

3215

Book "B"

4-679

JAN 7 1916

21

BOOK 3215

FIELD NOTES

RE-
OF THE SURVEY OF THE

5th. Standard Parallel North, thru part of Range 11 East,

and SURVEY of the

West, and part of the North bdy., and subdivision lines of

TOWNSHIP 21 NORTH, RANGE 11 EAST,

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

EXECUTED BY

Thos. B. Matthews, U. S. Surveyor,

and

Jos. C. Clark, U. S. Transitman,

~~In the capacity of U. S. Surveyor~~, under Special Instructions dated Dec. 17, 1915,

issued by the United States Surveyor General to govern surveys included in Group

No. 68, which were approved by the Commissioner of the General Land

Office, Jan. 7, 1916, and Assignment Instructions dated Feb. 3, 1916.

Resurvey and Survey commenced February 25, 1916

Resurvey and Survey completed March 4, 1916

3215

3215

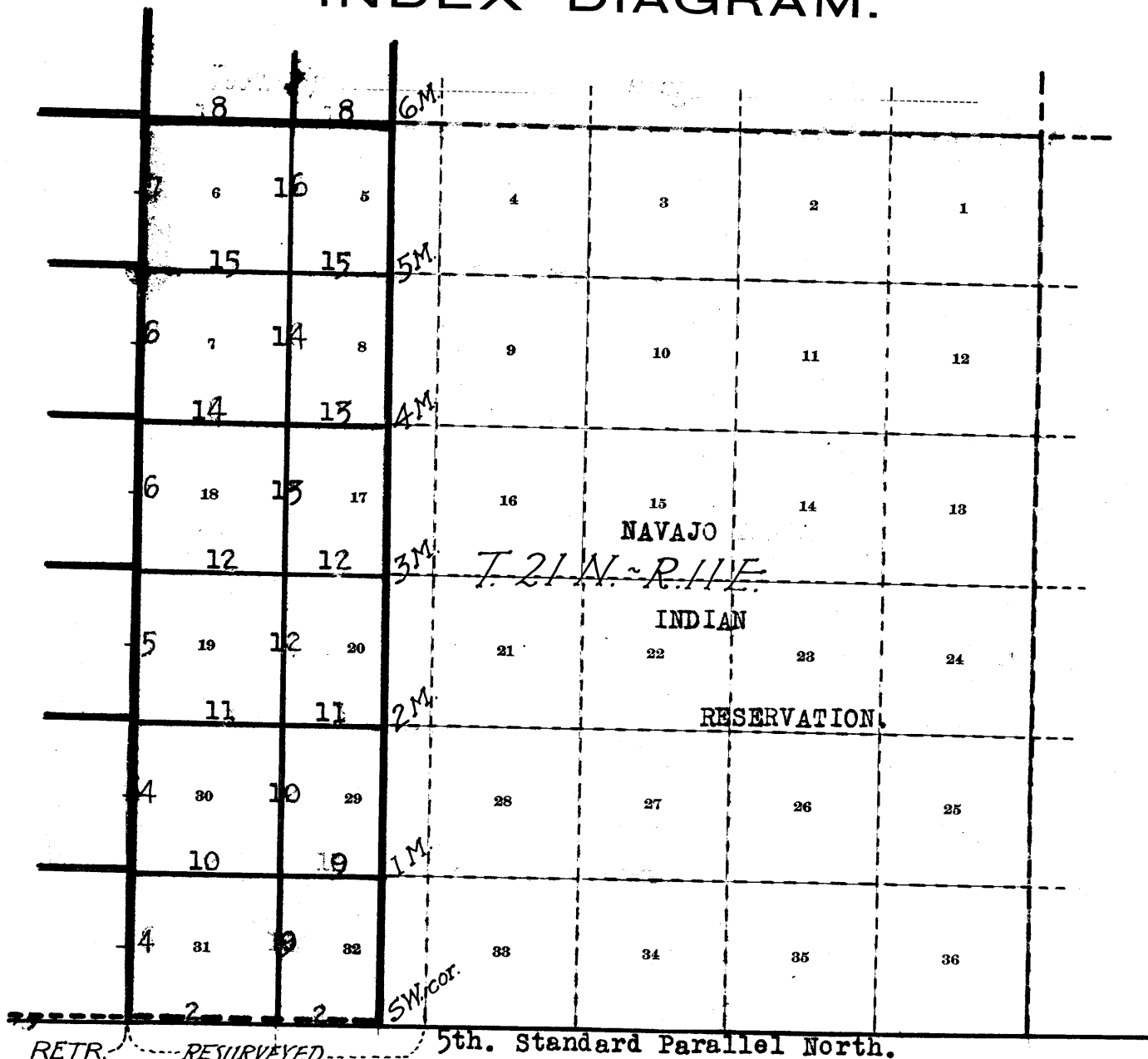
3215

Book "B."

Group 68 - - - Arizona.

BOOK 3215

INDEX DIAGRAM.



- Lines surveyed under this group, notes in this book. 3215
- - - - - Lines retraced or resurveyed under this group. Notes in this Bk 3215
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- Accepted surveys.
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Resurvey of 5th. Standard Parallel North, thru. part of Range 11 East,
Survey of West bdy., and part of North bdy., and Subdivision lines
of Township 21 North, Range 11 East.

Chains.

Work executed by Thomas B. Matthews, U.S. Surveyor, and Jos. C. Clark, U.S. Transitman, using a Buff and Buff light mountain transit No. 10124, and Young and Sons' light mountain transit No. 8535, respectively, on the dates shown on the diagram on page 18 of this book.

For description of Buff and Buff light mountain transit No. 10124 together with field tests of the transit and solar attachment, see beginning of notes in Book "A." Young and Sons' light mountain transit No. 8535 is equipped with horizontal plates having two double verniers placed opposite to each other, and reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

Test of Instrument No. 8535 by Jos. C. Clark, U.S. Transitman.

Examine the adjustments of the transit and correct all errors; then, to test the solar apparatus by comparing its indications resulting from observations on the sun made during a.m. and p.m. hours, with a meridian established by observations on Polaris, proceed as follows:

Feb. 15, 1916. In sec. 8, T. 24 N., R. 11 E. in latitude $35^{\circ}30'N.$; long. $111^{\circ}14'28''W.$, at 9h. 47m., p.m., l.m.t., observe Polaris at western elongation in accordance with the Manual of Surveying Instructions, and turn off the azimuth of Polaris, $1^{\circ}23\frac{1}{2}'$ to the East, and mark a point in the meridian thus determined by a tack in a wooden peg set firmly in the ground, 5 chs. N. of instrument.

Feb. 16, 1916. At 9h. a.m., l.m.t., set off $35^{\circ}30'N.$ on the lat. arc; $12^{\circ}36'S.$ on the decl. arc, and determine a meridian with the solar. The meridian thus determined falls $\frac{1}{2}'$ to the E. of the Polaris meridian.

At 4h. p.m., l.m.t., set off $35^{\circ}30'N.$ on the latitude arc; $12^{\circ}29'S.$ on the decl. arc, and determine a meridian with the solar. The meridian thus determined falls within 1' in azimuth of the meridian established by observations on Polaris. Therefore, conclude that the adjustments of the transit and solar attachment are satisfactory.

Instrument No. 8535 was approved by the Assistant Supervisor of Surveys, District No. 5, subject to satisfactory field tests as above described.

Resurvey of 5th. Standard Parallel N., thru. part of R. 11 E.

From the original standard cor. of secs. 32 and 33, T. 21 N., R. 11 E. on the 5th Standard Parallel N., which is a limestone, $16 \times 14 \times 8$ ins., loosely set in a mound of stone, marked and witnessed as described by the surveyor general,

West, on a random line on S. bdy. of sec. 32 ($E. \frac{1}{2}'$).

No difference in measurements of 40.92 chs. by two sets of chainmen.

40.92 Fall 219 lks. N. of original standard $\frac{1}{4}$ sec. cor., which is a limestone, $14 \times 10 \times 8$ ins., loosely set in a mound of stone, marked and witnessed as described by the surveyor general.

True course and distance back to original standard sec. cor. is therefore, $N. 86^{\circ}56'E.$, 40.97 chs.

From original standard $\frac{1}{4}$ sec. cor.,

West, on a random line, on S. bdy. of sec. 32 ($W. \frac{1}{2}'$).

No difference in measurements of 40.11 chs. by two sets of chainmen.

40.11 Fall 39 lks. S. of original standard cor. of secs. 31 and 32, which is a limestone, $18 \times 14 \times 12$ ins., loosely set, in a mound of stone, marked and witnessed as described by the surveyor general.

True course and dist. back to original std. $\frac{1}{4}$ sec. cor. is therefore $S. 89^{\circ}27'E.$, 40.11 chs.

2 Resurvey of 5th. Standard Parallel North, thru. part of Range 11 E.

Chains,

- From the original standard cor. of secs. 31 and 32, West, on a random line on S. bdy. of sec. 31, (E. $\frac{1}{2}$). Difference in measurements of 40.10 chs. by two sets of chainmen is 2 lks.; position of middle point
 By 1st set, 40.09 chs.,
 By 2nd set, 40.11 chs., the mean of which is
 40.10 Fall 76 lks. S. of the original standard $\frac{1}{4}$ sec. cor., which is a limestone, marked and witnessed as described by the surveyor general; marks nearly obliterated. True course and dist. back to original standard sec. cor. is therefore S. $88^{\circ}55'E.$, 40.11 chs.
- From original standard $\frac{1}{4}$ sec. cor., West, on a random line, on S. bdy. of sec. 31 (W. $\frac{1}{2}$). No difference in measurement of 40.04 chs. by two sets of chainmen.
 40.04 Fall 65 lks. S. of the original standard cor. of Ts. 21 N., Rs. 10 and 11 E., which is a limestone, 12x10x12 ins. above ground, firmly set, marked and witnessed as described by the surveyor general. True course and dist. back to original standard $\frac{1}{4}$ sec. cor. is therefore S. $89^{\circ}04'E.$, 40.05 chs.

The preceding retracement of S. bdy. of secs. 31 and 32, demonstrating that this portion of the parallel is out of limits in both alignment and measurement, and no accepted surveys being tied to same ^{make} independent resurvey as follows:

- From the original standard cor. of Ts. 21 N., Rs. 10 and 11 E., hereinbefore described,
 East, on true line, on S. bdy. of sec. 31.
 Over level prairie land, thru. short undergrowth.
 26.64 Old trails highway, brs. N. $71^{\circ}W.$
 No difference in measurements of 40.00 chs. by two sets of chainmen.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., marked on brass cap,

S C
 S 31
 1916

and raise a mound of stone, 3 ft. base, 3 ft. high, N. of cor.

- From this point, the original standard $\frac{1}{4}$ sec. cor., hereinbefore described, brs. S. $31^{\circ}E.$, 65 lks. dist. Destroy all trace of this old cor.
 No difference in measurements of 80.00 chs. by two sets of chainmen.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished standard cor. of secs. 31 and 32, marked on brass cap,

S C
 T21N R11E
 S31 | S32
 1916

and raise mound of stone, 3 ft. base, 3 ft. high, N. of cor.
 From this cor., the original std. cor. of secs. 31 and 32 hereinbefore described, brs. S. $41^{\circ}E.$, 142 lks. dist. Destroy all trace of this old cor.
 Land, level and gently rolling.
 Soil, thin and rocky.
 No timber.
 Undergrowth, sage brush, 1 to 2 ft. high.
 Short grass.

East, on a true line, on S. bdy. of sec. 32.
 Over gently rolling land, thru. short undergrowth.
 No difference in measurements of 40.00 chs. by two sets of chainmen.

Resurvey of 5th. standard Parallel N. thru part of R. 11 E. 3.

Chains
40.00 Set an iron post, 3 ft. long, 1 in. indiam., 26 ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., marked on brass cap,

S C
S 32
1916

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

From this point, the old standard $\frac{1}{4}$ sec. cor., hereinbefore described, brs. S. 73° E., 182 lks. dist. Destroy all trace of this old cor.

55.01 Intersect SW. cor. of Navajo Indian Reservation, described in Book "A."
No difference in measurements of 80.00 chs. by two sets of chainmen.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished standard cor. of secs. 32 and 33, marked on brass cap,

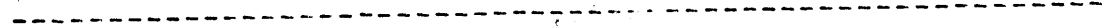
S C
T21N R11E
S32 S33

1916

and raise a mound of stone, 3 ft. base, 3 ft. high, N. of cor.

From this point, old standard cor. of secs. 32 and 33, hereinbefore described, brs. N. $71\frac{1}{2}^{\circ}$ E., 122 lks. dist. Destroy all trace of this old cor.

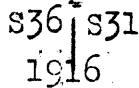
Land, rolling.
Soil, thin and rocky.
No timber.
Undergrowth, sage brush, 1 to 2 ft. high.
Short grass.



4. Survey of West bdy. of Township 21 North, Range 11 East.

Chains.

From the original standard cor. of Ts. 21 N., Rs. 10 and 11 E., hereinbefore described, North, bet. secs. 31 and 36.
 Over gently rolling land, thru scattering timber and short undergrowth.
 7.44 Old Trails highway from Flagstaff to Winslow, brs. N. 71° W., and S. 71° E.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground, in a mound of stone, for $\frac{1}{4}$ sec. cor., marked on brass cap,



from which,

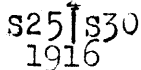
A pinyon, 12 ins. diam., brs. N. 44 $\frac{1}{2}$ ° E., 107 lks. dist., marked $\frac{1}{4}$ S 31 B T.
 A cedar, 5 ins. in diam., brs. S. 61 $\frac{1}{4}$ ° W., 160 lks. dist., marked $\frac{1}{4}$ S 36 B T.
 53.60 Descend gradual N. slope.
 57.60 Draw, course NE. Thence ascend along S. slope.
 65.00 Rim-rock, brs. E. and W. Descend abrupt N. slope, 88 ft. into
 67.10 Canyon of Padre Creek, 25 lks. wide, 4 ft. deep, clear water, course E. for about 7 chs.; thence NE. Ascend 106 ft. to
 71.30 Rim-rock on N. side of canyon, brs. E. and W. Thence over gently rolling land.
 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 25, 30, 31 and 36, marked on brass cap,



from which.

A pinyon, 9 ins. in diam., brs. N. 55 $\frac{1}{2}$ ° E., 57 lks. dist., marked T 21 N R 11 E S 30 B T.
 A cedar, 9 ins. in diam., brs. S. 29° E., 47 lks. dist., marked T 21 N R 11 E S 31 B T.
 A cedar, 8 ins. in diam., brs. S. 34° W., 122 lks. dist., marked T 21 N R 10 E S 36 B T.
 A cedar, 10 ins. in diam., brs. N. 23 $\frac{1}{2}$ ° W., 88 lks. dist., marked T 21 N R 10 E S 25 B T.
 Land, gently rolling.
 Soil, dark, sandy clay and rocky, 5 to 20 ins. deep, volcanic ash formation, with limestone.
 Timber, medium growth of cedar and pinyon.
 Undergrowth, dense short rabbit brush and yellow-top brush in first 20 chs.; remainder of mile, scattering.
 Fair growth of grass.

North, bet. secs. 25 and 30.
 Over nearly level land, thru dense timber.
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,



From which,

A pine, 12 ins. in diam., brs. S. 31° E., 114 lks. dist., marked $\frac{1}{4}$ S 30 B T.
 A cedar, 4 ins. in diam., brs. N. 32 $\frac{1}{4}$ ° W., 121 lks. dist., marked $\frac{1}{4}$ S 25 B T.

West bdy. of Township 21 North, Range 11 East.

5

Chains
80.00

Set an iron post, 3 ft. long, 3 ins. diam., 15 ins. in the ground, in a mound of stone, for cor. of secs. 19, 24, 25 and 30, mkd. on brass cap

T21N
R10E R11E
S24 | S19
S25 | S30
1916

from which,

- A pine, 7 ins. diam., brs. N. 25 $\frac{1}{4}$ ° E. 44 lks. dist.; mkd. T 21 N R 11 E S 19 B.T.
- A cedar, 10 ins. diam., brs. S. 25 $\frac{3}{4}$ ° E. 170 lks. dist.; mkd. T 21 N R 11 E S 30 B T.
- A cedar, 6 ins. diam., brs. S. 57 $\frac{3}{4}$ ° W. 66 lks. dist.; mkd. T 21 N R 10 E S 25 B T.
- A cedar, 10 ins. diam., brs. N. 46 $\frac{1}{2}$ ° W. 106 lks. dist.; mkd. T 21 N R 10 E S 24 B T.

Land, nearly level.
Soil, clay loam, volcanic ash and gravelly surface, medium texture, 6 to 18 ins. deep on limestone and hardpan subsoil.
Timber, dense cedar and pinion.
Undergrowth, scattering rabbit brush.
Scattering grass.

37.10
40.00

North bet. secs. 19 and 24.
Over nearly level land, through dense timber.
Telephone line brs. NW. and SE.
Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the ground, in a mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$\frac{1}{4}$
S24 | S19
1916

from which,

- A cedar, 10 ins. diam., brs. S. 34° E. 268 lks. dist.; mkd. $\frac{1}{4}$ S 19 B T.
- A cedar, 5 ins. diam., brs. S. 31 $\frac{1}{4}$ ° W. 108 lks. dist.; mkd. $\frac{1}{4}$ S 24 B T.

40.06
40.31
40.91
41.10
41.54
44.40

Telegraph line brs. N. 87° W. and S. 87° E.
Signal line brs. N. 87° W. and S. 87° E.
A. T. and S. F. Ry. brs. N. 87° 3' W. and S. 87° 3' E.
A. T. and S. F. Ry. brs. N. 87° 3' W. and S. 87° 3' E.
W. U. Telegraph line brs. N. 87° W. and S. 87° E.
Old road brs. E. and W.

80.00

Thence over gently rolling land.
Set an iron post, 3 ft. long, 3 ins. diam., 12 ins. in the ground, in a mound of stone, for cor. of secs. 13, 18, 19 and 24, mkd. on brass cap

T21N
R10E R11E
S13 | S18
S24 | S19
1916

from which,

- A cedar, 6 ins. diam., brs. N. 32 $\frac{1}{2}$ ° E. 175 lks. dist.; mkd. T 21 N R 11 E S 18 B T.
- A cedar, 6 ins. diam., brs. S. 63° E. 251 lks. dist.; mkd. T 21 N R 11 E S 19 B T.
- A cedar, 5 ins. diam., brs. S. 36 $\frac{1}{2}$ ° W. 197 lks. dist.; mkd. T 21 N R 10 E S 24 B T.
- A cedar, 8 ins. diam., brs. N. 34 $\frac{3}{4}$ ° W. 165 lks. dist.; mkd. T 21 N R 10 E S 13 B T.

6 West boundary of Township 21 North, Range 11 East.

Chains

Land, gently rolling.
Soil, gravelly and volcanic ash surface with rocky clay-loam 6 to 18 ins. deep on hard pan subsoil.
Timber, dense scrub cedar and pinyon.
Undergrowth, rabbit brush and yellow-top brush.
Fair grass.

23.70 North bet. secs. 13 and 18. ft. to
Over gently rolling land, through dense timber; desc. 30
Young's Creek, 10 lks. wide, 1 ft. deep, muddy water,
40.00 course E. Asc. rocky S. slope, 172 ft. to
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the
ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$\frac{1}{4}$
 S13 | S18
 1916

from which,

A cedar, 10 ins. diam., brs. N. 31° E.
150 lks. dist.; mkd. $\frac{1}{4}$ S 18 B T.
A cedar, 8 ins. diam., brs. N. $33\frac{1}{4}^{\circ}$ W.
300 lks. dist.; mkd. $\frac{1}{4}$ S 13 B T.

45.00 Thence over rolling hills.
60.00 Asc. gradual slope, 35 ft. to
70.00 Thence over nearly level land.
75.00 Asc. 23 ft. to
80.00 Thence over gently rolling land.
Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the
ground, for cor. of secs. 7, 12, 13 and 18, mkd. on
brass cap.

T21N
 R10E R11E
 S12 | S 7
 S13 | S18
 1916

from which,

A cedar, 6 ins. diam., brs. N. $60\frac{3}{4}^{\circ}$ E.
79 lks. dist.; mkd. T 21 N R 11 E S 7 B T.
A cedar, 6 ins. diam., brs. S. $59\frac{3}{4}^{\circ}$ E.
153 lks. dist.; mkd. T 21 N R 11 E S 18 B T.
A cedar, 7 ins. diam., brs. S. $30\frac{1}{4}^{\circ}$ W.
81 lks. dist.; mkd. T 21 N R 10 E S 13 B T.
A cedar, 8 ins. diam., brs. N. $78\frac{1}{2}^{\circ}$ W.
100 lks. dist.; mkd. T 21 N R 10 E S 12 B T.

Land, S. 20 chs. gently rolling; remainder rolling hills.
Soil, rocky and gravelly, 10 to 20 ins. deep on gravelly
subsoil, coarse texture, moist, last $\frac{3}{4}$ mile lava
formation.

Timber, dense scrub cedar and pinion.
Undergrowth, scattering rabbit brush and mountain-rush.
Fair grass.

35.00 North bet. secs. 7 and 12. undergrowth and
40.00 Over rolling mountainous land, through scattering timber.
Asc. gradual SE. slope, 86 ft. to
Asc. abrupt SW. slope of mountain 91 ft. to
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the
ground, for $\frac{1}{4}$ sec. cor.; mkd. on brass cap

$\frac{1}{4}$
 S12 | S 7
 1916

West bdy. of Township 21 North, Range 11 East.

7

Chains

- and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
- Asc. 327 ft. to
- 52.45 Top of mountain brs. NW. and SE. Desc. abrupt NE. slope 691 ft. to
- 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of secs. 1, 6, 7 and 12, mkd. on brass cap

T21N
R10E R11E
S 1 | S 6
S12 | S 7
1916

from which,

- A cedar, 5 ins. diam., brs. S. 16¼° E. 140 lks. dist.; mkd. T 21 N R 11 E S 7 B T.
- A cedar, 4 ins. diam., brs. S. 39½° W. 159 lks. dist.; mkd. T 21 N R 10 E S 12 B T.
- A cedar, 6 ins. diam., brs. N. 76½° W. 150 lks. dist.; mkd. T 21 N R 10 E S 1 B T.

No other trees within limits.
 Raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
 Land, rolling and mountainous.
 Soil, gravelly and rocky, lava formation, 10 to 20 ins. deep on hardpan subsoil.
 Timber, scattering scrub cedar and pinyon.
 Undergrowth, scattering rabbit brush and mountain-rush.
 Good grass.

North bet. secs. 1 and 6.

Over gently rolling land, through scattering timber and undergrowth.

- 1.00 Leave scattering timber brs. E. and W.
- 10.00 Desc. 46 ft. to
- 18.00 Foot of desc. brs. E. and W. Thence over gently rolling bench. Desc. gradual slope 52 ft. to
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., mkd. on brass cap

¼
S 1 | S 6
1916

- dig pits, 18 X 18 X 12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor.
- 51.50 Old road brs. NE. and SW.
- 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of Ts. 21 and 22 N., Rs. 10 and 11 E., mkd. on brass cap

T22N
R10E R11E
S36 | S31
S 1 | S 6
T21N
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, S. of cor.
 Land, rolling.
 Soil, clay loam, 20 to 26 ins. deep, rocky and gravelly, volcanic formation.
 Timber, scattering cedar.
 Undergrowth, rabbit brush.
 Good grass.

8

Survey of part of the north bdy. of T. 21 N., R. 11 E.

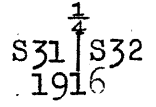
Chains

- From the cor. of Ts. 21 and 22 N., Rs. 10 and 11 E., East on a random line along N. bdy. of Tp., setting temp. $\frac{1}{4}$ sec. and sec. cors. at intervals of 40 chs., and at 1 mile, 55.02 chs., intersect W. bdy. of the Navajo Indian Reservation 12 lks. S. of the 6 mile post thereof; also cor. of fracl. secs. 5 and 32, described in "Book "A." in Book "11".
- Return to the cor. of Ts. 21 and 22 N., Rs. 10 and 11 E.; Thence N. $89^{\circ} 57'$ E. on a true line bet. secs. 6 and 31. Over gently rolling prairie land, through scattering undergrowth.
- 28.30 Wagon road brs. NE. and SW.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap
- $$\begin{array}{r} \frac{1}{4} \text{ S } 31 \\ \text{S } 6 \\ \hline 1916 \end{array}$$
- and raise a mound of stone, 3 ft. base, 3 ft. high, N. of cor.
- 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of fracl. secs. 5 and 32 and secs. 6 and 31, mkd. on brass cap
- $$\begin{array}{c} \text{T22N R11E} \\ \text{S31 | S32} \\ \text{S 6 | S 5} \\ \hline \text{T21N} \\ 1916 \end{array}$$
- dig pits, 18 X 18 X 12 ins., in each sec., $5\frac{1}{2}$ ft. dist. and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.
- Land, gently rolling prairie.
Soil, volcanic ash, 14 ins. deep.
No timber.
Undergrowth, scattering rabbit brush.
Good grass.
-
- N. $89^{\circ} 57'$ E. bet. fracl. secs. 5 and 32. Over gently rolling prairie land, through scattering undergrowth.
- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. mkd. on brass cap
- $$\begin{array}{r} \frac{1}{4} \text{ S } 32 \\ \text{S } 5 \\ \hline 1916 \end{array}$$
- and raise a mound of stone, $3\frac{1}{2}$ ft. base, 2 ft. high, N. of cor.
- 55.02 The cor. of fracl. secs. 5 and 32 and the 6th mile post of the W. bdy. of Navajo Indian Reservation, described in "Book "A." in Book "11".
- Land, nearly level.
Soil, clay and loam.
No timber.
Undergrowth, scattering rabbit brush.
Thick growth of grass.

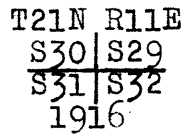
Survey of part of Subdivision ~~lines~~ of T. 21 N., R. 11 E. 19

Chains

40.00 From the reestablished standard cor. of secs. 31 and 32 one S. bdy. of Tp. (5th Std. Parallel North), N. 0° 1' E. bet. secs. 31 and frac. sec. 32. Over gently rolling land, through scattering undergrowth. Old indian ruins bear S. 46° W. 12 chs. dist. Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap



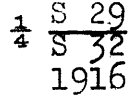
80.00 and raise a mound of stone, 3 ft. base, 2 ft. high, W. of cor. Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 30 and 31 and frac. secs. 29 and 32, mkd. on brass cap



- from which,
- A pinyon, 5 ins. diam., brs. N. 21 $\frac{1}{2}$ ° E. 150 lks. dist.; mkd. T 21 N R 11 E S 29 B T.
 - A soldier-berry, 5 ins. diam., brs. S. 68 $\frac{1}{2}$ ° E. 110 lks. dist.; mkd. T 21 N R 11 E S 32 B T.
 - A pinyon, 6 ins. diam., brs. S. 34 $\frac{3}{4}$ ° W. 150 lks. dist.; mkd. T 21 N R 11 E S 31 B T.
 - A cedar 5 ins. diam., brs. N. 70° W. 47 lks. dist.; mkd. T 21 N R 11 E S 30 B T.

Land, nearly level.
Soil, clay loam, thin and rocky.
Timber, scattering cedar and pinyon.
Undergrowth, scrub cedar brush.
Short grass.

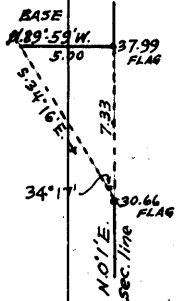
40.00 East on a random line bet. frac. secs. 29 and 32. Set temp. $\frac{1}{4}$ sec. cor.
54.92 Intersect W. bdy. of Navajo Indian Reservation, 11 lks. S of 1st mile post thereof; also cor. of frac. secs. 29 and 32, described in Book "A. Book 3215". Thence S. 89° 53' W. on a true line bet. frac. secs. 29 and 32. Over gently rolling prairie land.
14.92 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap



54.92 and raise a mound of stone, 3 ft. base, 2 $\frac{1}{2}$ ft. high, N. of cor. The cor. of secs. 30 and 31 and frac. secs. 29 and 32. Land, gently rolling prairie. Soil, thin and rocky. No timber. No undergrowth. Short grass.

10 Part of the Subdivision lines of T. 21 N. R. 11 E.

Chains	West on a random line bet. secs. 30 and 31.
40.00	Set temp. $\frac{1}{4}$ sec. cor.
80.16	Intersect W. bdy. of Tp., at the cor. of secs. 25, 30, 31 and 36, hereinbefore described.
	Thence
	East on a true line bet. secs. 30 and 31.
	Over level land, through scattering timber.
9.20	Left rim of Padre Canyon brs. NE. and SW. Desc. 162 ft.
20.00	Padre Creek, 30 lks. wide, 4 ft. deep, swift current, clear water, course NE. Asc. 145 ft. to
26.42	Right rim of Padre Canyon. Thence over gently rolling land, nearly level.
39.31	Old indian ruins, on line.
40.08	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap
	$\frac{1}{4} \begin{array}{r} S 30 \\ S 31 \\ \hline 1916 \end{array}$
	from which,
	A cedar, 16 ins. diam., brs. N. 62° E. 47 lks. dist.; mkd. $\frac{1}{4}$ S 30 B T.
	A pinyon, 12 ins. diam., brs. S. $19\frac{3}{4}^\circ$ E. 32 lks. dist.; mkd. $\frac{1}{4}$ S 31 B T.
80.16	The cor. of secs. 30 and 31 and fracl. secs. 29 and 32. Land, nearly level except from 9.20 chs. to 26.42 chs. Soil, thin and rocky. Timber, scattering cedar and pinyon. Undergrowth, scattering scrub cedar brush. Short grass.
	N. $0^\circ 1'$ E. bet. secs. 29 and 30.
30.66	Over gently rolling land, through scattering scrub timber. S. rim of Padre Canyon. Impractical to chain across, therefore to determine the distance across triangulate as follows;
	At this point set a flag on line and also one on line on N. side of canyon.
	From flag on N. side of canyon, measure off a base N. $89^\circ 59'$ W., 5 chs. dist. to a point from which the first flag, set on S. side of canyon brs. S. $34^\circ 16'$ E. and the cotan. of $34^\circ 17'$ or 1.46686×5.00 chs. = 7.33 chs. the required distance across canyon, which added to 30.66 chs. = 37.99 chs.
	Descent into Padre Canyon is approximately 150 ft. to Padre Creek, 30 lks. wide, 3 ft. deep, course NE. Asc. 150ft. to
34.33	N. rim of Padre Canyon.
37.99	Thence over gently rolling land.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 24 ins. in the ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap
	$\frac{1}{4} \begin{array}{r} S 30 S 29 \\ \hline 1916 \end{array}$
	from which,
	A cedar, 4 ins. diam., brs. N. 61° E. 153 lks. dist.; mkd. $\frac{1}{4}$ S 29 B T.
	A cedar, 6 ins. diam., brs. N. $83\frac{1}{4}^\circ$ W. 110 lks. dist.; mkd. $\frac{1}{4}$ S 30 B T.
43.90	Old indian ruins bear E. 35 lks. dist. Leave scattering timber.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 12 ins. in the ground, in a mound of stone, for cor. of secs. 19 and 30 and fracl. secs. 20 and 29, mkd. on brass cap



Part of the Subdivision lines of T. 21 N. R. 11 E. 11

Chains	<p style="text-align: center;">T21N R11E S19 S20 S30 S29 1916</p> <p>and raise a mound of stone, 3 ft. base, 3 ft. high, W. of cor. Land, gently rolling, except Padre Canyon. Soil, thin and rocky. Timber, scattering scrub cedar and pinyon. Undergrowth, scrub cedar brush. Short grass.</p>
40.00 54.92	<p>East on a random line bet. fracl. secs. 20 and 29. Set temp. $\frac{1}{4}$ sec. cor. Intersect W. bdy. of Navajo Indian Reservation, 11 lks. S. of 2nd mile post thereof; also cor. of fracl. secs. 20 and 29, described in Book 3215 in Book 3215. Thence S. 89° 53' W. on a true line bet. secs. 20 and 29. Over gently rolling prairie land.</p>
14.92	<p>Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap</p> <p style="text-align: center;">$\frac{1}{4}$ S 20 S 29 1916.</p>
54.92	<p>and raise a mound of stone, 3 ft. base, 2$\frac{1}{2}$ ft. high, W. of cor. The cor. of secs. 19 and 30, and fracl. secs. 20 and 29. Land, gently rolling prairie. Soil, thin and rocky. No timber. No undergrowth. Scattering short grass.</p>
40.00 80.14	<p>West on a random line bet. secs. 19 and 30. Set temp. $\frac{1}{4}$ sec. cor. Intersect W. bdy. of Tp., at the cor. of secs. 19, 24, 25 and 30, hereinbefore described. Thence East on a true line bet. secs. 19 and 30. Over gently rolling and level land, through scattering timber.</p>
40.07	<p>Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap</p> <p style="text-align: center;">$\frac{1}{4}$ S 19 S 30 1916.</p>
80.14	<p>from which, A cedar, 6 ins. diam., brs. N. 20$\frac{1}{2}$° W. 204 lks. dist.; mkd. $\frac{1}{4}$ S 19 B T. A cedar, 4 ins. diam., brs. S. 15° E. 52 lks. dist.; mkd. $\frac{1}{4}$ S 30 B T. The cor. of secs. 19, 20, 29 and 30. Land, nearly level. Soil, thin and rocky. Timber, scattering scrub cedar and juniper. Undergrowth, scrub cedar and juniper brush. Short grass.</p>

12 Part of the Subdivision lines of T. 21 N., R. 11 E.

Chains

- N. 0° 1' E. bet. sec. 19 and fracl. sec. 20.
 Over gently rolling prairie land,
 23.95 Mutual telephone line brs. NW. and SE.
 36.00 Postal telegraph line brs. N. 87° 2' W. and S. 87° 2' E.
 37.03 A. T. and S. F. R. R. track brs. N. 87° 2' W. and S. 87°
 2' E.
 37.48 A. T. and S. F. R. R. track brs. N. 87° 2' W. and S. 87°
 2' E.
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the
 ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$$\begin{array}{c} \frac{1}{4} \\ \hline S19 \mid S20 \\ 1916 \end{array}$$

- and raise a mound of stone, 3 ft. base, 2 $\frac{1}{2}$ ft. high,
 W. of cor.
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the
 ground, for cor. of secs. 18 and 19, and fracl. secs.
 17 and 20, mkd. on brass cap

$$\begin{array}{c} T21N \ R11E \\ S18 \mid S17 \\ S19 \mid S20 \\ 1916 \end{array}$$

and raise a mound of stone, 3 ft. base, 2 $\frac{1}{2}$ ft. high,
 W. of cor.
 Land, gently rolling.
 Soil, thin and rocky.
 No timber.
 No undergrowth.
 Short grass.

- 40.00 East on a random line bet. fracl. secs. 17 and 20.
 Set temp. $\frac{1}{4}$ sec. cor.
 55.02 Intersect W. bdy. of Navajo Indian Reservation, 5 lks. S.
 off the 3rd mile post thereof; also cor. of fracl. secs.
 17 and 20, described in Book "A".

- Thence
 S. 89° 57' W. on a true line bet. secs. 17 and 20.
 Over gently rolling land,
 15.02 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the
 ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

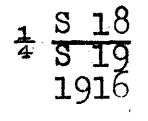
$$\begin{array}{c} S \ 17 \\ \frac{1}{4} \ S \ 20 \\ 1916 \end{array}$$

- and raise a mound of stone, 3 ft. base, 3 ft. high,
 N. of cor.
 55.02 The cor. of secs. 18 and 19 and fracl. secs. 17 and 20.
 Land, gently rolling.
 Soil, thin and rocky.
 Timber, scattering scrub cedar and juniper.
 No undergrowth.
 Short grass.

- 40.00 West on a random line bet. secs. 18 and 19.
 Set temp. $\frac{1}{4}$ sec. cor.
 80.08 Intersect W. bdy. of Tp., at the cor. of secs. 13, 18,
 19 and 24, hereinbefore described.
 Thence
 East on a true line bet. secs. 18 and 19.
 Over gently rolling land, through scattering timber.

Part of the Subdivision of T. 21 N., R. 11 E. 13

Chains
40.04 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap



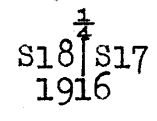
from which,
A cedar, 4 ins. diam., brs. N. $33\frac{1}{4}^\circ$ E.
192 lks. dist.; mkd. $\frac{1}{4}$ S 18 B T.
A cedar, 4 ins. diam., brs. S. $48\frac{1}{4}^\circ$ E.
41 lks. dist.; mkd. $\frac{1}{4}$ S 19 B T.

80.08 The cor. of secs. 18 and 19 and frac. secs. 17 and 20.
Land, gently rolling.
Soil, thin and rocky.
Timber, scattering scrub juniper and cedar.
No undergrowth.
Short grass.

N. $0^\circ 1'$ E. bet. sec. 18 and frac. sec. 17.
Over gently rolling prairie land, through scattering timber.

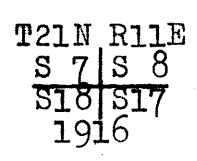
39.12 Young's Canyon; stream of water 20 fks. wide, 1 ft. deep, course NE. Leave scattering timber.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 16 ins. in the ground, in a mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap



from which,
An alder, 9 ins. diam., brs. S. 1° E.
124 lks. dist.; mkd. $\frac{1}{4}$ S 17 B T.
A soldier-berry, 6 ins. diam., brs. S. 50° W.
69 lks. dist.; mkd. $\frac{1}{4}$ S 18 B T.

Asc. 22 ft. to
40.31 Rim rock brs. E. and W. Thence over nearly level land.
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 7 and 18 and frac. secs. 8 and 17, mkd. on brass cap



dig pits, 18 X 18 X 12 ins., in each sec., $5\frac{1}{2}$ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, gently rolling.
Soil, thin and rocky.
Timber, scattering cedar and alder, and soldier-berry.
No undergrowth.
Short grass.

40.00 East on a random line bet. frac. secs. 8 and 17.
Set temp. $\frac{1}{4}$ sec. cor.

55.01 Intersect W. bdy. of Navajo Indian Reservation 6 lks. S. of the 4th. mile post at the cor. of frac. secs. 8 and 17, described in Book "A."

Thence
S. $89^\circ 56'$ W. on a true line bet. secs. 8 and 17.
Over gently rolling prairie land,

14 Part of Subdivision lines of Township T. 21 N. R. 11 E.

Chains

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

1/4 S 8
S 17
1916

dig pits, 18 X 18 X 12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, N. of cor.

55.01 The cor. of secs. 7 and 18 and fracl. secs. 8 and 17.

Land, gently rolling.

Soil, thin and rocky.

No timber.

No undergrowth.

Short grass.

West on a random line bet. secs. 7 and 18.

40.00 Set temp. 1/4 sec. cor.

80.02 Intersect W. bdy. of Tp., 7 lks. N. of the cor. of secs. 7, 12, 13 and 18, hereinbefore described.

Thence

N. 89° 57' E. on a true line bet. secs. 7 and 18.

Over rolling land, through scattering scrub timber.

Asc. gradual slope, 40 ft.

14.55 Top of ascent brs. N. and S. Leave scattering timber.

Desc. 155 ft.

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

1/4 S 7
S 18
1916

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

Thence over nearly level prairie land.

80.02 The cor. of secs. 7 and 18 and fracl. secs. 8 and 17.

Land, level and rolling.

Soil, thin and rocky.

Timber, scattering cedar and juniper.

No undergrowth.

Fair grass.

N. 0° 1' E. bet. sec. 7, and fracl. sec. 8.

Over rolling prairie land,

Asc. 70 ft. to

12.73 Top of ascent brs. NE. and SW. Desc. 9 ft. to

14.93 Draw, course W. Asc. gradual slope to

22.92 Top of ridge brs. NE. and SW. Desc. gradual rolling slope.

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

1/4 S 7 | S 8
1916

dig pits, 18 X 18 X 12 ins., N. and S. of post, 3 ft. dist.; and raise a mound of earth, 3 1/2 ft. base, 1 1/2 ft. high, W. of cor.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 6 and 7, and fracl. secs. 5 and 8, mkd. on brass cap

Part of the Subdivision lines of Townships 21 N. R. 11 E. 15

Chains

T21N R11E
 S 6 | S 5
 S 7 | S 8
 1916

dig pits, 18 X 18 X 12 ins., in each sec., 5½ ft. dist.; and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, rolling.
 Soil, coarse, gravelly, 16 ins. deep.
 No timber.
 No undergrowth.
 Fair grass.

40.00 East on a random line bet. frac. secs. 5 and 8.
 Set temp. ¼ sec. cor.
 54.99 Intersect W. bdy. of Navajo Indian Reservation 6 lks. S. of the 5 mile post thereof; also cor. of frac. secs. 5 and 8, as described in book "A".
 Thence
 S. 89° 56' W. on a true line bet. frac. secs. 5 and 8.
 Over gently rolling prairie land,
 14.99 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., mkd. on brass cap

¼ S 5
 S 8
 1916

dig pits, 18 X 18 X 12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.

54.99 The cor. of secs. 6 and 7 and frac. secs. 5 and 8.
 Land, gently rolling prairie land.
 Soil, volcanic ash, 12 ins. deep.
 No timber.
 No undergrowth.
 Good grass.

40.00 West on a random line bet. secs. 6 and 7.
 Set temp. ¼ sec. cor.
 80.12 Intersect W. bdy. of Tp., 5 lks. S. of cor. of secs. 1, 6, 7 and 12, hereinbefore described.
 Thence
 S. 89° 58' E. on a true line bet. secs. 6 and 7.
 Over gently rolling prairie land, through scattering scrub timber.
 Asc. gradual slope.
 20.16 Top of ascent brs. N. and S. Desc. E. slope, 75 ft. to
 40.06 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., mkd. on brass cap

¼ S 6
 S 7
 1916

dig pits, 18 X 18 X 12 ins., E. and W. of post, 3 ft. dist.; and raise a mound of earth, 3½ ft. base, 1½ ft. high, N. of cor.

80.12 The cor. of secs. 6 and 7, and frac. secs. 5 and 8.
 Land, gently rolling.
 Soil, gravelly, 12 ins. deep.
 Timber, scattering scrub cedar.
 No undergrowth.
 Short grass.

16. Part of Subdivision lines of Tp., 21 N., R. 11 E.

Chains
 40.00 N. 0° 1' E. on a random line bet. sec. 6 and fracl. sec. 5.
 Set temp. $\frac{1}{4}$ sec. cor.
 80.15 Intersect N. bdy. of Tp., 16 lks. E. of cor. of secs.
 6 and 31 and fracl. secs. 5 and 32, hereinbefore de-
 scribed.
 Thence
 S. 0° 6' E. on a true line bet. sec. 6 and fracl. sec. 5.
 Across gently rolling prairie land, through scattering
 undergrowth.
 40.15 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the
 ground, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$\frac{1}{4}$
 S 6 $\frac{1}{4}$ S 5
 1916

and raise a mound of stone, 3 ft. base, 3 ft. high,
 W. of cor.
 67.47 Ledge of rock brs. E. and W. Desc. 40 ft. to
 80.15 The cor. of secs. 6 and 7 and fracl. secs. 5 and 8.
 Land, rolling.
 Soil, thin and rocky.
 No timber.
 Undergrowth, scattering rabbit brush.
 Short grass.

Boundaries of that portion of Township 21 North, Range 11 East, outside of the Navajo Indian Reservation.

LATITUDES, DEPARTURES AND CLOSING ERRORS

Line designated.	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
South boundary, (5th. Std. Par. N.)	West,	135.01				135.01
West Tp. boundary,	North,	480.00	480.00			
North Tp. bdy.	N. 89° 57' E.	135.02	.12		135.02	
West bdy. of Nava- jo Indian Reser- vation (E. bdy).	South,	480.00		480.00		
Convergency,					.13	
	Totals,		480.12	480.00	135.15	135.01
			480.00		135.01	
	Error in latitude, --	0.12				
	Error in departure, -----	0.14				

GENERAL DESCRIPTION.

This township situated in the north central part of the State of Arizona, on the watershed of the Little Colorado river, lies partly inside and partly outside the Navajo Indian Reservation, at the SW. cor. thereof. The foregoing field notes describe the survey of that portion lying outside the Reservation.

The surface is rolling. The soil is a thin and rocky clay loam. The timber, cedar and pinon is scattering, except along the W. bdy., where dense growths are found. Undergrowth of sage brush, rabbit brush, scrub cedar and juniper brush in both dense and scattering growths cover the secs. surveyed.

There is a permanent flow of water in Young's Creek, course easterly, thru. the center of the Tp., and in Padre Creek, course easterly, thru. the southern part. No other permanent water exists and no other water courses.

The double track of the Atchison, Topeka & Santa Fe Ry., brs. E. and W. thru. the center of the township, paralleled by telephone and telegraph lines, and right-of-way fences. The "National Old Trails Highway" passes thru. the township, near the SW. cor. No other improvements and no indications of valuable mineral deposits could be found. Ruins of Indian habitations in sec. 29. No settlers in the surveyed portion.

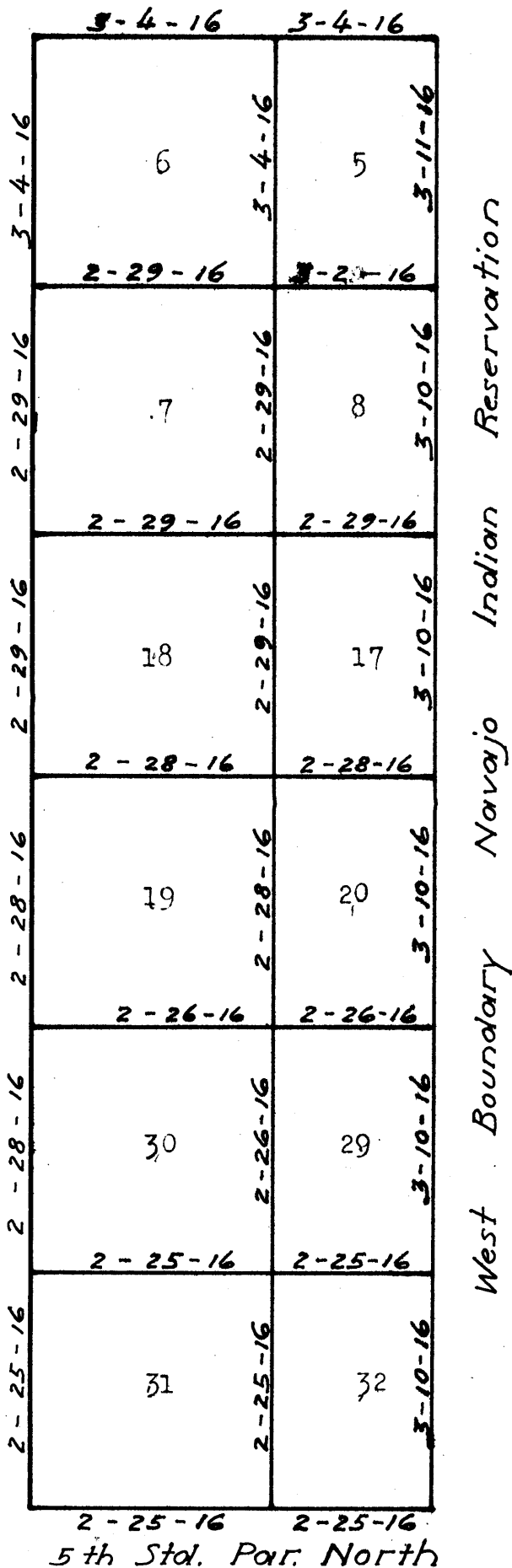
Book "B"

Group 68 - - - Arizona.

Township 21 North, Range 11 East.

DATE DIAGRAM.

BOOK 3215



Red lines indicate surveys by Thomas B. Matthews, U.S. Surveyor, on various dates shown thereon.

Black lines indicate surveys by Thos. C. Clark, U.S. Transitman, on various dates shown thereon.

4-680

BOOK 8215

**FIELD ASSISTANTS. to
Joseph C. Clark, U. S. Transitman,
Group 68, Ariz.**

NAMES.	CAPACITY.
E.F. Strickler,	1st. Chairman,
M. H. Sprinkle,	2nd Chairman,
Daniel Goins,	Cornerman,
Frank Mason,	Axman
Ray Adcock,	Flagman.

CERTIFICATE OF UNITED STATES TRANSITMAN.

Applies to Books "B," "E," "G," "H," and "I," of this group.

I, Joseph C. Clark, U.S. Transitman, hereby certify upon honor that, in pursuance of special instructions received from the U. S. Surveyor General for Group 68, Arizona, bearing date of the 17th day of December, 1915, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, retraced all those parts or portions of the 5th. Standard Parallel North, in Range 10 East, and Resurveyed all those parts or portions of the East bdy. of T.23 N., R.9 E., and Surveyed all those parts or portions of the West bdy. of T.21 N., R.11E., and South bdrs. of Ts.22 and 23 N., R.10 E., and Subdivision lines of Ts.21, 22, 23 and 24 N., R. 10 E.,

of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the field notes in this book and those in books "E," "G," "H" and "I" of this group and by the date diagrams in said books as having been executed by me, and under my direction; and that all the corners of said retracements, resurveys and surveys have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Group 68, Arizona, and in the specific manner described in the field notes, and that the foregoing and notes in books E, G, H and I are the original field notes of such retracements, resurveys and surveys.

Dec. 31, 1918.

Joseph C. Clark U.S. Transitman.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

....., 191

The foregoing field notes of the survey of

executed by under his special instructions dated, 191 , 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. Surveyor General.

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

..... U. S. Surveyor General.

44
BOOK 2215

CERTIFICATE OF UNITED STATES SURVEYOR.

Applies to Books "C", "D", "E", "F", "G", and "I" of this group.

James D. Matthews

U. S. Surveyor, hereby certify upon honor that, in pursuance

of special instructions received from the U. S. Surveyor General for Group 68, Arizona,

bearing date of the 17th day of December, 1915, I have well, faithfully, and truly

in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instruc-

tions, and the laws of the United States, ~~resurveyed~~ ^{resurveyed} ~~all those parts or portions of~~ ^{all those parts or portions of} ~~5th. Std. Par. N. in R. 11 E., and the East bdrs. of Ts. 23 and 24 N., R. 9 E., and Surveyed all those parts or portions of the North bdrs. of T. 21 N., R. 11 E. and T. 23 N., R. 10 E., the North & West bdrs. of Ts. 22 and 23 N., R. 11 E. & W. bdy. of T. 24 N., R. 1 E., the Subdivision lines of Ts. 21 N., Rs. 10 and 11 E., T. 22 N., R. 11 E., Ts. 23 N., Rs. 10 and 11 E., and Ts. 24 N., Rs. 10 and 11 E., and the Meanders of the Left Bank of the Little Colorado River, in T. 24 N., R. 11 E.,~~

of the Gila and Salt River

Base and Meridian, in the State of Arizona, which are represented ^{by} ~~the field notes and data diagrams in this book and in books "C," "D," "E," "F," "G," and "I" of this group;~~ as having been executed by me, and under my direction; and that all the corners of

^{resurvey and} said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instruc-

tions, and the special written instructions of the U. S. Surveyor General for Group 68, Arizona,

and in the specific manner described in the field notes, and that the foregoing are the original field notes of ~~and~~ ^{such}, resurvey and survey.

Thomas B. Matthews
U. S. Surveyor.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, January 15, 1919

^{re-} The foregoing field notes of the survey of the

5th. Standard Parallel North, thru part of Range 11 East, and

SURVEY of the

West, and part of the North boundary, and Subdivision lines of

TOWNSHIP 21 NORTH, RANGE 11 EAST,

of the Gila and Salt River Base and Meridian, in the State of Arizona,

executed by Thos. B. Matthews, U. S. Surveyor, and Jos. C. Clark, U. S. Transitman,

under ~~his~~ special instructions dated Dec. 17, 1915, for Group 68, Arizona, ~~and~~ having been critically examined, and the necessary corrections and explanations made, the said field notes, and the ^{re} surveys and surveys they describe, are hereby approved.

Franz J. Roth
U. S. Surveyor General.

I certify that the foregoing transcript of the field notes of the above described surveys in

~~has been correctly copied from the original notes on file in this office.~~