: mountainous.  
 Soil: granite loam, gravel, 3rd rate.  
 Timber: cedar, sycamore, walnut.  
 Undergrowth: oak, catclaw, mesquite, cactus.

## Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

## Chains

- East, on random line, bet. secs. 25 and 36.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 79.96 Fall 28 lks. S. of the cor. of secs. 25, 30, 31 and 36, on  
 the E. bdy. of the Tp., hereinbefore described.  
 Thence  
 S.  $89^{\circ}48'$  W., on true line, bet. secs. 25 and 36.  
 Over rolling land; thru scattering timber and brush.  
 Desc. 27 ft. over SW. slope.  
 5.70 Wash, 10 lks. wide at bottom, 10 ft. deep, course SW.  
 Desc. 60 ft. over SW. slope.  
 16.90 Gulch, course S.  
 Asc. 18 ft. over E. slope.  
 19.80 Toe of spur, slopes S.  
 Desc. 122 ft. over W. slope.  
 21.70 Ravine, course SE.  
 Asc. 192 ft. over E. slope.  
 26.20 Spur, slopes SE.  
 Desc. 113 ft. over SW. slope.  
 32.00 Ravine, course SE.  
 Asc. 57 ft. over NE. slope.  
 36.80 Ridge, bears N. and S.  
 Desc. 66 ft. over SW. slope.  
 38.80 Head of short ravine, course SW.  
 39.98 Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the  
 ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

1325  
 $\frac{1}{4}$  S36  
 1929

from which

A juniper, 16 ins. diam., bears N.  $45^{\circ}$  E., 267 lks.  
 dist., marked  $\frac{1}{4}$  S25 BT.

No other suitable bearing trees. Raise a mound of  
 stone, 3 ft. base, 2 ft. high, N. of cor.

- Desc. 30 ft. along S. slope.  
 42.50 Short spur, slopes SW.  
 Desc. 122 ft. over W. slope.  
 45.00 Wire fence, bears N. and S.  
 47.10 Wire fence, bears NW. and SE.  
 51.00 Gulch, course SW.  
 Asc. 30 ft. over SE. slope.  
 53.50 Spur, slopes S.  
 Desc. 25 ft. over W. slope.  
 57.90 Draw, course SW.  
 Asc. 20 ft. over SE. slope.  
 59.80 Spur, slopes S.  
 Desc. 12 ft. over W. slope.  
 61.40 Gulch, course SE.  
 Asc. 357 ft. over SE. slope.  
 75.10 Ridge, bears SE. and NW.  
 Desc. 117 ft. over NW. slope.  
 79.96 The cor. of secs. 25, 26, 35 and 36.

Land: rolling.

Soil: gravel, 2nd rate.

Timber: cedar, pinon.

Undergrowth: oak, mesquite, catclaw, cactus, bear grass,  
 torch weed, sotol.

Survey of  
Part of the Subdivision Lines of T.4 S.; R.20 E.

BOOK 3877

- Chains
- N.0°01'W., bet. secs. 25 and 26.  
Over mountainous land; thru scattering timber and brush.  
Along W. slope.
  - 2.20 Ravine, course SW.  
Asc. 240 ft. over SW. slope.
  - 13.00 Ridge, bears SE. and NW.  
Asc. 117 ft. over SW. slope.
  - 25.00 Short spur, slopes SE.  
Desc. 56 ft. over NE. slope.
  - 35.10 Head of ravine, course SE.  
Asc. 280 ft. over S. slope.
  - 36.20 Trail, bears W. to Stanley Butte and E.
  - 40.00 Set an iron post, 3 ft. long, 1 in. diam., 16 ins. in the ground, supported by a mound of stone, for  $\frac{1}{4}$  sec. cor. with brass cap marked

$\frac{1}{4}$   
 S26 | S25  
 1929

No bearing trees available. Raise a mound of stone,  
3 ft. base, 2 ft. high, W. of cor.

- Asc. 407 ft. over SE. slope.
- 59.00 Spur, slopes SW.
- 59.24 NW. cor. of goat shed bears S.61°20'W.  
Asc. 315 ft. along broken W. slope.
- 79.80 Small ravine, course SW.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for cor. of secs. 23, 24, 25 and 26, with brass cap marked

T4SR20E  
S23 | S24  
S26 | S25  
 1929

- from which
- A juniper, 10 ins. diam., bears N.40°E., 242 lks. dist., marked T4S R20E S24 BT.
  - A live oak, 6 ins. diam., bears S.42 $\frac{1}{2}$ °E., 76 lks. dist., marked BT.
  - A live oak, 4 ins. diam., bears S.1°W., 40 lks. dist., marked BT.
  - A live oak, 3 ins. diam., bears N.45°W., 51 lks. dist., marked BT.

Land: mountainous.  
Soil: gravel and adobe, 2nd rate.  
Timber: oak, cedar, juniper, pinon.  
Undergrowth: oak, mahogany, catclaw, mesquite, cactus, sotol, bear grass, torch weed.

- 
- N.89°48'E., on random line, bet. secs. 24 and 25.
  - 40.00 Set temp.  $\frac{1}{4}$  sec. cor.
  - 79.98 Fall 44 lks. N. of the cor. of secs. 19, 24, 25 and 30, on the E. bdy. of the Tp., hereinbefore described.  
Thence
  - N.89°53'W., on true line, bet. secs. 24 and 25.  
Over mountainous land; through scattering timber and undergrowth.  
Asc. 192 ft. over E. slope.

## Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

- 4.00 Ridge, bears NW. and SE.  
 Desc. 458 ft. over SW. slope.
- 37.90 Gulch, trace of water, course S.  
 Asc. 52 ft. over general E. slope.
- 39.30 Drain, course SE.
- 39.99 Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

$$\begin{array}{r} \frac{1}{4} S24 \\ \frac{1}{4} S25 \\ 1929 \end{array}$$

from which

- A live oak, 6 ins. diam., bears N.43°E., 155 lks.  
 dist., marked  $\frac{1}{4}$  S24 BT.
- A juniper, 6 ins. diam., bears S.63 $\frac{1}{2}$ °W., 80 lks.  
 dist., marked  $\frac{1}{4}$  S25 BT.

Asc. 417 ft. over SE. slope.

- 54.00 High spur, slopes SE.  
 Asc. 69 ft. over SE. slope.
- 60.00 Ridge, bears NE. and SW.  
 Desc. 651 ft. over W. slope.
- 79.98 The cor. of secs. 23, 24, 25 and 26.

Land: mountainous.  
 Soil: gravel and adobe, 2nd rate.  
 Timber: oak, cedar, juniper, pinon.  
 Undergrowth: oak, catclaw, mesquite, cactus, sotol.

N.0°01'W., bet. parts of secs. 23 and 24.

Over mountainous land; thru scattering timber and medium undergrowth.

Asc. 1101 ft. over general SW. slope (to spur).

- 23.00 Head of ravine, course SW.
- 30.60 Spur, slopes SW.  
 Asc. 52 ft. along W. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

$$\begin{array}{r} \frac{1}{4} \\ S23 | S24 \\ 1929 \end{array}$$

from which

- A black oak, 6 ins. diam., bears N.62 $\frac{1}{2}$ °E., 30 lks.  
 dist., marked  $\frac{1}{4}$  S24 BT.
- A box elder, 4 ins. diam., bears N.54 $\frac{1}{2}$ °W., 34 lks.  
 dist., marked  $\frac{1}{4}$  S23 BT.

Asc. 228 ft. over SW. slope.

- 48.00 Ridge, divide, bears NW. and SE.  
 Desc. 30 ft. along E. slope.
- 51.79 (3.14 chs. S.0°01'E. of true point) Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for witness cor. to closing cor. of secs. 23 and 24, with brass cap marked

$$\begin{array}{r} WMIR \\ \hline W | C \\ S23 | S24 \\ C | C \\ T4SR20E \\ 1929 \end{array}$$

Survey of

BOOK 3877

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

from which  
 A black oak, 9 ins. diam., bears S.61°E., 274 lks. dist., marked T4S R20E S24 WC CC BT.  
 An alligator juniper, 30 ins. diam., bears S.18½°W., 347 lks. dist., marked T4S R20E S23 WC CC BT.

52.00 Foot of cliff, faces E. and SE.  
 . Asc. 90 ft. over same.

54.93 Intersect the S. bdy. of the White Mountain Indian Reservation at a point 5.09 chs. N.79°32'W. of the 12 mile mon. thereon, hereinbefore described.

Impracticable to monument closing cor. at this point on account of steep sloping bedrock.

Land: mountainous.  
 Soil: gravel and loam, 3rd rate.  
 Timber: oak, pinon, locust, cedar, juniper, elder.  
 Undergrowth: oak, manzanita, mahogany, catclaw, cactus, cherry, sotol, bear grass, torch weed.

From the cor. of secs. 2, 3, 34 and 35, on the S. bdy. of the Tp., established under this Group, described in Book "F".

N.0°01'W., bet. secs. 34 and 35.

Over mountainous land; through scattering timber and undergrowth.

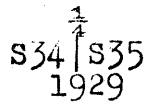
Asc. 150 ft. over S. slope.

4.50 Spur, slopes SE.  
 Desc. 450 ft. over NE. slope.

25.50 Gulch, trace of water, course E.  
 Asc. 250 ft. over SE. slope.

34.40 Spur, slopes E.  
 Desc. 190 ft. over cliffs, face NE. on E. side of spur, slopes N.

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

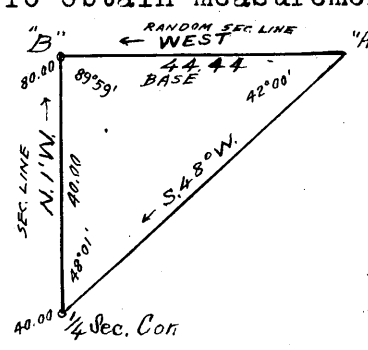


from which

A pinon, 12 ins. diam., bears S.17½°E., 43 lks. dist., marked ¼ S35 BT.

A pinon, 16 ins. diam., bears N.1°E., 110 lks. dist., marked ¼ S35 BT.

To obtain measurement across rugged land forward, triangulate as described as follows:



From a point "A", on random line bet. secs. 26 and 35, measure a base West, 44.44 chs. to point "B". From "A", the ¼ sec. cor. of secs. 34 and 35 bears S.48°00'W. Bearings checked by deflection and totaling of angles. Vertical angle = -6¾°. Dist. triangulated = 40.00 chs.; therefore point "B" is true point for cor. of secs. 26, 27, 34 and 35.

Desc. about 400 ft. over broken NE. slope.

58.00 (Approx.) Gulch, trace of water, course NE.  
 Asc. about 180 ft. over broken E. slope. (to cor.).

69.00 (Approx.) Ravine, course E.

76.00 (Approx.) Ravine, course SE.

Survey of  
Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

80.00 Triangulation point "B". Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for cor. of secs. 26, 27, 34 and 35, with brass cap marked

T4SR20E  
S27 | S26  
S34 | S35  
1929

from which

A black oak, 12 ins. diam., bears S. 21° E., 12 lks. dist., marked T4S R20E S35 BT.

A live oak, 6 ins. diam., bears N. 46½° W., 40 lks. dist., marked T4S R20E S27 BT.

No other bearing trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.

Land: mountainous.

Soil: gravel, adobe, 3rd rate.

Timber: oak, pinon, cedar, juniper.

Undergrowth: oak, mesquite, catclaw, cactus, mahogany, manzanita, torch grass, etc.

40.00 East, on random line, bet. secs. 26 and 35.

Set temp. ¼ sec. cor.

44.44 Triangulation point "A".

79.58 Intersect the cor. of secs. 25, 26, 35 and 36.

Thence

West, on true line, bet. secs. 26 and 35.

Over mountainous land; thru scattering timber and dense undergrowth.

Desc. 54 ft. over W. slope.

2.00 Small ravine, course SW

Desc. 90 ft. along S. slope.

13.00 Spur, slopes SW.

Desc. 250 ft. over W. slope.

19.00 Gulch, wash, 40 lks. wide, course SE.

Asc. 579 ft. over E. slope.

35.14 Triangulation point "A". Goat shed bears N. 8° 40' E.

35.20 Ridge, bears NW. and SE., slopes NW.

Desc. 161 ft. over SW. slope.

39.79 Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground, for ¼ sec. cor., with brass cap marked

S26  
¼ S35  
1929

No bearing trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.

Desc. 125 ft. over SW. slope.

42.30 Head of ravine, course SW.

Asc. 85 ft. over SE. slope.

54.80 Spur, slopes SW.

Desc. 81 ft. over W. slope.

59.80 North Goodwin Creek, 8 lks. wide, course SE.

Asc. 420 ft. over NE. slope.

74.00 Spur, slopes SE.

Asc. 106 ft. along S. slope.

79.58 The cor. of secs. 26, 27, 34 and 35.

Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

Land: mountainous.  
 Soil: gravel and adobe, 3rd rate.  
 Timber: oak, pinon, cedar, juniper.  
 Undergrowth: oak, mahogany, catclaw, cactus, mesquite,  
 torch grass, etc.

N.0°01'W., bet. secs. 26 and 27.

Over mountainous land; through scattering timber and dense undergrowth.

Asc. 34 ft. over SE. slope.

6.40 Spur, slopes E.

Desc. 233 ft. over N. slope.

14.50 North Goodwin Creek, 8 lks. wide; course SE.

Asc. 35 ft. over SE. slope.

17.20 Spur, slopes SE.

Desc. 35 ft. over N. slope.

26.00 Draw, course SE.

Asc. 129 ft. over SE. slope.

40.00 True point for  $\frac{1}{4}$  sec. cor. falls on face of cliff, 15 ft. high, faces S.

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

$\frac{1}{4}$   
 S27 | S26  
 W C  
 1929

from which

A live oak, 3 ins. diam., bears N.47°E., 34 lks. dist., marked WC BT.

An alligator juniper, 6 ins. diam., bears S.12 $\frac{1}{2}$ °W., 167 lks. dist., marked  $\frac{1}{4}$  S27 WC BT.

Asc. 36 ft. over S. slope.

42.40 Spur, slopes SE.

Desc. 191 ft. over NE. slope.

56.50 Junction of gulch, course E. with gulch from NE., course E. Asc. 63 ft. over SE. slope.

58.50 Toe of spur, slopes E.

Desc. 18 ft. over NE. slope.

59.10 Same gulch, course SE.

Asc. 389 ft. over general S. slope.

75.50 Spur, slopes SW.

Desc. 47 ft. along W. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for cor. of secs. 22, 23, 26 and 27, with brass cap marked

T4SR20E  
 S22 | S23  
 S27 | S26  
 1929

No bearing trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.

Land: mountainous.

Soil: gravel and loam, 2nd rate.

Timber: oak, pinon, cedar, juniper.

Undergrowth: oak, mesquite, catclaw, cactus, mahogany, torch weed, sotol, Spanish bayonet, etc.

Part of the Subdivision Lines of T.4 S., R.20 E.

Survey of  
Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

- East, on random line, bet. secs. 23 and 26.
- 40.00 Set temp.  $\frac{1}{4}$  sec. cor.
- 79.56 Fall 14 lks. N. of the cor. of secs. 23, 24, 25 and 26.
- Thence
- N.  $89^{\circ}54'W.$ , on true line, bet. secs. 23 and 26.
- Over mountainous land; thru scattering timber and brush.
- Desc. 110 ft. over SW. slope.
- 3.00 Ravine, course SW.
- Asc. 90 ft. over SE. slope.
- 11.00 Spur, slopes SW.
- Desc. 492 ft. over SW. slope.
- 22.50 Gulch, trace of water, course S.
- Asc. 462 ft. over E. slope.
- 39.78 Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

$$\begin{array}{r} \frac{1}{2}S23 \\ \frac{1}{4}S26 \\ \hline 1929 \end{array}$$

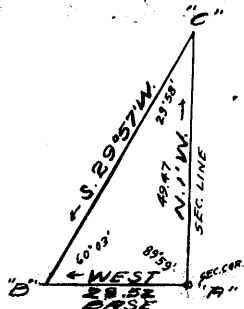
No bearing trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.

- Asc. 47 ft. over E. slope.
- 41.50 Spur, slopes SE.
- Desc. 47 ft. over SW. slope.
- 44.00 Head of ravine, course SW.
- Asc. 57 ft. over E. slope.
- 52.50 Spur, slopes SE.
- Desc. 600 ft. over W. slope.
- 65.00 Gulch, course S.
- Asc. 200 ft. over E. slope.
- 77.20 Spur, slopes S.
- Desc. 105 ft. over W. slope.
- 79.56 The cor. of secs. 22, 23, 26 and 27.

Land: mountainous.  
Soil: gravel, loam, adobe, 3rd rate.  
Timber: oak, pinon, cedar.  
Undergrowth: oak, mesquite, catclaw, cactus, mahogany, sotol, bear grass, torch weed.

N.  $0^{\circ}01'W.$ , bet. parts of secs. 22 and 23.  
Over mountainous land; thru scattering timber and dense undergrowth.

To obtain measurement over very rugged land ahead, triangulate as described as follows:



Designate sec. cor. "A". from which measure a base 28.52 chs. West to point "B". From a point "C", forward on line, point "B" bears S.  $29^{\circ}57'W.$  Bearings checked by deflection of angles.  
Distance triangulated = 49.47 chs.  
By return measurement =  $\frac{49.47}{1.25} = 39.58$  "  
 $\frac{1}{4}$  sec. cor. ----- 40.00 "

- Asc. about 850 ft. over very broken SW. slope.
- 36.00 (Approx.) Ravine, course S.  $10^{\circ}W.$
- Asc. about 150 ft. over SE. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked



Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

1  
S33|S34  
1929

from which

A white oak, 7 ins. diam., bears N. 82° E., 56 lks. dist., marked 1/4 S34 BT.

A cedar, 6 ins. diam., bears S. 56° W., 16 lks. dist., marked 1/4 S33 BT.

- Asc. 56 ft. over S. slope.
- 41.80 Spur, slopes SW.
- Asc. 84 ft. over SW. slope.
- 44.00 Same spur, slopes SE.
- Asc. 207 ft. over SE. slope.
- 51.90 Ridge, bears E. and W.
- Desc. 356 ft. over NE. slope.
- 61.00 Ravine, course NE.
- Desc. 116 ft. over NE. slope.
- 66.00 Creek, 3 lks. wide, course NW.
- Asc. 186 ft. over SW. slope.
- 78.80 Top of cliff, 40 ft. high, faces S.
- Enter scattering yellow pine timber, bears NW. and SE.
- Asc. 30 ft. over SW. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground, supported by a mound of stone, 4 ft. base, 1 1/2 ft. high, for cor. of secs. 27, 28, 33 and 34, with brass cap marked

T4SR20E|  
S28|S27  
S33|S34  
1929

from which

A yellow pine, 10 ins. diam., bears N. 15 1/2° E., 76 lks. dist., marked T4S R20E S27 BT.

A yellow pine, 8 ins. diam., bears S. 76 1/2° E., 72 lks. dist., marked T4S R20E S34 BT.

A cedar, 12 ins. diam., bears S. 1 1/2° W., 103 lks. dist., marked T4S R20E S33 BT.

A yellow pine, 10 ins. diam., bears N. 46° W., 44 lks. dist., marked T4S R20E S28 BT.

Land: mountainous.

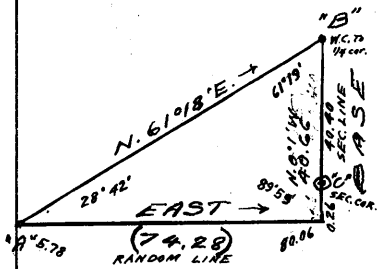
Soils: granite loam, adobe, 3rd rate.

Timber: oak, cedar, pinon, pine.

Undergrowth: oak, manzanita, mahogany, catclaw, cactus, mesquite, torch weed, sotol.

East on random line, bet. secs. 27 and 34.

5.78 To obtain measurement over rugged land and dense brush ahead, triangulate as described as follows:



Designate this point "A". The witness cor. to 1/4 sec. cor. of secs. 26 and 27, designated point "B", bears N. 61° 19' E.

Extending blank line forward, fall 26 lks. S. of the cor. of secs. 26, 27, 34 and 35, designated point "C", 40.40 chs. S. 0° 01' E. of point "B". Base is therefore 40.46 chs. S. 1' E. Angles checked by deflection.

Distance triangulated = 74.28 chs.

80.06 Fall 26 lks. S. of the cor. of secs. 26, 27, 34 and 35.

Thence S. 89° 49' W., on true line, bet. secs. 27 and 34.

Survey of

BOOK 3877

Part of the subdivision Lines of T.4 S., R.20 E.

Chains

S22 | S23  
1929

from which  
A live oak, 5 ins. diam., bears S.44°E., 8 lks. dist., marked 1/4 S23 BT.  
A live oak, 5 ins. diam., bears S.14°W., 8 lks. dist., marked 1/4 S22 BT.

Continue line and measurement by chaining.  
Asc. 306 ft. over SE. slope on W. side of ravine, course S.

49.47 Triangulation point "C".

49.60 Ridge, bears NE. and SW.

49.88 Triangulation point "D", hereinbefore described in Notes of Re-tracement of W.M.I.R. Bdy. Discontinue chaining.  
Desc. about 730 ft. over rocky NE. slope.

69.80 (Approx.) Gulch, course NW.

Asc. about 100 ft. over SW. slope.

71.79 Set an iron post, 3 ft. long, 2 ins. diam., 4 ins. in the ground; deposit a stone, marked with cross (+) beside post and raise a mound of stone, 5 ft. base, 2 1/2 ft. high, around post, for witness cor. to closing cor. of secs. 22 and 23, with brass cap marked

WC  
WMIR  
S22 | S23  
C C  
T4SR20E  
1929

No bearing trees available.

71.89 Intersect the S. bdy. of the White Mountain Indian Reservation at a point 29.82 chs. S.77°48'E. of the 13 1/2 mile mon. thereof, hereinbefore described. Point falls on sloping ledge, unsafe place to set C.C. monument.

Land: mountainous.  
Soil: gravel loam, 3rd rate.  
Timber: oak, pinon, cedar, locust.  
Undergrowth: oak, manzanita, mahogany, catclaw, cactus, mesquite, cherry, locust, bear grass.

From the cor. of secs. 3, 4, 33 and 34, on the S. bdy. of the Tp., established under this Group, described in Book "F",

N.0°02'W., bet. secs. 33 and 34.  
Over mountainous land; thru scattering timber and brush.

Asc. 22 ft. over SW. slope.

1.90 Ridge, bears NW. and SE.

Desc. 25 ft. over NE. slope.

6.10 Wash, 15 lks. wide, course SE.

Asc. 425 ft. over S. slope.

23.30 Spur, slopes SW.

Along W. slope.

31.00 Ravine, course SW.

Asc. 407 ft. over S. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 10 ins. in the ground, supported by a mound of stone, 4 1/2 ft. base, 2 ft. high, for 1/4 sec. cor., with brass cap marked

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

Over mountainous land; thru scattering timber and medium undergrowth.

Asc. 850 ft. over SE. slope.

31.50 Spur, slopes NE. Enter dense undergrowth.

Desc. 144 ft. over NW. slope.

39.10 Ravine, course NE.

Asc. 14 ft. over E. slope.

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

1/4 S27  
1/4 S34  
1929

from which

A live oak, 6 ins. diam., bears S.29 1/2° E., 24 lks. dist., marked 1/4 S34 BT.

A live oak, 7 ins. diam., bears N.34 1/4° W., 18 lks. dist., marked 1/4 S27 BT.

Discontinue measurement by chaining.

Asc. about 550 ft. over broken NE. slope.

60.00 Enter scattering yellow pine timber.

74.28 Triangulation point "A". Continue line and measurement by chaining.

74.60 Spur, slopes NE.

Along N. slope.

76.80 Ridge, bears NW. and SE.

Desc. 68 ft. over SW. slope.

80.06 The cor. of secs. 27, 28, 33 and 34.

Land: mountainous.

Soil: loam and adobe, 3rd rate.

Timber: oak, cedar, pine, pinon.

Undergrowth: oak, manzanita, cherry, dogwood, catclaw, mesquite, cactus, torch weed, etc.

N.0°02'W., bet. secs. 27 and 28.

Over mountainous land; thru scattering timber and dense undergrowth.

Asc. 15 ft. over SW. slope.

1.70 Rocky ridge, bears NW. and SE.

Desc. 108 ft. along E. slope.

11.20 Head of ravine, course NE.

Asc. 15 ft. over SE. slope.

16.85 Ridge, bears NE. and SW.

Desc. 216 ft. over steep N. slope.

20.00 Head of ravine, course NE.

Desc. 300 ft. over NE. slope.

28.00 Same ravine, course NW.

Asc. 50 ft. along W. slope.

35.00 Spur, slopes NW.

Desc. 110 ft. over N. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the ground, for 1/4 sec. cor., with brass cap marked

1/4 S28 | S27  
1929

from which

A cedar, 4 1/2 ins. diam., bears S.65° E., 122 lks. dist.,

Chains	
	marked $\frac{1}{4}$ S27 BT. A cedar, 40 ins. diam., bears S.70°W., 63 lks. dist., marked $\frac{1}{4}$ S28 BT.
	Desc. 73 ft. over N. slope.
41.55	Ravine, course NW. Asc. 50 ft. over SW. slope.
45.00	Spur, slopes NW. Desc. 170 ft. over N. slope.
49.05	Gulch, course SW. Asc. 60 ft. over SW. slope.
52.65	Spur, slopes W. Desc. 34 ft. over NW. slope.
54.95	Ravine, course W. Asc. 34 ft. over SW. slope.
56.35	Small spur, slopes W. Desc. 32 ft. over NW. slope.
57.85	Ravine, course SW. Asc. 240 ft. over SW. slope.
64.35	Trail, bears NE. and W. Asc. 30 ft. over SW. slope.
66.10	Spur, slopes SW.
66.27	Cabin, bears S.84°W. Desc. 250 ft. over NW. slope.
73.70	Ravine, course NW. Asc. 35 ft. over SW. slope.
75.50	Spur, slopes W. Desc. 30 ft. over NW. slope.
76.50	Wash, 15 lks. wide, course SW. Asc. 135 ft. over S. slope.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 28 ins. in the ground, for cor. of secs. 21, 22, 27 and 28, with brass cap marked
	T4SR20E S21 S22 S28 S27 1929
	from which A white oak, 7 ins. diam., bears S.44 $\frac{1}{2}$ °W., 21 lks. dist., marked T4S R20E S28 BT. A white oak, 8 ins. diam., bears N.45 $\frac{1}{2}$ °W., 18 lks. dist., marked T4S R20E S21 BT. Raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor. Land: mountainous. Soil: sandy, adobe, 3rd rate. Timber: oak, cedar, pine, pinon. Undergrowth: oak, manzanita, catclaw, mesquite, cactus, mahogany, torch weed, etc.
	N. 89°49'E., on random line, bet. secs. 22 and 27.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.06	Fall 19 lks. S. of the cor. of secs. 22, 23, 26 and 27. Thence S. 89°41'W., on true line, bet. secs. 22 and 27. Over mountainous land; thru scattering timber and brush. Desc. 134 ft. over W. slope.
4.30	Wash, 20 lks. wide, course S. Asc. 50 ft. over SE. slope.
7.50	Small spur, slopes S. Desc. 94 ft. over SW. slope.
12.30	Wash, 25 lks. wide, course SE. Asc. 173 ft. over SE. slope.
16.50	Small spur, slopes SE. Asc. 343 ft. over SE. slope.

Survey of

BOOK 35  
3877

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains  
 28.50 Ridge, bears NW. and SE.  
 Desc. 40 ft. over SW. slope  
 31.30 Ravine, course SE.  
 Asc. 335 ft. over NE. slope.  
 40.03 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the  
 ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

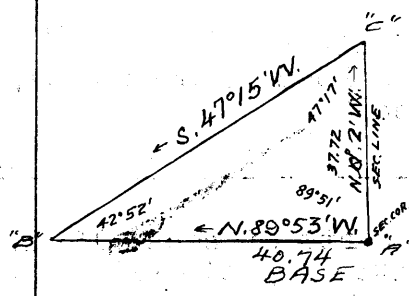
S22  
 S27  
 1929

No bearing trees available. Raise a mound of stone, 5  
 ft. base,  $2\frac{1}{2}$  ft. high, N. of cor.

Asc. 83 ft. over NE. slope.  
 42.00 Spur, slopes SE., from W.  
 Asc. 277 ft. over top of same.  
 51.60 Ridge, bears N. and SW. Enter dense undergrowth.  
 Desc. 734 ft. over SW. slope.  
 80.06 The cor. of secs. 21, 22, 27 and 28.

Land: mountainous.  
 Soil: loam, 2nd rate.  
 Timber: oak, cedar, pinon, juniper.  
 Undergrowth: oak, manzanita, dogwood, catclaw, mesquite  
 cactus, torch weed, sotol, etc.

N.0°02'W., bet. secs. 21 and 22.  
 Over mountainous land; thru scattering timber and dense  
 undergrowth.  
 To obtain measurement across cliffs and dense brush  
 ahead, triangulate as follows:  
 Designate sec. cor. "A". Measure a  
 base 40.74 chs. N.89°53'W. to point  
 "B". From a point "C", forward on line,  
 point "B" bears S.47°15'W.  
 All angles checked by deflection and  
 all bearings checked by direct read-  
 ing of the solar.  
 Vertical angle forward to "C" = +7°  
 " " " " "wash = -1 $\frac{1}{2}$ °  
 Dist. triangulated = 37.72 chs.



Asc. about 50 ft. over S. slope.  
 3.00 Spur, slopes SW.  
 Desc. 100 ft. over NW. slope.  
 15.00 (Approx.) Wash, 20 lks. wide, course W.  
 Asc. about 50 ft. over SW. slope.  
 20.00 (Approx.) Low spur, slopes W.  
 Desc. about 50 ft. over NW. slope.  
 23.00 (Approx.) Wash, 20 lks. wide, course SW.  
 Asc. about 300 ft. over S. slope.  
 37.72 Triangulation point "C". Line and measurement forward by  
 chaining.  
 38.00 Ridge, bears NE. and SW.  
 Along W. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the  
 ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

S21 | S22  
 1929

from which

Survey of

Part of the Subdivisions of T. 4 S., R. 20 E.

Chains

A white oak, 5 ins. diam., bears S. 43° E., 21 lks. dist., marked 1/4 S22 BT.  
A white oak, 4 ins. diam., bears S. 87° W., 32 lks. dist., marked 1/4 S21 BT.

- Asc. 111 ft. along W. slope.
- 49.70 Ravine, course SW.  
Asc. 137 ft. over S. slope.
- 54.20 Ridge, bears NW. and SE.  
Desc. 118 ft. along E. slope.
- 66.30 Gulch, course NE.  
Asc. 40 ft. along E. slope.
- 73.30 Spur, slopes NE.  
Desc. 303 ft. over steep NE. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground, supported by a mound of stone, 3 ft. base, 1 ft. high, for cor. of secs. 15, 16, 21 and 22, with brass cap marked

T4SR20E  
 S16 | S15  
 S21 | S22  
 1929

from which

- A white oak, 4 ins. diam., bears N. 43° E., 57 lks. dist., marked T4S R20E S15 BT.
- A white oak, 6 ins. diam., bears S. 2° E., 92 lks. dist., marked T4S R20E S22 BT.
- A white oak, 5 ins. diam., bears S. 79 1/2° W., 39 lks. dist., marked T4S R20E S21 BT.
- A white oak, 4 ins. diam., bears N. 85 1/2° W., 33 lks. dist., marked T4S R20E S16 BT.

Land: mountainous.  
 Soil: rocky, 4th rate.  
 Timber: oak, pinon, cedar, juniper.  
 Undergrowth: oak, mesquite, mahogany, manzanita, cactus, catclaw, sotol, torch weed.

N. 89° 41' E., on true line, bet. parts of secs. 15 and 22.  
 Over mountainous land; thru scattering timber and dense undergrowth.

- Desc. 60 ft. over NE. slope.
- 1.40 Head of ravine, course NE.  
Desc. 40 ft. along N. slope.
- 5.00 Spur, slopes NE.  
Desc. 230 ft. over E. slope.
- 11.70 Wash, 15 lks. wide, course NE.  
Asc. 330 ft. over W. slope.
- 24.80 Spur, slopes N.  
Desc. 240 ft. over NE. slope.
- 30.00 Wash, 10 lks. wide, course N.
- 32.00 Wash, 10 lks. wide, course NW.  
Asc. 157 ft. over broken NW. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 14 ins. in the ground, supported by a mound of stone, 4 ft. base, 1 1/2 ft. high, for 1/4 sec. cor., with brass cap marked

S15  
 1/4 S22  
 1929

from which

Survey of

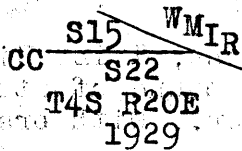
Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

A white oak, 8 ins. diam., bears S.86 $\frac{1}{2}$ °E., 485 lks.  
dist., marked  $\frac{1}{4}$  S22 BT.  
A black oak, 10 ins. diam., bears S.88 $\frac{1}{2}$ °E., 472 lks.  
dist., marked  $\frac{1}{4}$  S22 BT.  
Asc. 110 ft. over NW. slope.

45.16 Intersect the S. bdy. of the White Mountain Indian Reser-  
-vation at a point 6.05 chs. N.77°57'W. of the 13 $\frac{1}{2}$  mile  
mon. thereof, hereinbefore described.

At point of intersection,  
Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in  
the ground, for closing cor. of secs. 15 and 22, with  
brass cap marked



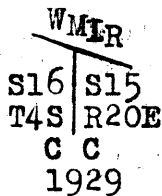
from which  
A black oak, 4 ins. diam., bears S.40 $\frac{1}{2}$ °E., 156 lks.  
dist., marked T4S R20E S22 CC BT.  
A black oak, 4 ins. diam., bears S.31°E., 53 lks.  
dist., marked T4S R20E S22 CC BT.

Land: mountainous.  
Soil: granite loam, adobe, 2nd rate.  
Timber: oak, cedar, pinon, juniper.  
Undergrowth: oak, mesquite, manzanita, catclaw, cactus,  
mahogany, cherry, sotol, torch weed.

N.0°02'W., bet. parts of secs. 15 and 16.  
Over mountainous land; through scattering timber and  
dense undergrowth.  
Desc. 363 ft. over NE. slope.

9.89 Intersect the S. bdy. of the White Mountain Indian Reser-  
-vation at a point 13.74 chs. N.77°47'W. of the 14 mile  
mon., thereof, hereinbefore described.

At point of intersection,  
Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in  
the ground, for closing cor. of secs. 15 and 16, with  
brass cap marked



from which  
A white oak, 6 ins. diam., bears S.68 $\frac{1}{4}$ °E., 82 lks.  
dist., marked T4S R20E S15 CC BT.  
A white oak, 12 ins. diam., bears S.46 $\frac{1}{4}$ °E., 70 lks.  
dist., marked T4S R20E S15 CC BT.

Land: mountainous.  
Soil: loam, adobe, 3rd rate.  
Timber: oak, pinon.  
Undergrowth: oak, manzanita, catclaw, cactus.

Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

- From the cor. of secs. 4, 5, 32 and 33, on the S. bdy. of the Tp., established under this Group, described in Book "F".
- N.0°02'W., bet. secs. 32 and 33.
- Over mountainous land; thru scattering timber and dense undergrowth.
- Asc. 297 ft. over SW. slope.
- 8.50 Spur, slopes SE.
- Asc. 60 ft. along E. slope.
- 18.80 Ravine, course SE.
- Asc. 290 ft. over S. slope.
- 25.30 Ridge, bears E. and SW.
- Desc. 521 ft. over NW. slope.
- 36.80 Ravine, course NW.
- Asc. 32 ft. over SW. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 24 ins. in the ground, supported by a mound of stone, 2 ft. base, 1 ft. high, for  $\frac{1}{4}$  sec. cor., with brass cap marked

1
S32   S33
1929

from which

- A white oak, 10 ins. diam., bears S.67 $\frac{1}{2}$ °E., 3 lks. dist., marked  $\frac{1}{4}$  S33 BT.
- A white oak, 5 ins. diam., bears S.4°W., 6 lks. dist., marked  $\frac{1}{4}$  S32 BT.

- Along W. slope.
- 42.10 Spur, slopes NW.
- Desc. 165 ft. over NW. slope.
- 45.30 Ravine, course NW.
- Asc. 25 ft. over SW. slope.
- 48.90 Small spur, slopes NW.
- Desc. 239 ft. along broken W. slope.
- 60.50 Spur, slopes NW.
- Desc. 384 ft. over N. slope.
- 69.65 Creek, 2 lks. wide, course NW.
- Asc. 70 ft. over SW. slope.
- 74.30 Spur, slopes NW.
- Desc. 66 ft. over N. slope.
- 75.90 Ravine, course NW.
- Asc. 91 ft. over SW. slope.
- 78.70 Spur, slopes NW.
- Desc. 38 ft. over NW. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in the ground, for cor. of secs. 28, 29, 32 and 33, with brass cap marked

T4SR20E
S29   S28
S32   S33
1929

from which

- A cedar, 14 ins. diam., bears N.22 $\frac{1}{2}$ °E., 57 lks. dist., marked T4S R20E S28 BT.
- A cedar, 12 ins. diam., bears S.88 $\frac{1}{2}$ °W., 73 lks. dist., marked T4S R20E S32 BT.
- A white oak, 8 ins. diam., bears N.53 $\frac{1}{2}$ °W., 67 lks. dist., marked T4S R20E S29 BT.
- No other suitable trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.



Survey of

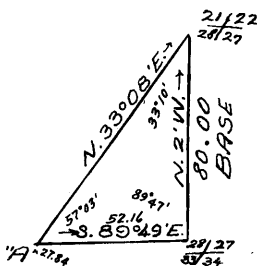
Part of the Subdivision Lines of T.4 S., R.20 E.

BOOK 3871

Chains

Land: mountainous.  
 Soil: rocky, gravelly, 2nd rate.  
 Timber: oak, cedar, pinon, juniper.  
 Undergrowth; oak, mesquite, catclaw, cactus, mahogany,  
 manzanita, Spanish bayonet, etc.

27.84 East, on random line, bet. secs. 28 and 33.  
 To obtain measurement across cliffs and dense undergrowth  
 ahead, triangulate as follows:



Designate this point "A". The cor. of  
 secs. 27, 28, 33 and 34 bears S. 89° 49' E.  
 The cor. of secs. 21, 22, 27 and 28  
 bears N. 33° 08' E.  
 Vertical angle ahead on line = +71½°  
 Distance triangulated = 52.16 chs.

40.00 Set temp. ¼ sec. cor. Discontinue chaining.  
 80.00 Fall (by computation) 17 lks. N. of the cor. of secs. 27,  
 28, 33 and 34.

Thence  
 N. 89° 53' W., on true line, bet. secs. 28 and 33.  
 Over mountainous land; through scattering timber and  
 dense undergrowth.

Desc. about 750 ft. over SW. slope.  
 20.00 (Approx.) Creek, 3 lks. wide, course NW.  
 Asc. about 220 ft. over NE. slope.  
 23.00 (Approx.) Spur, slopes NW.  
 Desc. about 140 ft. over W. slope.  
 26.50 (Approx.) Wash, 15 lks. wide, course N.  
 Asc. about 210 ft. over NE. slope.  
 33.50 (Approx.) Spur, slopes NW.  
 Desc. about 130 ft. over W. slope.

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

1 S28  
 4 S33  
 1929

from which  
 A cedar, 26 ins. diam., bears S. 10° E., 57 lks. dist.,  
 marked ¼ S33 BT.  
 A cedar, 12 ins. diam., bears S. 75° W., 50 lks. dist.,  
 marked ¼ S33 BT.

Continue line and measurement by chaining.  
 Desc. 45 ft. over NW. slope.

43.20 Ravine, course N.  
 Asc. 152 ft. over NE. slope.  
 46.60 Small spur, slopes N.  
 Desc. 40 ft. over NW. slope.  
 50.00 Head of ravine, course N.  
 Asc. 60 ft. over NE. slope.  
 52.16 Triangulation point "A".  
 52.20 Ridge, bears NW. and SE.  
 Desc. 546 ft. over W. slope.  
 60.00 Ravine, course NW.  
 Asc. 150 ft. over NE. slope.  
 68.00 Spur, slopes NW.  
 Desc. 346 ft. over W. slope.  
 77.70 Ravine, course NW.  
 Desc. 50 ft. along N. slope.

80.00 The cor. of secs. 28, 29, 32 and 33.

Survey of

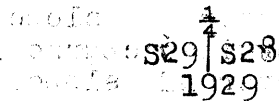
Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

Land: mountainous. Soil: loam, adobe, 2nd rate. Timber: oak, pinon, cedar, juniper, pine. Undergrowth: oak, manzanita, mahogany, cherry, cactus, catclaw, mesquite, dogwood.

N.0°02'W., bet. secs. 28 and 29. Over mountainous land; thru scattering timber and dense undergrowth. Desc. 20 ft. over NW. slope. 0.50 Ravine, course NW. Asc. 20 ft. over SW. slope. 1.90 Spur, slopes V. Desc. 70 ft. over NW. slope. 7.10 Creek, 3 lks. wide, course SW. Asc. 381 ft. over S. slope. 18.20 Ridge, bears E. and NW. Spur, slopes SW. Desc. 685 ft. over N. slope. 38.50 Ravine, course NE. Desc. 22 ft. along E. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the ground, for 1/4 sec. cor., with brass cap marked

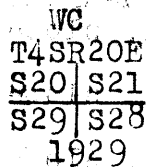


No suitable bearing trees available. Raise a mound of stone, 5 ft. base, 2 1/2 ft. high, W. of cor.

Along E. slope.

50.00 Spur, slopes NE. Desc. 400 ft. over broken N. slope. 65.00 Kelly wash, 100 lks. wide, course NW. Leave dense; enter scattering undergrowth, bears E. and W. Asc. 335 ft. over S. slope. 74.00 Spur, slopes SW. Along W. slope. 77.50 Head of ravine, course SW. Asc. 75 ft. over S. slope.

79.90 (10 lks. S.0°02'E. of true point) Set an iron post, 3 ft. long, 2 ins. diam., 6 ins. in the ground, supported by a mound of stone, 6 1/2 ft. base, 2 1/2 ft. high, for witness cor. to cor. of secs. 20, 21, 28 and 29, with brass cap marked



from which  
A pinon, 5 ins. diam., bears N.51 1/2°E., 102 lks. dist., marked T4S R20E S21 WC BT.  
A cedar, 14 ins. diam., bears S.79 1/2°E., 139 lks. dist., marked T4S R20E S28 WC BT.  
A cedar, 3 ins. diam., bears S.27°W., 48 lks. dist., marked WC BT.  
A cedar, 12 ins. diam., bears N.53 1/2°W., 225 lks. dist., marked T4S R20E S20 WC BT.

80.00 True point for cor. falls on sloping bedrock. Land: mountainous. Soil: loam, 3rd rate. Timber: oak, cedar, pinon, juniper, Undergrowth: oak, manzanita, mahogany, cherry, dogwood, catclaw, mesquite, cactus.

Survey of Part of the Subdivision Lines of T.4 S., R.20 E. BOOK 3877

Chains From true cor. point for cor. of secs. 20, 21, 28 and 29  
 S. 89° 53' E., on random line, bet. secs. 21 and 28.  
 40.00 Set temp.  $\frac{1}{4}$  sec. cor.  
 80.08 Fall 1 lk. N. of the cor. of secs. 21, 22, 27 and 28.  
 Thence  
 N. 89° 53' W., on true line, bet. secs. 21 and 28.  
 Over mountainous land; thru scattering timber and dense  
 undergrowth.  
 Desc. 54 ft. along S. slope.  
 11.20 Spur, slopes W., from NE.  
 Desc. 92 ft. over top of same  
 15.30 Same spur, slopes SW.  
 Desc. 260 ft. over W. slope.  
 25.20 Wash, 35 lks. wide, course SW.  
 Asc. 50 ft. over E. slope.  
 28.00 Small spur, slopes SE.  
 Along S. slope.  
 32.20 Ravine, course SE.  
 Asc. 75 ft. over E. slope.  
 34.50 Spur, slopes SE.  
 Along S. slope  
 37.00 Head of ravine, course SE.  
 Asc. 85 ft. over SE. slope.  
 39.84 (20 lks. S. 89° 53' E. of true point) Set an iron post, 3  
 ft. long, 1 in. diam., 20 ins. in the ground, supported  
 by a mound of stones, 3 ft. base, 1 ft. high, for  
 witness cor. to  $\frac{1}{4}$  sec. cor., with brass cap marked

S21  
 $\frac{1}{4}$  WC  $\frac{S21}{S28}$   
 1929

from which  
 A white oak, 14 ins. diam., bears S. 53° E., 35 lks.  
 dist., marked  $\frac{1}{4}$  S28 WC BT.  
 A white oak, 6 ins. diam., bears N. 56° W., 20 lks.  
 dist., marked  $\frac{1}{4}$  S21 WC BT.  
 NW. cor. of cabin bears S. 5 $\frac{1}{2}$ ° E.

40.04 True point for  $\frac{1}{4}$  sec. cor. falls on sloping bedrock,  
 unsafe place to establish cor. monument.  
 Asc. 41 ft. over SE. slope.  
 41.90 Top of cliff, 30 ft. high, faces SW.  
 Desc. 50 ft. over SE. slope.  
 46.00 Head of draw, course S.  
 Asc. 20 ft. over SE. slope.  
 49.50 Spur, slopes S. Leave dense; enter scattering undergrowth,  
 bears N. and S.  
 Desc. 462 ft. along broken S. slope.  
 74.10 Trail, bears NW. and SE.  
 Desc. 144 ft. over SW. slope.  
 80.08 The true point for cor. of secs. 20, 21, 28 and 29.  
 Land: mountainous.  
 Soil: loam, 3rd rate.  
 Timber: oak, pinon, cedar, juniper.  
 Undergrowth: oak, manzanita, mahogany, dogwood, cactus,  
 catclaw, mesquite, torch weed.

-----  
 From true cor. point for cor. of secs. 20, 21, 28 and 29.  
 N. 0° 02' W., bet. secs. 20 and 21.  
 Over mountainous land; through scattering timber and  
 scattering undergrowth.  
 Asc. 82 ft. over SW. slope.

## Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

4.50 Ridge, bears NW. and SE.  
Desc. 88 ft. over N. slope.

8.40 Ravine, course NW.  
Asc. 64 ft. over SW. slope.

10.00 Trail, bears NW. and SE.

13.00 Spur, slopes NW.  
Desc. 301 ft. over N. slope.

23.80 Wash, 20 lks. wide, course SW.

26.50 Wash, 60 lks. wide, course SW.  
Asc. 86 ft. over S. slope.

34.80 Spur, slopes SW.  
Along W. slope.

35.30 Shed and corrals bear about 22.50 chs. West.

36.50 Spring branch, 1 lk. wide, course SW.  
Asc. 55 ft. over S. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 14 ins. in the ground; deposit a stone, marked with cross (+) beside post and raise a mound of stone, 2 ft. base, 1½ ft. high, around post, for ¼ sec. cor., with brass cap marked

S20 | S21  
1929

No suitable bearing trees available.  
NE. cor. of house bears N. 89°30' W., about 22 chs. dist.

40.80 Small spur, slopes SW.  
Along W. slope.

45.50 Wash, 15 lks. wide, course SW.  
Asc. 392 ft. over S. slope.

60.90 Ridge, bears NW. and SE.  
Desc. 295 ft. over N. slope.

71.30 Wash, 15 lks. wide, course NW.  
Asc. 179 ft. over SW. slope.

79.80 Top of cliff, 30 ft. high, faces SW.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 6 ins. in the ground; deposit a stone, marked with cross (+) at base of post and raise a mound of stone, 5 ft. base, 2½ ft. high, around post, for cor. of secs. 16, 17, 20 and 21, with brass cap marked

T4SR20E  
S17 | S16  
S20 | S21  
1929

from which  
A cedar, 3 ins. diam., bears S. 76¼° E., 27 lks. dist., marked BT.  
A pinon, 8 ins. diam., bears N. 12° W., 77 lks. dist., marked T4S R20E S17 BT.  
No other bearing trees available.

Land: mountainous.  
Soil: loam, 3rd rate.  
Timber: oak, pinon, cedar, juniper.  
Undergrowth: oak, manzanita, mesquite, catclaw, cactus, dogwood, sotol, torch weed.

S. 89°53' E., on random line, bet. secs. 16 and 21.

40.00 Set temp. ¼ sec. cor.

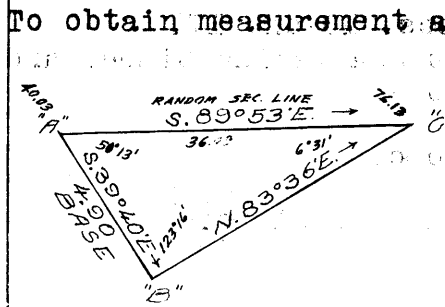
40.03 To obtain measurement across rugged land forward, triangulate as described as follows:  
Designate this point "1", from which measure a base 4.90 chs S. 59°40' E. to point "2", from "2" a point "3"

Survey of

Part of the Subdivision Lines of T.4 S., R.20 E. BOOK 3877

Chains

40.03



To obtain measurement across rugged land forward triangulate as described as follows: Designate this point "A", from which measure a base 4.90 chs. S. 39° 40' E., to point "B". From point "B" a point "C", forward on line bears N. 83° 36' E. Bearings checked by deflection of angles. Vertical angle "A" to "C" = -4 1/2° Dist. triangulated = 36.10 chs.

76.13

Triangulation point "C". Continue measurement by chaining.

80.06

Fall 30 lks. N. of the cor. of secs. 15, 16, 21 and 22.

Thence

N. 89° 40' W., on true line, bet. secs. 16 and 21.

Over mountainous land; thru scattering timber and dense undergrowth.

Asc. 122 ft. over E. slope.

3.93

Triangulation point "C" bears 29 lks. N. Discontinue measurement by chaining.

4.30

Spur, slopes NE.

Desc. about 130 ft. over NW. slope.

9.50

(Approx.) Gulch, course N.

Asc. about 100 ft. over NE. slope.

16.20

(Approx.) Spur, slopes NE.

Desc. 150 ft. over NW. slope.

21.00

(Approx.) Ravine, course N.

Asc. about 100 ft. over E. slope.

24.50

(Approx.) Spur, slopes N.

Desc. about 130 ft. over NW. slope.

28.50

(Approx.) Wash 15 lks. wide, course NE.

Asc. about 400 ft. over broken NE. slope.

40.03

Triangulation point "A" bears 16 lks. N.

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

1/4 S16  
1/4 S21  
1929

from which

A cedar, 24 ins. diam., bears S. 26 1/4° E., 346 lks. dist., marked 1/4 S21 BT.

A white oak, 6 ins. diam., bears N. 88 1/4° W., 126 lks. dist., marked 1/4 S16 BT.

Continue line and measurement forward by chaining.

Asc. 15 ft. over gradual NE. slope.

42.30

Ridge, bears NW. and SE.

Leave dense undergrowth, bears N. and S.

Desc. 358 ft. over W. slope.

54.70

Ravine, course NW.

Asc. 35 ft. over NE. slope.

57.40

Ridge, bears NW. and SE.

Desc. 268 ft. over SW. slope.

71.90

Top of cliff, 80 ft. high, faces SW.

Desc. 335 ft. over rocky SW. slope.

80.06

The cor. of secs. 16, 17, 20 and 21.

Land: mountainous.

Soil: loam, 3rd rate.

Timber: oak, pinon, cedar, juniper.

Undergrowth: oak, manzanita, mahogany, catclaw, cactus, mesquite, dogwood, sotol, torch weed.

## Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

N.0°02'W., bet. parts of secs. 16 and 17.  
 Over mountainous land; thru scattering timber and brush.  
 Asc. 40 ft. over SW. slope.  
 2.50 Spur, slopes W.  
 Desc. 82 ft. over NW. slope.  
 4.80 Ravine, course W.  
 Asc. 118 ft. over broken NW. slope.  
 14.50 Spur, slopes SW.  
 Along W. slope.  
 16.00 Ridge, bears NW. and SE.  
 Desc. 40 ft. over N. slope.  
 18.20 Wash, 20 lks. wide, course NW.  
 Asc. 64 ft. over SW. slope.  
 26.85 Intersect the S. bdy. of the White Mountain Indian Reservation at a point 19.16 chs. N.77°47'W. of the 15 mile mon., thereof, hereinbefore described.  
 At point of intersection,  
 Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in the ground, for closing cor. of secs. 16 and 17, with brass cap marked

WMIR

S17 | S16

C C

T4SR20E

1929

from which

A white oak, 10 ins. diam., bears S.71°E., 91 lks. dist., marked T4S R20E S16 CC BT.

A black oak, 20 ins. diam., bears S.86°W., 75 lks. dist., marked T4S R20E S17 CC BT.

Land: mountainous.

Soil: loam, 3rd rate.

Timber: oak, cedar, pinon, juniper.

Undergrowth: oak, mahogany, catclaw, cactus, mesquite, sotol, torch weed.

From the cor. of secs. 5, 6, 31 and 32, on the S. bdy. of the Tp., established under this Group, described in Book "F",

N.0°03'W., bet. secs. 31 and 32.

Over mountainous land; thru scattering timber and dense undergrowth.

Desc. 120 ft. over N. slope.

3.10 Ravine, course NW.

Asc. 60 ft. over SW. slope.

11.10 Spur, slopes NW.

Desc. 90 ft. over N. slope.

20.00 Ravine, course NW.

Asc. 100 ft. over SW. slope.

30.00 Spur, slopes NW.

Desc. 130 ft. over N. slope.

36.10 Ravine, course NW.

Asc. 70 ft. over SW. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 28 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

S31 | S32

1929

from which

Survey of

BOOK 3877

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

A black oak, 10 ins. diam., bears N.21°E., 79 lks. dist., marked 1/4 S32 BT.  
A black oak, 9 ins. diam., bears N.77 1/2°W., 9 lks. dist., marked 1/4 S31 BT.

- Asc. 165 ft. over S. slope.
- 49.00 Ridge, bears NW. and SE.  
Asc. 84 ft. along E. slope.
- 56.90 Spur, slopes E.  
Desc. 53 ft. over NE. slope.
- 60.50 Head of ravine, course E.  
Asc. 36 ft. over SE. slope.
- 64.70 Spur, slopes E.  
Desc. 272 ft. over NE. slope.
- 77.50 Head of ravine, course E.  
Asc. 35 ft. over SW. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in the ground, for cor. of secs. 29, 30, 31 and 32, with brass cap marked

T4SR20E  
 S30 | S29  
 S31 | S32  
 1929

No bearing trees available. Raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor.

Land: mountainous.  
 Soil: loam, limestone, 3rd rate.  
 Timber: oak, cedar, pinon, juniper.  
 Undergrowth: oak, manzanita, mahogany, dogwood, cactus, catclaw, mesquite, bear grass, sotol, torch weed.

- East, on random line, bet. secs. 29 and 32.
- 40.00 Set temp. 1/4 sec. cor.
- 80.12 Fall 30 lks. S. of the cor. of secs. 28, 29, 32 and 33.  
Thence  
S. 89°47'W., on true line, bet. secs. 29 and 32.  
Over mountainous land; thru scattering timber and dense undergrowth.
- 1.50 Desc. 20 ft. along N. slope.  
Small spur, slopes NW.  
Desc. 112 ft. over W. slope.
- 3.50 Wash, 30 lks. wide, course NW.  
Asc. 132 ft. over E. slope.
- 7.50 Spur, slopes N.  
Along N. slope.
- 17.50 Ravine, course NE.  
Asc. 338 ft. over NE. slope.
- 32.80 Spur, slopes NW.  
Desc. 254 ft. over W. slope.
- 40.06 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the ground, for 1/4 sec. cor., with brass cap marked

1/4 S29  
 1/4 S32  
 1929

from which  
 A black oak, 4 ins. diam., bears N.38°E., 56 lks. dist., marked 1/4 S29 BT.  
 A black oak, 6 ins. diam., bears S.16°E., 10 lks. dist., marked 1/4 S32 BT.

## Survey of

Part of the Subdivision Lines of T. 4 S., R. 20 E.

Chains

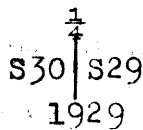
- 42.30 Desc. 202 ft. over W. slope.  
Ravine, course NW.
- 53.80 Desc. 116 ft. along N. slope.  
Creek, 2 lks. wide, course NE.
- 64.40 Asc. 392 ft. over E. slope.  
Spur, slopes SE.
- 67.10 Desc. 70 ft. over SW. slope.  
Ravine, course SE.
- 80.12 Asc. 307 ft. along S. slope.  
The cor. of secs. 29, 30, 31 and 32.
- Land: mountainous.  
Soil: loam, 3rd rate.  
Timber: oak, cedar, pinon, juniper.  
Undergrowth: oak, manzanita, mahogany, mesquite, cactus,  
catclaw, bear grass, sotol, torch weed.
- 
- 40.00 S. 89° 56' W., on random line, bet. secs. 30 and 31.  
Set temp.  $\frac{1}{4}$  sec. cor.
- 86.80 Fall 8 lks. N. of the cor. of secs. 25, 30, 31 and 36, on  
the W. bdy. of the Tp., hereinbefore described.
- Thence  
N. 89° 53' E., on true line, bet. secs. 30 and 31.  
Over mountainous land; thru scattering timber and dense  
undergrowth.
- 4.50 Desc. 210 ft. over E. slope.  
Ravine, course NE.
- 7.70 Asc. 130 ft. over W. slope.  
Spur, slopes NE.
- 13.20 Desc. 160 ft. over E. slope.  
Wash, 15 lks. wide, course NE.
- 17.80 Asc. 100 ft. over NW. slope.  
Spur, slopes NE.
- 26.30 Desc. 190 ft. over E. slope.  
Wash, 35 lks. wide, course NW.
- 46.80 Asc. 706 ft. over SW. slope.  
Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the  
ground to bedrock; deposit a stone, marked with cross  
(+) at base of post and raise a mound of stone, 5 ft.  
base, 2 $\frac{1}{2}$  ft. high, around post, for  $\frac{1}{4}$  sec. cor., with  
brass cap marked
- 1 S 30  
S 31  
1929
- No bearing trees available.
- 51.80 Asc. 136 ft. over SW. slope.  
Ridge, bears NW. and SE.
- 71.80 Desc. 153 ft. over NE. slope.  
Gulch, course NW.
- 84.60 Asc. 215 ft. over W. slope.  
Ridge, bears NE. and SW.
- 86.80 Desc. 20 ft. over E. slope.  
The cor. of secs. 29, 30, 31 and 32.
- Land: mountainous.  
Soil: loam, sandy, 3rd rate.  
Timber: oak, cedar, pinon, juniper.  
Undergrowth: oak, manzanita, mahogany, dogwood, cactus,  
catclaw, mesquite, sotol, bear grass, torch weed.
-



Part of the Subdivision Lines of T.4 S., R.20 E.

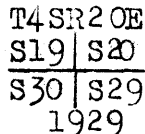
Chains

- N.0°03'W., bet. secs. 29 and 30.  
Over mountainous land; thru scattering timber and dense undergrowth.  
Asc. 25 ft. over SE. slope.
- 2.50 Ridge, bears NE. and SW.  
Asc. 36 ft. along W. slope.
- 10.70 Ridge, bears NW. and SE.  
Desc. 126 ft. along E. slope.
- 28.50 Ridge, bears NE. and SW.; joins ridge bears NW.  
Desc. 118 ft. over N. slope.
- 31.80 Head of ravine, course NW.  
Desc. 275 ft. over NW. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground; deposit a stone, marked with cross (+) beside post and raise a mound of stone, 5 ft. base, 2½ ft. high, around post, for ¼ sec. cor., with brass cap marked



No suitable bearing trees available.

- Desc. 130 ft. along W. slope.
- 50.00 Spur, slopes NW.  
Desc. 210 ft. over N. slope.
- 55.00 Ravine, course NW.  
Asc. 210 ft. over SW. slope.
- 65.00 Ridge, bears NW. and SE.  
Desc. 606 ft. over steep NE. slope.
- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in the ground, for cor. of secs. 19, 20, 29 and 30; with brass cap marked



No suitable bearing trees available. Raise a mound of stone, 5 ft. base, 2½ ft. high, W. of cor.

Land: mountainous.  
Soil: loam, sandy, 2nd rate.  
Timber: oak, cedar, pinon, juniper.  
Undergrowth: oak, manzanita, mahogany, mesquite, cactus, catclaw, bear grass, dogwood, sotol, torch weed.

- N.89°47'E., on random line, bet. secs. 20 and 29.
- 40.00 Set temp. ¼ sec. cor.
- 80.08 Fall 26 lks. N. of the true point for cor. of secs. 20, 21, 28 and 29.
- Thence  
S.89°58'W., on true line, bet. secs. 20 and 29.  
Over mountainous land; thru scattering timber and brush.  
Desc. 460 ft. over SW. slope.
- 25.20 Kelly wash, 120 lks. wide, course NW.  
Asc. 80 ft. over NE. slope.
- 34.50 Pole corral bears about 11 chs. N.
- 37.00 Small spur, slopes NE.  
Desc. 25 ft. over NW. slope.
- 39.50 Ravine, course NE.  
Asc. 15 ft. over NE. slope.

## Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

40.04 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

$\frac{1}{4}$  S20  
 $\frac{1}{4}$  S29  
 1929

from which

A pinon, 6 ins. diam., bears S.  $59\frac{1}{4}^{\circ}$  W., 193 lks. dist., marked  $\frac{1}{4}$  S29 BT.

A cedar, 5 ins. diam., bears N.  $47\frac{1}{4}^{\circ}$  W., 131 lks. dist., marked  $\frac{1}{4}$  S20 BT.

Asc. 91 ft. over NE. slope.

41.10 Corner of fences extending NE, and NW bears 5 lks. N.

52.50 Spur, slopes N.

Desc. 91 ft. over W. slope.

55.10 Ravine, course NW.

Asc. 91 ft. over NE. slope.

59.50 Ridge, bears NW. and SE.

Desc. 323 ft. over V. slope.

70.50 Creek, 2 lks. wide, course NW.

Enter dense undergrowth, bears NW. and SE.

Asc. 159 ft. over NE. slope.

80.08 The cor. of secs. 19, 20, 29 and 30.

Land: mountainous.

Soil: loam, gravel, 2nd rate.

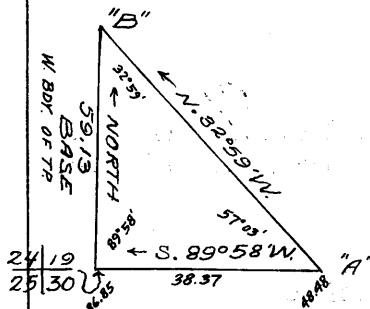
Timber: oak, pinon, cedar, juniper.

Undergrowth: oak, manzanita, catclaw, cactus, mesquite, mahogany, bear grass, sotol, torch weed.

S.  $89^{\circ}53'$  W., on random line, bet. secs. 19 and 30.

40.00 Set temp.  $\frac{1}{4}$  sec. cor.

48.48 To obtain measurement across cliffs and dense brush ahead, triangulate as described as follows:



Designate this point "A". A point "B", 59.13 chs. North of the cor. of secs. 19, 24, 25 and 30, on the W. bdy. of the Tp. bears N.  $32^{\circ}59'$  W. That sec. cor. bears S.  $89^{\circ}58'$  W.

Vertical angle =  $-1^{\circ}$

Dist. triangulated = 38.37 chs.

86.85 Computing alignment into terms of S.  $89^{\circ}53'$  W., at Fall 8 lks. S. of the cor. of secs. 19, 24, 25 and 30, on the W. bdy. of the Tp., hereinbefore described.

Thence

N.  $89^{\circ}56'$  E., on true line, bet. secs. 19 and 30.

Over mountainous land; thru scattering timber and dense undergrowth.

Desc. about 300 ft. over SE. slope.

17.40 (Approx.) Wash, 40 lks. wide, course NE.

Asc. about 150 ft. over V. slope.

24.80 (Approx.) Spur, slopes NW.

Desc. about 100 ft. over E. slope.

30.60 (Approx.) Wash, 20 lks. wide, course NW.

Asc. about 230 ft. over V. slope.

38.37 Triangulation point "A". Line and measurement forward by chaining.

38.40 Spur, slopes NW.

Desc. 56 ft. over NE. slope.

46.85 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

Survey of  
Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

$\frac{1}{4}$  S19  
S30  
1929

No suitable bearing trees available. Raise a mound of stone, 4 ft. base, 2 ft. high, N. of cor.

- 51.80 Desc. 100 ft. over NE. slope.
- Ravine, course NW.
- 61.80 Asc. 130 ft. over W. slope.
- Spur, slopes NW.
- 70.30 Desc. 121 ft. over broken NE. slope.
- Wash, 15 lks. wide, course NW.
- 76.50 Asc. 150 ft. over W. slope.
- Ridge, bears NW. and SE.
- 81.00 Desc. 107 ft. over NE. slope.
- Ravine, course N.
- 83.50 Asc. 50 ft. over NW. slope.
- Spur, slopes N.
- Desc. 100 ft. over NE. slope.
- 86.85 The cor. of secs. 19, 20, 29 and 30.

Land: mountainous.  
 Soil: loam, gravel, 2nd rate.  
 Timber: oak, pinon, cedar, juniper.  
 Undergrowth: oak, manzanita, mesquite, catclaw, cactus  
 mahogany, bear grass, sotol, torch weed.

N.0°03'W., bet. secs. 19 and 20.  
 Over mountainous land; thru scattering timber and dense undergrowth.

- 10.10 Desc. 237 ft. over NE. slope.
- Kelly wash, creek, 3 lks. wide, course NW. for 2 chs., thence W.
- 10.30 Trail, bears NW. and SE.
- Leave dense, enter scattering undergrowth.
- 28.50 Asc. 378 ft. over SW. slope.
- Spur, from NE., splits, slopes SE. and SW.
- 37.00 Asc. 75 ft. along W. slope.
- Ridge, bears E. and SW.
- Desc. 50 ft. over N. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the ground, supported by a mound of stone, 3 ft. base, 1 ft. high, for  $\frac{1}{4}$  sec. cor., with brass cap marked

$\frac{1}{4}$  S19 | S20  
1929

from which  
 A pinon, 10 ins. diam., bears N.22°E., 270 lks. dist., marked  $\frac{1}{4}$  S20 BT.  
 A pinon, 8 ins. diam., bears S.40 $\frac{1}{2}$ °E., 112 lks. dist., marked  $\frac{1}{4}$  S20 BT.

- 40.60 Desc. 20 ft. over N. slope.
- Draw, course SW.
- 43.50 Asc. 61 ft. over S. slope.
- Rocky ridge, bears NE. and NW.
- 59.60 Desc. 402 ft. over N. slope.
- Wash, 80 lks. wide, course NW.
- 67.30 Asc. 112 ft. over S. slope.
- Spur, slopes SW.
- 71.00 Desc. 50 ft. over NW. slope.
- Head of draw, course SW.
- Asc. 54 ft. over S. slope.

Survey of  
Part of the Subdivision Lines of T.4 S., R.20 E.

Chains  
77.50 Ridge, bears SE. and SW.  
Desc. 40 ft. over N. slope.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 30 ins. in the ground, for cor. of secs. 17, 18, 19 and 20, with brass cap marked

T4SR20E  
S18|S17  
S19|S20  
1929

No suitable bearing trees available. Raise a mound of stone, 4½ ft. base, 2½ ft. high, W. of cor.

Land: mountainous.  
Soil: rocky, sandy, loam, 2nd rate.  
Timber: oak, cedar, pinon, juniper.  
Undergrowth: oak, mahogany, manzanita, sage, yucca, catclaw, mesquite, bear grass, cactus.

40.00 N. 89°58'E., on random line, bet. secs. 17 and 20.  
Set temp. ¼ sec. cor.

80.10 Fall 7 lks. S. of the cor. of secs. 16, 17, 20 and 21.  
Thence  
S. 89°55'W., on true line, bet. secs. 17 and 20.  
Over mountainous land; thru scattering timber and brush.  
Desc. 404 ft. over rugged SW. slope.

0.50 Top of cliff, 30 ft. high, faces SW.

9.70 Wash, 25 lks. wide, course NW.  
Asc. 70 ft. along N. slope.

18.60 Spur, slopes NW.  
Desc. 54 ft. over W. slope.

21.60 Ravine, course NW.  
Asc. 257 ft. over NE. slope.

34.10 Ridge, bears NW. and SE.  
Desc. 134 ft. over NW. slope.

40.05 Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground, supported by a mound of stone, 5 ft. base, 2 ft. high, for ¼ sec. cor., with brass cap marked

S17  
S20  
1929

from which  
A cedar, 8 ins. diam., bears S. 81½°W., 113 lks. dist., marked ¼ S20 BT.  
A cedar, 10 ins. diam., bears N. 64½°W., 155 lks. dist., marked ¼ S17 BT.

Desc. 321 ft. over W. slope.

50.20 Ravine, course NW.  
Asc. 70 ft. over NE. slope.

55.50 Spur, slopes NW.  
Desc. 60 ft. over W. slope.

58.60 Ravine, course NW.  
Along N. slope.

63.40 Spur, slopes NW.  
Desc. 176 ft. over NW. slope.

76.00 Ravine, course NE.  
Asc. 32 ft. over NE. slope.

80.10 The cor. of secs. 17, 18, 19 and 20.

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

Land: mountainous.  
Soil: sandy, loam, gravel, 2nd rate.  
Timber: oak, pinon, cedar, juniper.  
Undergrowth: oak, manzanita, catclaw, cactus, mesquite,  
mahogany, bear grass, torch weed, sage, sotol.

- S. 89° 56' W., on random line, bet. secs. 18 and 19.
- 40.00 Set temp.  $\frac{1}{4}$  sec. cor.
- 86.78 Fall 8 lks. N. of the cor. of secs. 13, 18, 19 and 24, on the W. bdy. of the Tp., hereinbefore described.
- Thence
- N. 89° 53' E., on true line, bet. secs. 18 and 19.
- Over mountainous land; thru scattering timber and brush.
- 0.10 Spur, slopes NW.
- Desc. 90 ft. over NE. slope.
- 5.60 Wash, 10 lks. wide, course NW.
- Asc. 276 ft. over SW. slope.
- 24.90 Ridge, bears NW. and SE.
- Desc. 118 ft. over NE. slope.
- 34.20 Wash, 10 lks. wide, course NW.
- Asc. 87 ft. over NW. slope.
- 41.00 Ridge, bears NW. and SE.
- Along N. slope.

- 46.78 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked

$\frac{1}{4}$ S18  
 $\frac{1}{4}$ S19  
 1929

from which

- A pinon, 5 ins. diam., bears S. 18° W., 30 lks. dist., marked  $\frac{1}{4}$  S19 BT.
- A pinon, 5 ins. diam., bears N. 63 $\frac{1}{2}$ ° W., 83 lks. dist., marked  $\frac{1}{4}$  S18 BT.

- Desc. 83 ft. over NE. slope.
- 53.80 Wash, 15 lks. wide, course NW.
- Asc. 287 ft. along N. slope.
- 84.00 Ridge, bears NW. and SE.
- Desc. 48 ft. over NE. slope.
- 86.78 The cor. of secs. 17, 18, 19 and 20.

Land: mountainous.  
Soil: loam, gravel, 2nd rate.  
Timber: oak, pinon, cedar, juniper.  
Undergrowth: oak, manzanita, mahognay, catclaw, cactus, mesquite, sage, bear grass, sotol.

- N. 0° 03' W., bet. parts of secs. 17 and 18.
- Over mountainous land; thru scattering timber and brush.
- along E. slope.
- 2.30 Spur, slopes NE.
- Desc. 140 ft. over NW. slope.
- 11.60 Wash, 10 lks. wide, course NE.
- Desc. 60 ft. along E. slope.
- 17.80 Same wash, course NW.
- 18.60 Wash, course NW., 20 lks. wide.
- Asc. 20 ft. over SW. slope.
- 24.50 Small spur, slopes NW.
- Desc. 40 ft. over N. slope.

Survey of

Part of the Subdivision Lines of T.4 S., R.20 E.

Chains

- 28.50 Wash, 15 lks. wide, course W.  
Asc. 48 ft. over S. slope.
- 32.40 Ridge, bears E. and NW.  
Desc. 81 ft. over N. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 30 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap marked.

$\frac{1}{4}$   
 S18 | S17  
 1929

from which

- A pinon, 8 ins. diam., bears S.  $2\frac{1}{2}^{\circ}$  W., 141 lks. dist., marked  $\frac{1}{4}$  S18 BT.
- A pinon, 14 ins. diam., bears S.  $51\frac{1}{2}^{\circ}$  W., 165 lks. dist., marked  $\frac{1}{4}$  S18 BT.

Desc. 30 ft. over N. slope.

- 41.50 Wash, 15 lks. wide, course NW.  
Asc. 78 ft. over SW. slope.

- 44.30 Intersect the S. bdy. of the White Mountain Indian Reservation at a point 19.95 chs. N.  $77^{\circ}45'$  W. of the 16 mile mon. thereof, hereinbefore described.

At point of intersection,

Set an iron post, 3 ft. long, 2 ins. diam., 8 ins. in the ground, supported by a mound of stone, 4 ft. base, 2 ft. high, for closing cor. of secs. 17 and 18, with brass cap marked

WMIR  
 S18 | S17  
 C C  
 T4SR20E  
 1929

from which

- A pinon, 6 ins. diam., bears S.  $45\frac{1}{2}^{\circ}$  E., 207 lks. dist., marked T4S R20E S17 CC BT.
- A pinon, 5 ins. diam., bears S.  $35\frac{1}{2}^{\circ}$  W., 130 lks. dist., marked T4S R20E S18 CC BT.

Land: mountainous.

Soil: sandy, gravel, loam, 2nd rate.

Timber: oak, pinon, cedar.

Undergrowth: oak, mesquite, catclaw, cactus, sage, bear grass, sotol, torch weed.

FINAL TEST

On the meridian described on page 2, hereof,

April 1, 1929, at 8h00m a.m., app.t., set off  $32^{\circ}58'$  on the lat. arcs,  $4^{\circ}31\frac{1}{2}'$  N. on the decl. arcs, and determine meridians with the solar attachments, which agree within  $1\frac{1}{2}'$  with the true meridian.

At app. noon, with the lat. arcs unchanged, observe the sun of the meridian; the resulting reading on the decl. arcs. is  $4^{\circ}35'$  N., which agrees with the computed decl.

At 4h00m p.m., app.t., with the lat. arcs unchanged, set off  $4^{\circ}39+$  on the decl. arcs, and determine meridians with the solar attachments, which agree within  $1\frac{1}{2}'$  with the true meridian.

GENERAL DESCRIPTION

The fractional township, as surveyed, lies about 15 miles South-easterly of Fort Thomas, Arizona, bordering the present South Boundary of the White Mountain Indian Reservation. It is reached in the NW. corner by road from Coolidge Dam.

Its sea-level elevation is between 4,000 and 7,000 feet and it is nearly everywhere too rugged for agricultural purposes. The climate is semi-aria, though less so than other Arizona regions of that altitude. A proportionately heavy growth of timber and brush is present in all places where the soil is in sufficient quantity to support it.

The soil is gravel, loam and decayed granite except in the SW. cor., which is of a limestone formation. The timber is mostly cedar, oak, and pinon, with a small amount of yellow or bull pine and the excellent alligator juniper and some locust and alder on the higher North slopes. Undergrowth is mostly oak and catclaw.

The township has abundant water for grazing purposes and one creek, in Goodwin Canyon, semi-permanantly of good size.

There is a small amount of mineral, gold and copper, though none so far exploited.

There are four goat ranches, each with corrals and temporary residences.

BOOK 3877

4-680  
(August, 1926)

**FIELD ASSISTANTS.**  
to

**Theodore Vander Meer, U. S. Transitman,**

NAMES.	CAPACITY.
Owen B. Wright	First Chainman
Earl Endicott	Second Chainman
Sid G. Sheard	Moundman
Erwin Curtis	Axman
Mather Willis	Flagman



56 BOOK 3877

CERTIFICATE OF UNITED STATES SURVEYOR.

I, Theodore Vander Meer U.S. Transitman, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer, for Group 141, Arizona, bearing date of the 23rd day of June, 1926, 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

East Boundary

and

Subdivision Lines

of

Township 4 South, Range 20 East, of the Gila and Salt

River Base and Meridian, in the State of Arizona, which are represented in

the foregoing field notes and by diagram on page 2 hereof as having been executed by me, and under my direction; and 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 District Cadastral Engineer, for Group 141, Arizona, and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Place: Phoenix, Ariz. Date: June 24, 1929.

[Signature] U.S. Transitman

APPROVAL.

Office of U. S. Supervisor of Surveys,

19

The foregoing field notes of the survey of

executed by

under his special instructions dated, 19, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

U. S. Supervisor of Surveys

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

U. S. Supervisor of Surveys

LOCK 8877

4-680

FIELD ASSISTANTS.  
to

William E. Hiester, U. S. Surveyor,

NAMES.	CAPACITY.
Fred W. Pender,	First Chainman
Charles Mc Donald	Second Chainman
Tom Sheard	Flagman
D. H. McKechnie	Moundsman

58  
BCCX 3871

CERTIFICATE OF UNITED STATES SURVEYOR.

I, William E. Hiester, U. S. Surveyor, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer, for Group 141, Arizona bearing date of the 23rd day of June, 1926, 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, ~~retraced~~ <sup>refraced</sup> all those parts or portions of the Amended South boundary of the White Mountain Indian Reservation resurveyed all those parts or portions of the Amended South boundary of the White Mountain Indian Reservation and surveyed all those parts or portions of the East and West bdrs. and Subdivision lines of Township 4 South, Range 20 East of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in and by diagram on page 2 hereof the foregoing field notes <sup>as having been executed by me, and under my direction; and that all the corners of said refracement, resurvey</sup> ~~and survey~~ have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the District Cadastral Engineer, for Arizona Group 141 and in the specific manner described in the field notes, and that the foregoing are the original field notes of such ~~refracement, resurvey and survey.~~

Place: San Francisco Calif.

Date: June 4, 1929.

*William E. Hiester*  
U. S. Surveyor.

APPROVAL.

OFFICE OF U.S. SUPERVISOR OF SURVEYS,

Denver, Colo., December 7, 1929.

The foregoing field notes of the ~~refracement~~ <sup>refracement</sup> of Part of Amended South Bdy. of the White Mountain Indian Reservation, (11 to 14 mile mon. & 15 to 17 1/2 M. mon.) of the resurvey of Part of Amended South Bdy. of the White Mountain Indian Reservation (14 mile mon. to 15 mile mon.) and of the survey of Part of the East bdy., Part of the West bdy. and Part of the Subdivision Lines of Township 4 South, Range 20 East of the Gila and Salt River Base and Meridian, in the State of Arizona executed by William E. Hiester U.S. Surveyor <sup>and</sup> Theodore Vander Meer U.S. Transitman under special instructions dated June 23, 1926, for Group 141, Arizona, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the ~~refracement, resurvey and survey~~ <sup>refracement, resurveys and surveys</sup> they describe, are hereby approved.

*Theodore Vander Meer*  
U.S. Supervisor of Surveys.

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

U. S. Surveyor General