

3271

Book "L"

4-679

1

BOOK 3271

FIELD NOTES

OF RETRACEMENT OF THE

Second Guide Meridian East, through part of T. 29 N.

and SURVEY of a

Portion of West bdy. of Township 29 N., R. 8 E., and

" " Subdivisions of Township 29 N., R. 8 East.

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

EXECUTED BY

Theo. O. Johnston, U. S. Surveyor.

and

Philip L. Inch, U. S. Transitman.

~~In the capacity of U. S. Surveyor~~, under instructions dated Jan. 4, 1916, issued by the United States Surveyor General to govern surveys included in Group No. 66, which were approved by the Commissioner of the General Land Office, January 17, 1916.

Retracement & Survey commenced May 12, 1916.

Retracement & Survey completed " 22, 1916.

Executed under Assignment
Instructions dated Feb. 3, 1916.

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(1A)

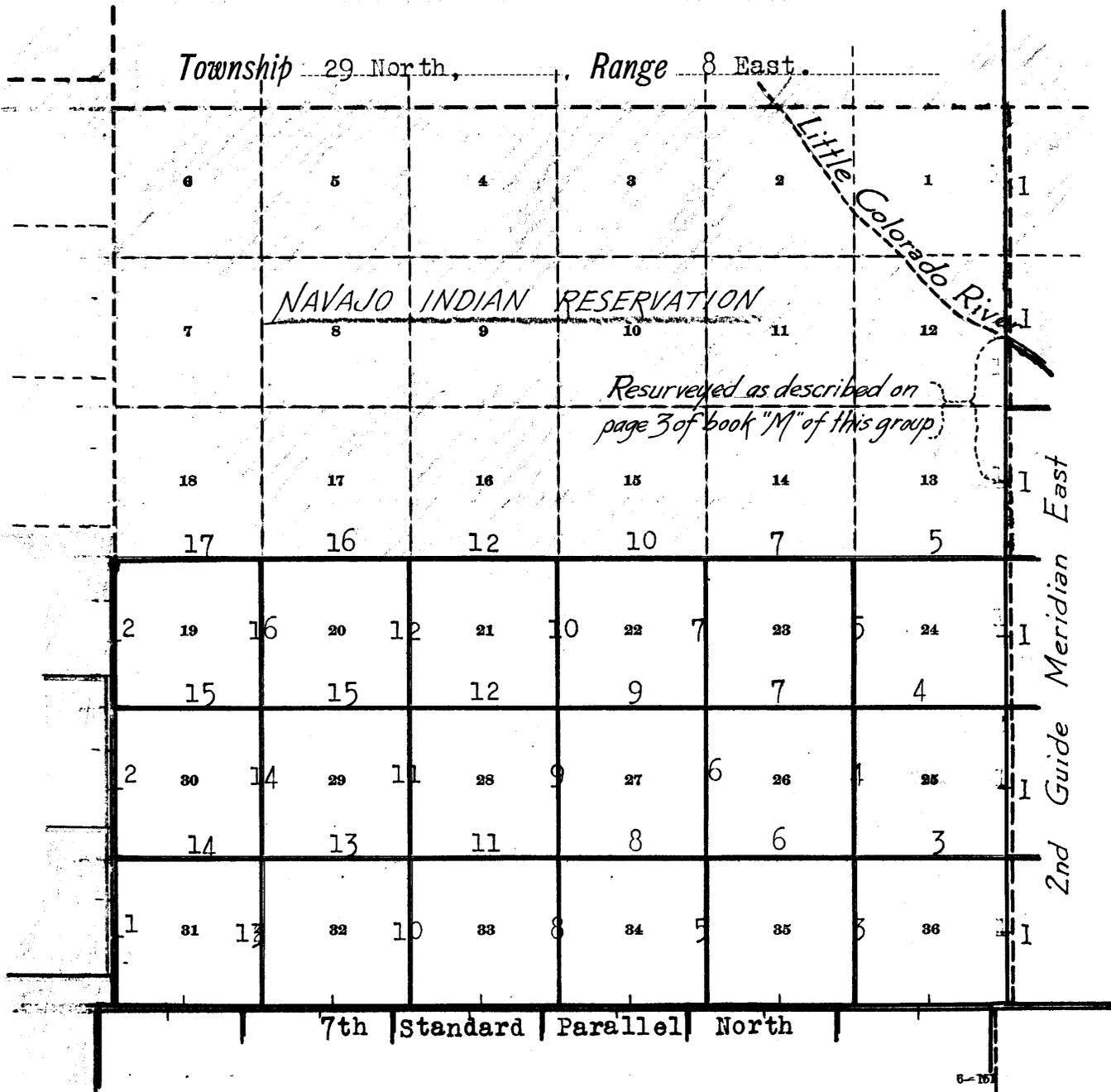
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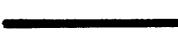
Book "L"

Group 66 - - - Arizona.

BOOK 3271

INDEX DIAGRAM.



-  Navajo Indian Reservation.
-  Tusayan National Forest.
-  Lines surveyed under this Group.
-  " retraced " " " "
-  " run under current Group 67.
-  Unsurveyed lines.
-  Accepted surveys.

Retracement of 2nd. G.M.E., thru. Township 29 North,
Survey of a portion of W. bdy. of Township 29 North, Range 8 East,
Survey of a portion of Township 29 North, Range 8 East.

1B

Chains.

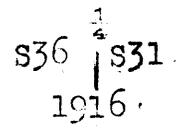
Work executed by Theo. O. Johnston, U.S. Surveyor, and Philip L. Inch, U.S. Transitman.
Dates of survey shown on diagram on page 18 hereof.
The instruments used are described, with record of approval by the Assistant Supervisor of Surveys, District No. 5, and field tests in Book "A."
All lines were originated by deflection from a meridian determined by Theo. O. Johnston, by observation on Polaris at elongation, a record of which is given in Book "K."

Retracement of 2nd G.M.E., thru. Township 29 North.

Preliminary to surveying the portion of the W. bdy., and Subdivision lines of T. 29 N., R. 8 E., retracement was made of the 2nd Guide Meridian East, thru. Tp. 29 N., the old distances being found closely approximating those given in the original record, and a mean bearing being developed for the six miles of approximately north.

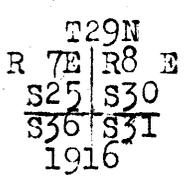
Portion of W. bdy. of Township 29 North, Range 8 East.

From the standard cor. of Ts. 29 N., Rs. 7 and 8 E., described in Book "K," and changed under Group 67, to Std. cor. of T. 29 N., R. 8 E. only, as described in same Book,
North, on W. bdy. of sec. 31.
Over mountainous land, thru. scattering scrub timber.
Ascend SE. slope, 71 ft. to
7.00 Top of ascent, brs. NE. and SW. Descend along E. slope, 24 ft. to
20.00 Canyon, course S. 10° E.
21.00 Same canyon, course SW. Ascend SE. slope, 128 ft. to
35.00 Top of ascent, brs. NE. and SW. Descend gradual N. slope.
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., marked on brass cap,



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Markings on this cor. later changed by Thomas B. Matthews, U.S.S. to make cor. refer to sec. 31 only, as described in notes of current Group No. 67.

43.60 Descend N. slope, 43 ft. to
50.00 Foot of descent; thence over rolling land.
62.40 Descend NE. slope, 33 ft. to
63.50 Canyon, course E: Ascend S. slope to
65.00 Descend 40 ft. to
70.00 Ascend 47 ft. to
73.20 Descend along NE. slope, 161 ft. to
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in a mound of stone, for cor. of secs. 25, 30, 31 and 36, marked on brass cap,



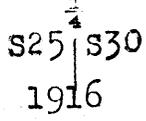
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Markings on this cor. later changed by Thomas B. Matthews, U.S.S. to make cor. refer to secs. 30 and 31 only.

Land, mountainous and rolling.
Soil, rocky, 4th rate.
Timber, scrub pine, and juniper.

2 Portion of West boundary of Township 29 North, Range 8 East.

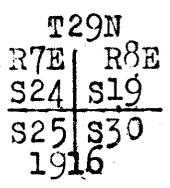
Chains

North, on W. bdy. of sec. 30.
Over mountainous land, thru scattering scrub timber.
Descend 134 ft. to
5.00 Canyon, course NE. Ascend S. slope, 286 ft. to
20.00 Top of ascent, brs. NW. and SE. Descend gradual slope.
38.50 Descend N. slope, 15 ft. to
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for 1/4 sec. cor., marked on brass cap,



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Markings on this cor. later changed by Thomas B. Matthews, U.S.S. to make cor. refer to sec. 30 only.

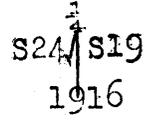
42.80 Descend NE. slope, 93 ft. to
56.50 Canyon, course E. Foot of descent. Asc. S. slope, 89 ft.
62.40 Top of ascent.
66.90 Descend N. slope, 71 ft. to
71.20 Canyon, course E. Ascend gradual SE. slope.
80.00 Set an iron post, 3 ft. long, 3 ins., 24 ins. in the ground, for cor. of secs. 19, 24, 25 and 30, marked on brass cap,



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Markings on this cor. later changed by Thomas B. Matthews, U.S.S. to make cor. refer to secs. 19 and 30 only, as described in notes of current Group No. 67.

Land, mountainous.
Soil, rocky, 4th rate.
Timber, scrub pine and juniper.

North, in W. bdy. of sec. 19.
Over mountainous land, thru scrub timber.
Ascend S. slope, 81 ft. to
9.80 Top of ascent; spur slopes SE.
11.90 Descend NE. slope, 303 ft. to
23.00 Canyon, course SE. Ascend SW. slope, 42 ft. to
27.60 Spur, slopes SW. Descend to
29.00 Canyon, course SW. Ascend SE. slope, 120 ft. to
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in a mound of stone, for 1/4 sec. cor., marked on brass cap,



and raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of cor. Markings on this cor. later changed by Thomas B. Matthews, U.S.S. to make cor. refer to sec. 19 only, as described in notes of current Group No. 67.

Ascend 34 ft. to
42.30 Top of ascent on W. slope. Thence along W. slope.
46.20 Ascend SE. slope, 133 ft. to
65.00 Top of ascent.
67.60 Descend NW. slope, 46 ft. to
70.00 Canyon, course NE. Ascend SE. slope, 88 ft. to

Chains

80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in a mound of stone, for cor. of secs. 13, 18, 19 and 24, mkd. on brass cap

T29N
R 7E | R 8E
S13 | S18
S24 | S19
1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Markings on this cor. later changed by Thomas B. Matthews, U.S.S. to make cor. refer to secs. 18 and 19 only, as described in notes of current Group No. 67. Land, mountainous; scrub pine and juniper. Soil, rocky, 4th rate. Timber, scrub pine and juniper.

SUBDIVISION OF PORTION OF T. 29 N., R. 8 E.

From the standard cor. of secs. 35 and 36, on S. bdy. of Tp. (7th Std. Par. N.), described in Book "K," N. 0° 1' W. bet. secs. 35 and 36.

21.50 Over rolling land.

40.00 Wash, course NE. 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
S35 | S36
1916

48.20 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

56.60 Asc. 124 ft. to Small rocky butte. Desc. gradual slope.

58.00 Wash, course NE. Desc. 43 ft. to

65.00 Wash, course SE.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 25, 26, 35 and 36, mkd. on brass cap

T29N R 8E
S26 | S25
S35 | S36
1916

dig pits, 18 X 18 X 12 ins., in each sec., 5 1/2 ft. dist and raise a mound of earth, 4 ft. base, 2 ft. high, W. of cor.

Land, rolling. Soil, untillable rocky clay, 4th rate. No timber.

40.00 East on a random line bet. secs. 25 and 36. Set temp. 1/4 sec. cor.

80.00 Intersect 2nd guide meridian E., 10 lks. N. of the cor. of secs. 25, 30, 31 and 36, which is a limestone, mkd. and witnessed as described by the Surveyor General.

Thence N. 89° 56' W. on a true line bet. secs. 25 and 36.

35.00 Over rolling land. Wash, course SE.

Subdivision of Partion of T. 29 N. R. 8 E.

Chains
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

S 25
 $\frac{1}{4}$ S 36
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

80.00

The cor. of secs. 25, 26, 35 and 36.

Land, rolling.

Soil, untillable, rocky clay, 4th rate.

No timber.

N. 9° 1' W. bet. secs. 25 and 26.

Over rolling land.

25.00

Wash, course E.

35.00

Wash, course NE.

38.00

Wash, course 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

S26 $\frac{1}{4}$ S25
1916

dig pits, 18 X 18 X 12 ins., N. and S. of post, $\frac{3}{4}$ ft. dist.; and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

78.00

Wash, course NW.

80.00

Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 23, 24, 25 and 26, mkd. on brass cap

T29N R 8E
S23 | S24
S26 | S25
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Land, rolling.

Soil, untillable, rocky clay, 4th rate.

No timber.

40.00

East on a random line bet. secs. 24 and 25.

80.18

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

Intersect N. and S. line, 16 lks. N. of cor. of secs. 19, 24, 25 and 30, which is a limestone, mkd. and witnessed as described by the Surveyor General.

Thence

N. 89° 53' W. on a true line bet. secs. 24 and 25.

Over broken rolling land.

7.50

Wash, course NE.

33.00

Wash, course NE.

40.09

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

S24
 $\frac{1}{4}$ S 25
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Chains
80.18

The cor. of secs. 23, 24, 25 and 26.
Land, rolling.
Soil, untillable, rocky, clay, 4th rate.
No timber.

19.00
40.00

N. 0° 1' W. bet. secs. 23 and 24.
Over rolling land.
Wash, course NE.
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

↑
S23 | S24
1916

62.00
67.00
80.00

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
Wash, course NE.
Wash, course NE.
Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground, for cor. of secs. 13, 14, 23 and 24, mkd. on brass cap

T29N R 8E
S14 | S13
S23 | S24
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
Land, rolling.
Soil, untillable, rocky clay, 4th rate.
No timber.

40.00
80.02

East on a random line bet. secs. 13 and 24.
Set temp. $\frac{1}{4}$ sec. cor.
Intersect 2nd guide meridian E., 10 lks. N. of the cor. of secs. 13, 18, 19 and 24, which is a limestone, mkd. and witnessed as described by the Surveyor General.

40.01

Thence
N. 89° 56' W. on a true line bet. secs. 13 and 24. (Navajo Co. Indian Res. Bdy.) Over rolling land.
Set an iron post, 3 ft. long, lin. diam., 26 ins. in a mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$\frac{1}{4}$ S 13
 $\frac{1}{4}$ S 24
1916

64.00
80.02

and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.
Wash, course NE.
The cor. of secs. 13, 14, 23 and 24.
Land, rolling.
Soil, untillable, rocky clay, 4th rate.
No timber.

40.00

From the std. cor. of secs. 34 & 35 on Sbdy. of Tp. (7th Std. Par. N.) described in Book "K,"
N. 0° 1' W. bet. secs. 34 and 35.
Over rolling land.
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

6

Subdivision of portion of T. 29 N., R. 8 E.

Chains

80.00

$$\begin{array}{c} \uparrow \\ S34 | S35 \\ 1916 \end{array}$$

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ 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. 26, 27, 34 and 35, mkd.
on brass cap

$$\begin{array}{c} T29N R 8E \\ S27 | S26 \\ S34 | S35 \\ 1916 \end{array}$$

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
W. of cor.

Land, rolling.

Soil, untillable, rocky clay, 4th rate.

No timber.

40.00

East on a random line bet. secs. 26 and 35.

80.12

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

Intersect N. and S. line, 5 lks. N. of cor. of secs. 25,
26, 35 and 36.

Thence

N. $89^{\circ} 58'$ W. on a true line bet. secs. 26 and 35.

Over rolling land.

16.00

Wash, course NE.

40.06

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,

$$\begin{array}{c} S 26 \\ \frac{1}{4} S 35 \\ 1916 \end{array}$$

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.

56.30

Desc. gradual slope.

65.10

Foot of slope.

80.12

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

Land, rolling.

Soil, untillable, rocky, clay, 4th rate.

No timber.

40.00

N. $0^{\circ} 1'$ W. bet. secs. 26 and 27.

Over rolling land.

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

$$\begin{array}{c} \uparrow \\ S27 | S26 \\ 1916 \end{array}$$

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ 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, 22, 23, 26 and 27, mkd.
on brass cap

$$\begin{array}{c} T29N R 8E \\ S22 | S23 \\ S27 | S26 \\ 1916 \end{array}$$

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
W. of cor.

Chains

Land, rolling.
Soil, untillable, rocky clay, 4th rate.
No timber.

40.00 East on a random line bet. secs. 23 and 26.
Set temp. $\frac{1}{4}$ sec. cor.
80.06 Intersect N. and S. line, 24 lks. N. of cor. of secs. 23,
24, 25 and 26.

Thence
N. $89^{\circ} 50' W.$, on a true line bet. secs. 23 and 26.
Over rolling land.
12.00 Wash, course NE.
35.00 Wash, course NE.
40.03 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

$\frac{1}{4} S 23$
 $\frac{1}{4} S 26$
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.
65.00 Wash, course NW.
80.06 The cor. of secs. 22, 23, 26 and 27.
Land, rolling.
Soil, untillable, rocky, clay, 4th rate.
No timber.

N. $0^{\circ} 1' W.$ bet. secs. 22 and 23.
Over rolling land.
3.20 Road brs. NW. and SE.
30.00 Wash, course NE.
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a
mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$\frac{1}{4}$
S22 | S23
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
W. of cor.
61.00 Canyon course, NE.
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in
the ground, for cor. of secs. 14, 15, 22 and 23, mkd.
on brass cap

T29N R 8E
S15 | S14
S22 | S23
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
W. of cor.
Land, rolling.
Soil, untillable, rocky clay, 4th rate.
No timber.

40.00 East on a random line bet. secs. 14 and 23.
Set temp. $\frac{1}{4}$ sec. cor.
80.18 Intersect N. and S. line, 5 lks. N. of cor. of secs. 13,
14, 23 and 24.
Thence
N. $89^{\circ} 58' W.$ on a true line bet. secs. 14 and 23. (Navajo
Indian Reservation Bdy.)

8

Subdivision of portion of T. 29 N., R. 8 E.

Chains

11.18 Desc. 163 ft. to Wash, course, NE.
 25.20 Desc. 112 ft. to Wash, course, N.
 37.18
 40.09 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

S 14
 $\frac{1}{4}$ S 23
 1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

50.20 Asc. 98 ft. to Thence over rolling land.
 66.18 Canyon course NE.
 80.18 The cor of secs. 14, 15, 22 and 23.
 Land, rolling and hilly.
 Soil, untillable, rocky clay, 4th rate.
 No timber.

From the standard cor. of secs. 33 and 34 on S. bdy. of Tp., (7th. Std. Par. N.), described in Book "K," N. $0^{\circ} 2'$ W. bet. secs. 33 and 34.
 Over rolling land.

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

$\frac{1}{4}$
 S33 | S34
 1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ 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, 27, 28, 33 and 34, mkd. on brass cap

T29N R 8E
 S28 | S27
 S33 | S34
 1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Land, rolling and hilly.
 Soil, untillable, rocky clay, 4th rate.
 No timber.

40.00 East on a random line bet. secs. 27 and 34.
 80.00 Set temp. $\frac{1}{4}$ sec. cor.
 Intersect N. and S. line, 12 lks. S. of cor. of secs. 26, 27, 34 and 35.

Thence
 S. $89^{\circ} 55'$ W. on a true line bet. secs. 27 and 34.
 Over rolling land.

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

S 27
 $\frac{1}{4}$ S 34
 1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Subdivision of portion of T. 29 N., R. 8 E. 9

Chain
80.00

The cor. of secs. 27, 28, 33 and 34.
Land rillong.
Soil, untillable, rocky clay, 4th rate.
No timber.

60006

.50
40.00

N. 0° 2' W. bet. secs. 27 and 28.
Over rolling land.
Road brs. NE. and SW.
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

$\frac{1}{4}$
S28 | S27
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

40.50
49.00
51.00
80.00

Wash, course E.
Wash, course E.
Wash, course E.
Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for cor. of secs. 21, 22, 27 and 28, mkd. on brass cap

T29N R 8E
S21 | S22
S28 | S27
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Land, rolling.
Soil, untillable, Rocky clay, 4th rate.
No timber.

40.00
80.22

East on a random line bet. secs. 22 and 27.
Set temp. $\frac{1}{4}$ sec. cor.,
Intersect N. and S. line, 18 lks. S. of cor. of secs. 22, 23, 26 and 27.

Thence
S. 89° 52' W. on a true line bet. secs. 22 and 27.
Over rolling land.

9.20
17.20
40.11

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

S 22
 $\frac{1}{4}$ S 27
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

56.60
73.20
79.20
80.22

Road brs. N. and S.
Wash, course NE.
Wash, course SE.
The cor. of secs. 21, 22, 27 and 28.
Land, rolling.
Soil, rocky, clay, 4th rate.
No timber.

10

Subdivision of portion of T. 29 N., R. 8 E.

Chains

N. 0° 2' W. bet. secs. 21 and 22.
 Over rolling land.
 1.00 Wash, course NE.
 11.00 Wash, course 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

$\frac{1}{4}$
 S21 | S22
 1916

and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high,
 W. of cor.
 42.00 Wash, course E.
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in
 the ground, for cor. of secs. 15, 16, 21 and 22, mkd.
 on brass cap

T29N R 8E
 S16 | S15
 S21 | S22
 1916

and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high,
 W. of cor.
 Land, rolling, rocky clay, 4th rate.
 Soil, untillable, rocky clay, 4th rate.
 No timber.

40.00 East on a random line bet. secs. 15 and 22.
 Set temp. $\frac{1}{4}$ sec. cor.
 80.30 Intersect N. and S. line, 6 lks. S. of cor. of secs.
 14, 15, 22 and 23.
 Thence
 S. 89° 57' W. on a true line bet. secs. 15 and 22, (Navajo
 Co Indian Res. Bdy.)
 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 15
 $\frac{1}{4}$ S 22
 1916

and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high,
 N. of cor.
 54.80 Wash, course NE.
 61.80 Road brs. NW. and SE.
 80.30 The cor. of secs. 15, 16, 21 and 22.
 Land, rolling.
 Soil, untillable, rocky clay, 4th rate.
 No timber.

From the standard cor. of secs. 32 and 33, on S. Bdy. of Tp.,
 (7th. Std. Par. N.), described in Book "K,"
 N. 0° 3' W. bet. secs. 32 and 33.
 Over rolling and hilly land, on Coconino Rim.
 20.00 Wash, course SE.
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a
 mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$\frac{1}{4}$
 S32 | S33
 1916

and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high,
 W. of cor.

Subdivision of portion of T. 29 N., R. 8 E. 11

Chains
52.00
60.00
70.00
80.00

Wash, course E.
Wash, course E.
Wash, course E.
Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in a mound of stone, for cor. of secs. 28, 29, 32 and 33, mkd. on brass cap

T29N R 8E
S29|S28
S32|S33
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
Land, rolling.
Soil, untillable, rocky clay, 4th rate.
No timber.

40.00
79.92

East on a random line bet. secs. 28 and 33.
Set temp. ¼ sec. cor.
Intersect N. and S. line, 5 lks. S. of the cor. of secs. 27, 28, 33 and 34.

Thence
S. 89° 58' W. on a true line bet. secs. 28 and 33.
Over rolling and mountainous land.

37.00
39.96

Wash, course SE.
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., mkd. on brass cap

1/4 S 28
1/4 S 33
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.

50.00
79.92

Asc. 487 ft. to
The cor. of secs. 28, 29, 32 and 33.
Land, rolling and mountainous.
Soil, untillable, rocky, 4th rate.
No timber.

N. 0° 3' W. bet. secs. 28 and 29.
Over rolling and mountainous..

5.00
30.00
40.00

Wash, course E.
Wash, course SE.
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., mkd. on brass cap

1/4 S 28
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

61.00
80.00

Wash, course NE.
Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in a mound of stone, for cor. of secs. 20, 21, 28 and 29, mkd. on brass cap

T29N R 8E
S20|S21
S29|S28
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

12

Subdivision of portion of T. 29 N. R. 8 E.

Chains

Land, rolling and mountainous.
Soil, untillable, rocky clay, 4th rate.
No timber.

40.00 East on a random line bet. secs. 21 and 28.
79.94 Set temp. $\frac{1}{4}$ sec. cor.
Intersect N. and S. line, 16 lks. S. of cor. of secs.
21, 22, 27 and 28.

Thence
39.97 S. $89^{\circ} 53'$ W. on a true line bet. secs. 21 and 28.
Over rolling land.
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 21
 $\frac{1}{4}$ S 28
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.
66.00 Wash, course SE.
79.94 The cor. of secs. 20, 21, 28 and 29.
Land, rolling.
Soil, untillable, rocky clay, 4th rate.
No timber.

25.00 N. $0^{\circ} 3'$ W. bet. secs. 20 and 21.
40.00 Over rolling and mountainous land.
Wash, course E.
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a
mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$\frac{1}{4}$
S20 | S21
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
W. of cor.
45.00 Wash, course E.
55.00 Wash, course E.
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in a
mound of stone, for cor. of secs. 16, 17, 20, and 21,
mkd. on brass cap

T29N R 8E
S17 | S16
S20 | S21
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high,
W. of cor.
Land, rolling and mountainous.
Soil, untillable, rocky clay, 4th rate.
No timber.

40.00 East on a random line bet. secs. 16 and 21.
80.20 Set temp. $\frac{1}{4}$ sec. cor.
Intersect N. and S. line, 14 lks. S. of cor. of secs.
15, 16, 21 and 22.
Thence
S. $89^{\circ} 54'$ W. on a true line bet. secs. 16 and 21, (Navajo
Indian Reservation Bdy.), Over rolling land.

Subdivision of portion of T. 29 N., R. 8 E. 13

Chains
49.10

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 16
S 21
1916

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

65.20
80.20

Wash, course SE.
The cor. of secs. 16, 17, 20 and 21.
Land, rolling.
Soil, untillable, rocky, clay, 4th rate.
No timber.

20.00
40.00

From the standard cor. of secs. 31 and 32, on S. bdy. of Tp., (7th. Std. Par. N.), described in Book "K," N. $0^{\circ} 3'$ W. bet. secs. 31 and 32.

Over mountainous land.
Asc. SW. slope, 316 ft. to Top of ascent. Thence over rolling land.
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for $\frac{1}{4}$ sec. cor., mkd. on brass cap

$\frac{1}{4}$
S31 | S32
1916

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

45.00
49.00
58.00
65.00
80.00

Desc. 69 ft. to Wash, course E. Asc. 98 ft. to Desc. 85 ft. to Wash, course E.
Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in a mound of stone, for cor. of secs. 29, 30, 31 and 32, mkd. on brass cap

T29N R. 8E
S30 | S29
S31 | S32
1916

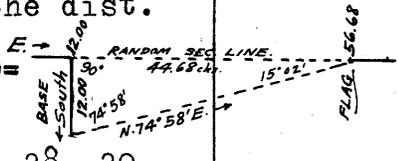
and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, W. of cor.

Land, mountainous, and rolling.
Soil, untillable, rocky, 4th rate.
Timber, scattering scrub pine timber.

12.00

East on a random line bet. secs. 29 and 32. Series of cliffs impossible to chain over. To determine the distance across, proceed as follows: From this point lay off a base, 12 chs. long, to the south, from the south extremity of which, a flag on line to the east brs, N. $74^{\circ} 58'$ E. and the dist. across is

$\tan 74^{\circ} 58' \times 12.00$ or $3.72338 \times 12.00 = 44.68$ chs. which added to 12.00 =



56.68
79.88

Set temp. witness cor. to $\frac{1}{4}$ sec. cor.
Intersect E. line, at the cor. of secs. 28, 29, 32 and 33.
Thence West on a true line bet. secs. 29 and 32. Over mountainous land. Desc. 33 ft. to

14 Subdivision of portion of T. 29 N., R. 8 E.

Chains

11.00 Wash, course SE. Asc. 73 ft. to
23.20 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for witness cor. to 1/4 sec. cor., mkd. on brass cap

WC 1/4 S 29
S 32
1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Ascend 118 ft. to

30.00 Thence ascend over SE. slope, over cliffs, to
39.94 True point for 1/4 sec. cor. inaccessibles to

69.90 Wash, course SE.
79.88 The cor. of secs. 29, 30, 31 and 32.
Land, mountainous.
Soil, rocky, 4th rate.
No timber.

40.00 West on a random line bet. secs. 30 and 31.
Set temp. 1/4 sec. cor.
79.90 Intersect W. bdy. of Tp., 10 lks. N. of cor. of secs. 25, 30, 31 and 36, later changed under Group 67 to cor. of secs. 30 and 31, as hereinbefore described.
N. 89° 56' E. on a true line bet. secs. 30 and 31,
Over mountainous land.

5.00 Wash, course N. Asc. 46 ft. to
10.00 Thence over rolling land.
30.00 Desc. gradual rocky slope to
39.90 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for 1/4 sec. cor., mkd. on brass cap

1/4 S 30
S 31
1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

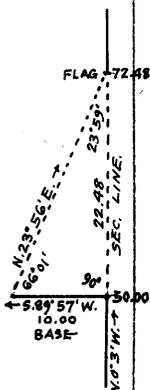
47.00 Wash, course N.
57.00 Wash, course N. Asc. rocky NW. slope to
65.00 Wash, course N. Asc. 35 ft. to
69.00 Thence over top of rolling ridge bearing NE. and SW.
75.00 Desc. 46 ft. to
79.90 The cor. of secs. 29, 30, 31 and 32.
Land, mountainous.
Soil, rocky clay, 4th rate.
No timber.

N. 0° 3' W. bet. secs. 29 and 30.
Over mountainous land.
6.00 Desc. N. slope, 303 ft. to
20.00 Foot of descent. Thence over rolling & rocky land.
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for 1/4 sec. cor., mkd. on brass cap

S 30 1/4 S 29
1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

50.00 S. edge of canyon course E. Impossible to chain over.
To determine distance across, from this point lay off a base, 100.00 chs. long, S. 89° 57' W. from the south extremity of which, a flag set on line on the north bank of the canyon brs. N. 23° 56' E.



Subdivision of portion of T. 29 N., R. 8 E. 15

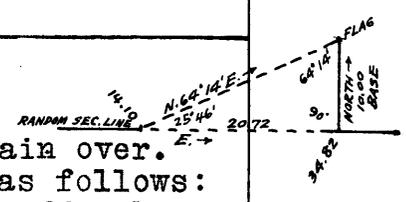
Chains

72.48 cot. 239 59' X 10.00 or 2.24780 X 10.00 = 22.48 chs.
 80.00 which added to 50.00 chs. =
 N. edge of canyon, course E. Continue measurement by chaining.
 Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in a mound of stone, for cor. of secs. 19, 20, 29 and 30, mkd. on brass cap

#29N R 8E
 S19|S20
 S30|S29
 1916.

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
 Land mountainous.
 Soil, untillable, rocky clay 4th rate.
 No timber.

14.10 East on a random line bet. secs. 20 and 29.
 Cliffs along steep descent, impossible to chain over.
 To determine the distance across, proceed as follows:
 From a point on line E. of the cliffs, lay off a base, 10 chs. long to the north, the northern extremity of which brs. N. 64° 14' E. from this point (14.10) and the distance across is tan. 64° 14' X 10.00 or 2.06553 X 10.00 = 20.72 chs. which added to 14.10 chs. =



34.82 Foot of steep descent across cliffs, Continue measurement
 40.00 Set by chaining. cor.
 40.00 Set temp. ¼ sec. cor. line, 7 lks. S. of cor. of secs. 20, 21, 28 and
 79.82 Intersect N. and S. line, 7 lks. S. of cor. of secs. 20, 21, 28 and 29. Thence,

S. 89° 57' W. on a true line bet. secs. 20 and 29.
 Over mountainous land.
 Asc. E. slope, 461 ft. to
 Spur slopes S. Desc. SW. slope, 162 ft. to
 25.00 Canyon, course S.
 33.10 Canyon, course SE.
 38.60
 39.91 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for ¼ sec. cor., mkd. on brass cap

¼ S 20
 S 29
 1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.
 45.00 Cliffs bear NW. and SE. Asc. 408 ft. to
 65.72 Top of cliffs. bear NE. and SW. Thence desc. 120 ft. over broken SW. slope to
 79.82 The cor. of secs. 19, 20, 29 and 30.
 Land, mountainous.
 Soil, untillable, rocky, 4th rate.
 No timber.

40.00 West on a random line bet. secs. 19 and 30.
 79.82 Set temp. ¼ sec. cor.
 Intersect W. bdy. of Tp., 12 lks. N. of cor. of secs. 19, 24, 25 and 30, later changed under Group 67 to cor. of secs. 19 and 30, as hereinbefore described. Thence N. 89° 55' E. on a true line bet. secs. 19 and 30.
 Over mountainous land.
 Asc. 34 ft. to
 5.90 Desc. 29 ft. to
 10.60 Desc. steep NE. slope, 428 ft. to
 30.00 Wash, course SE. Foot of desc. brs. NE. and SW. Asc. 231 ft. to

16 Subdivision of portion of T. 29 N., R. 8 E.

Chains

38.80 Ridge brs. N. and S. Desc. 69 ft.
39.82 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for 1/4 sec. cor., mkd. on brass cap

1/4 S 19
S 30
1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

45.00 Foot of desc. Asc. SW. slope, 220 ft. to
60.00 Desc. 108 ft. to
70.00 Wash, course SE. Desc. 30 ft. to
78.00 Wash, course NE. Desc. 85 ft. to
79.82 The cor. of secs. 19, 20, 29 and 30.

Land, mountainous.
Soil, rocky, 4th rate.
No timber.

N. 0° 3' W. bet. secs. 19 and 20
Over mountainous land.

3.00 Asc. S. slope, 152 ft. to
19.00 Desc. 192 ft. to
25.00 Wash, course E. Asc. 229 ft. to
40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in a mound of stone, for 1/4 sec. cor., mkd. on brass cap

1/4 S19 | S20
1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

78.00 Asc. 416 ft. to
80.00 Top of asc. brs. E. and W.
Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in a mound of stone, for cor. of secs. 17, 18, 19 and 20, mkd. on brass cap

T29N R 8E
S18 | S17
S19 | S20
1916

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

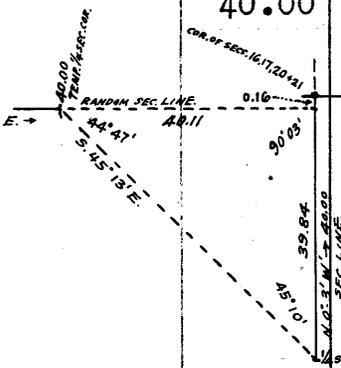
Land, mountainous.
Soil, untillable, rocky clay, 4th rate.
No timber.

40.00 East on a random line bet. secs. 17 and 20.
Set temp. 1/4 sec. cor.

Remainder of mile lies over rocky cliffs, difficult to survey, therefore to determine the distance across proceed as follows:

From this temp. 1/4 sec. cor., the cor. of secs. 16, 17, 20 and 21 is plainly visible; also the 1/4 sec. cor. of secs. 20 and 21. From this point the 1/4 sec. cor. of secs. 20 and 21 brs. S. 45° 13' E. and the falling at the section cor. is 16 lks. S. Included angles of the triangle are 44° 47', 90° 03' and 45° 10', the sum of which is 180° 00'. Dist. on random sec. line projected is found by $\frac{\text{side } 45^\circ 10' \times 39.84}{\text{side } 44^\circ 47'}$ or

80.11 $\frac{70916 \times 39.84}{75423} = 40.11$ chs. which added to 40.00 chs. = 80.11 chs.
Intersect N. and S. line, 16 lks. S. of cor. of secs. 16, 17, 20 and 21.



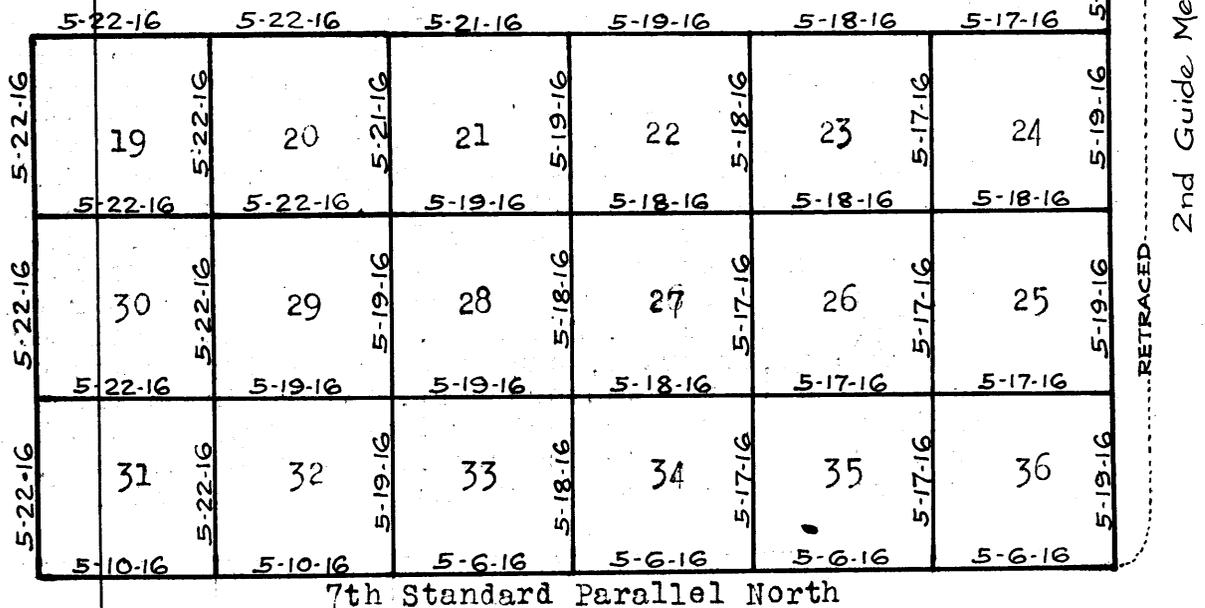
Boundaries of the S. half of T. 29 N., R. 8 East.
Latitudes, departures, and closing errors.

Line designated.	True course.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
South bdy., (7th. Std. Par. N.)	West,	480.00				480.00
West boundary,	North,	240.00	240.00			
Subdivisional boundary.	N. 89° 57' E.	79.70	.07		79.70	
	N. 89° 53' E.	80.11	.16		80.11	
	N. 89° 54' E.	80.20	.24		80.20	
	N. 89° 57' E.	80.30	.07		80.30	
	S. 89° 58' E.	80.18		.05	80.18	
	S. 89° 56' E.	80.02		.09	80.02	
East boundary (2nd. G. M. E.)	South,	240.00		240.00		
Convergency,					.26	
Totals,			240.44	240.14	480.77	480.00
			240.14		480.00	
Error in latitude,			0.30			
Error in departure,					0.77	

GROUP 66-ARIZONA,
Township 29 North, Range 8 East.

DATE DIAGRAM.

NAVAJO INDIAN RESERVATION



Lines run by Surveyor Johnston on dates shown above.

Lines run by Transitman Inch on dates shown above.

CERTIFICATE OF UNITED STATES ~~SURVEYOR~~

Philip L. Inch, U.S. Transitman

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

of special instructions received from the U. S. Surveyor General, for Group 66, Arizona,

bearing date of the 4th day of January, 1916, 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, ~~surveyed~~ retraced all those parts or portions of the

Second Guide Mer. East, through part of Township 29 North, and surveyed

All those parts or portions of the Subdivision lines of

TOWNSHIP 29 NORTH, RANGE 8 EAST,

of the Gila and Salt

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

and by diagram on page 13 hereof

the foregoing field notes, as having been executed by me, and under my direction; and that all the corners of

retracement 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 66, Arizona,

and in the specific manner described in the field notes, and that the foregoing are the original field notes of

such retracement & survey.

Philip L. Inch

U.S. Surveyor
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.

BOOK 3271 CERTIFICATE OF UNITED STATES SURVEYOR.

I, Theodore O. Johnston, U. S. Surveyor, hereby certify upon honor that, in pursuance of special instructions received from the U. S. Surveyor General, for Group 66, Arizona, bearing date of the 4th day of January, 1916, 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 West Boundary, and all those parts or portions of the Subdivision lines of

TOWNSHIP 29 NORTH, RANGE 8 EAST,

of the Gila and Salt

River Base & Meridian, in the State of Arizona, which are represented in and by diagram on page 13 hereof the foregoing field notes 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 U. S. Surveyor General, for Group 66, Arizona, and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Theodore O. Johnston U. S. Surveyor.

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Ariz. FEB 8, 1919.

The foregoing field notes of the retracement of the Second Guide Meridian East, through Township 29 North, and of the survey of a Portion of the West Boundary and of the Subdivision lines of

TOWNSHIP 29 NORTH, RANGE 8 EAST,

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

executed by Theodore O. Johnston, U.S.S. and Philip L. Inch, U.S.T. under his special instructions dated Jan. 4, 1916, for Gp. 66, Ariz., 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.