

3114

Book "A"

4-679

NOV. 21. 1916

(Standard Lines)

BOOK 3114

FIELD NOTES

OF THE SURVEY OF THE

FOURTH STANDARD PARALLEL North part of R. 12 W.

thru part of Range 12 West and

thru Ranges 15, 16, and 17 West;

OF THE RESURVEY OF THE

FOURTH STANDARD PARALLEL NORTH thru part of R. 13 W. and

thru Ranges 14 West;

AND OF THE RETRACEMENT OF THE

FOURTH STANDARD PARALLEL NORTH, thru part of R. 13 W. and
FIFTH STANDARD PARALLEL NORTH

thru PARTS of Ranges 14, 16 and 17 West

of the Gila and Salt River Base and Meridian,

In the State of Arizona

EXECUTED BY

FRED N. WARDWELL, U.S. Surveyor and

PHILIP L. INCH, HOWARD G. MASON AND MANS. H. COFFIN, JR.

U.S. Transitmen

~~In the capacity of U.S. Surveyor~~, under instructions dated Jan. 7 and 29, 1915,

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

Group No. 46, which were approved by the Commissioner of the General Land

Office, Jan. 22 and Feb. 6, 1915

Survey, Resurvey and
Retracement ~~Survey~~ commenced February 17, 1915

Survey, Resurvey and
Retracement ~~Survey~~ completed March 19, 1916

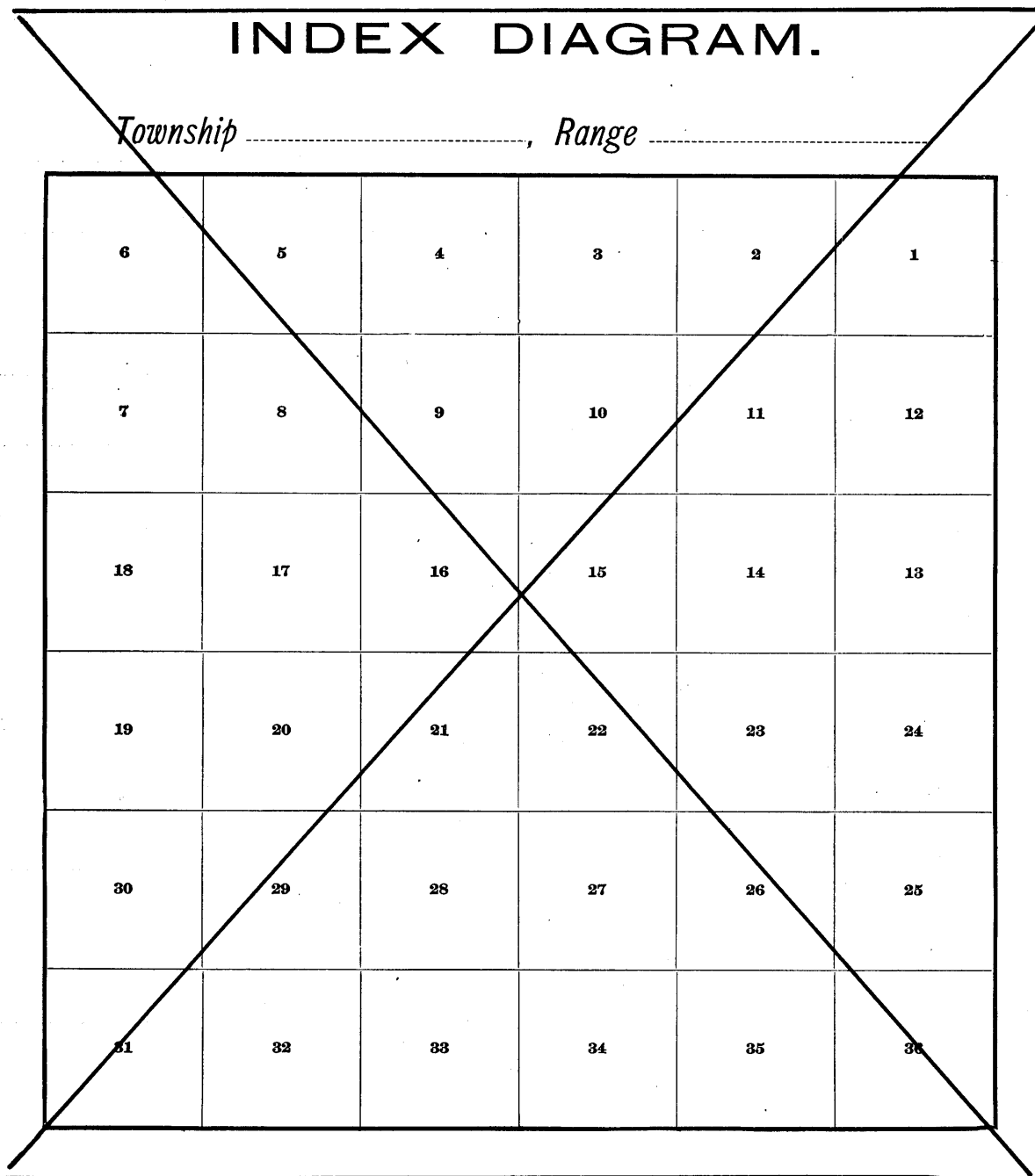
Executed under Assignment
Instructions dated Jan. 28, 1915 and Nov. 6, 1915.

3114

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Book "A"
Group 46 - Arizona.

SEE SPECIAL INDEX DIAGRAM.



GROUP NO 46 - ARIZONA

BOOK "A" 3114
INDEX-DIAGRAM
BOOK 3114

Standard Parallel North
5th Parallel North
4th Standard Parallel North

RETRACED 31
46 45 44 44

T. 20N. R. 17W. Subs. in book "N" 3127	T. 20N. R. 16W. Subs. in book "S" 3132	T. 20N. R. 15W. Subs. in book "R" 3131	T. 20N. R. 14W. Subs. in book "K" 3124	T. 20N. R. 13W.
T. 19N. R. 17W. Subs. in book "M" 3126	T. 19N. R. 16W. Subs. in book "P" 3129	T. 19N. R. 15W. Subs. in book "Q" 3130	T. 19N. R. 14W. Subs. in book "J" 3123	T. 19N. R. 13W.
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31 32 33 34 35 36
27 21 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 9 42 41 40 39 38 37 36 35 34 33 32 31 29 30 31 32 33 34 35 36 37 38 39 40 41 42
RESURVEYED
RETRACED
RET.

Standard lines surveyed under this group
Notes in this book 3114

Standard lines retraced or resurveyed under
this group. Notes in this book 3114

Township bdrs. resurveyed under
this group. Notes in book "B" 3115

Township bdrs. retraced or resurveyed under
this group. Notes in book "B" 3115

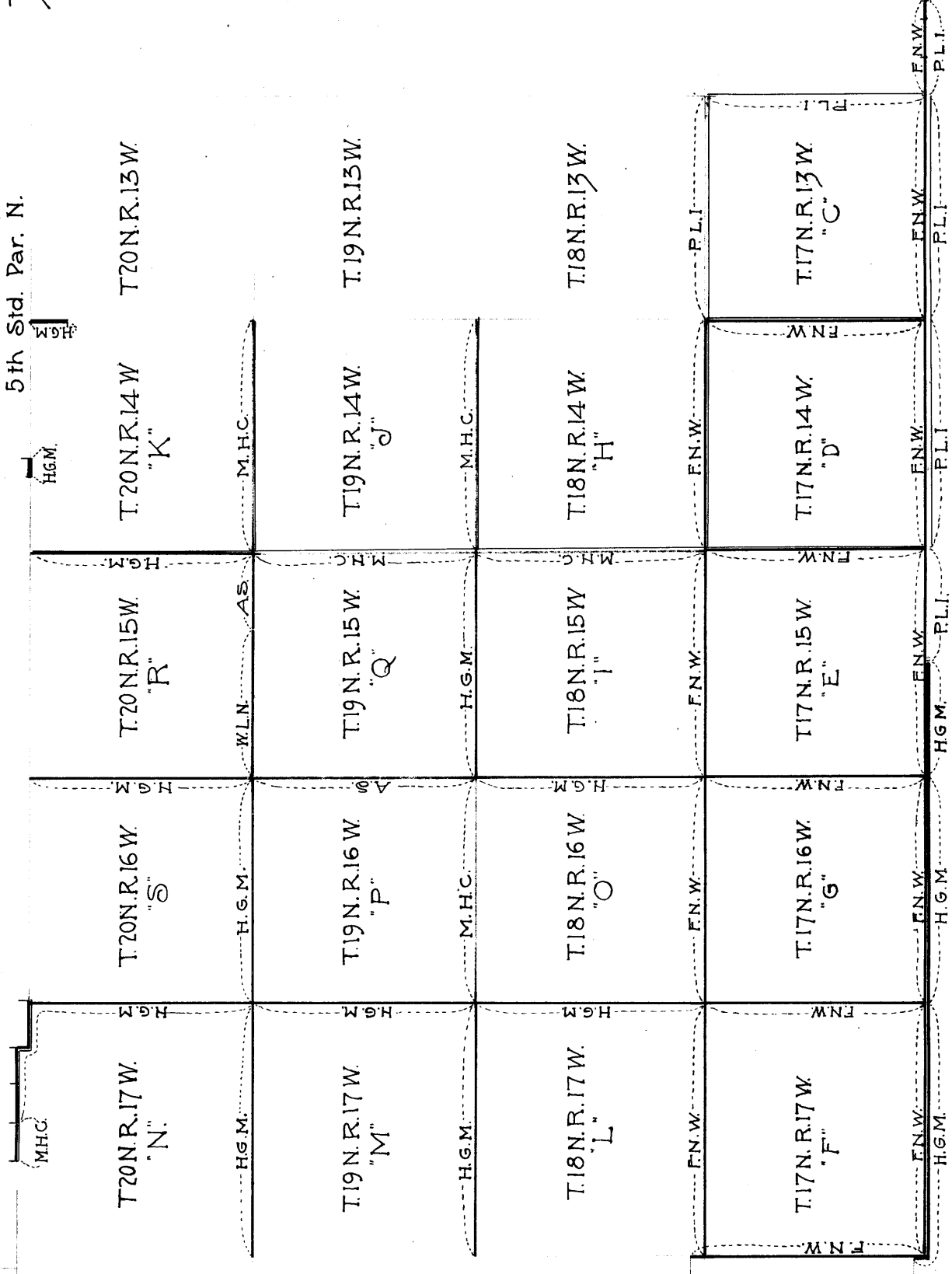
Accepted surveys.

Township bdrs. surveyed under current
group No. 41.

Township bdrs. surveyed under current
group No. 42.

Township bdrs. surveyed under current
group No. 50.

Red letters thus "C" indicate Subdivisional books of this Group



DIAGRAM

SHOWING THE RESPECTIVE SURVEYS, RETACEMENTS & RESURVEYS OF STANDARD LINES AND TOWNSHIP EXTERIORS EXECUTED BY EACH U.S. SURVEYOR AND U.S. TRANSITMAN UNDER INSTRUCTIONS FOR

GROUP No 46 ARIZONA

F.N.W.
SURVEY
F.N.W.
RETACEMENT OR RESURVEY

By FRED N. WARDWELL U.S. Surveyor

A.S.
SURVEY
A.S.
RETACEMENT OR RESURVEY

By ALBERT SMITH Jr. U.S. Surveyor

P.L.I.
SURVEY
P.L.I.
RETACEMENTS OR RESURVEY

By PHILIP L. LINCH U.S. Transitman

H.G.M.
SURVEY
H.G.M.
RETACEMENT OR RESURVEY

By HOWARD G. MASON U.S. Transitman

M.H.C.
SURVEY
M.H.C.
RETACEMENT OR RESURVEY

By MANS H. COFFIN Jr. U.S. Transitman

W.H.C.
SURVEY
W.H.C.
RETACEMENT OR RESURVEY

By WILLIAM L. NASH U.S. Transitman

BOOK 3114

3

4th Standard Parallel North

4

CERTIFICATES OF U. S. SURVEYORS AND TRANSITMEN.

We, the undersigned, hereby certify on honor that, in pursuance of special instructions received from the U. S. Surveyor General of Arizona, bearing date of January 7, 1915, we have well, faithfully and truly, in our own proper persons, and in strict conformity with said instructions, and the laws of the United States, surveyed all those parts or portions of

G R O U P 46, ARIZONA,

which are represented on the diagram on the reverse hereof as having severally been executed by us, and under our direction; and we do further certify on honor 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 Arizona, and in the specific manner described in our respective field notes.

Fred N. [Signature]
U. S. Surveyor.

Wass A. [Signature]
U. S. Transitman

William J. [Signature]
U. S. Transitman.

Robert Smith Jr.
U. S. Surveyor.

Philip L. [Signature]
U. S. Transitman.

Howard E. [Signature]
U. S. Transitman.

U. S. Surveyor General.

Survey of 4th. Standard Parallel North, thru. part of Range 12 W. 5.

Chains.

DATE DIAGRAM.

31	32	33
2-17-15	2-18-15	2-18-15
2-17-15	2-18-15	2-18-15

Lines dated in red surveyed by Fred N. Wardwell, U. S. Surveyor.

Lines dated in green surveyed by Philip L. Inch, U. S. Transitman.

Survey executed jointly by Fred N. Wardwell, U. S. Surveyor, and Philip L. Inch, U. S. Transitman, on dates shown on above diagram, under Assignment Instructions for Group 46, dated January 28, 1915, with Young and Sons' transits, Nos. 8481 and 8389, respectively, with Smith solar attachments. The instruments were tested on a meridian determined by Polaris observation following the execution of the work, and found to be in good adjustment.

From standard cor. of Ts. 17 N., Rs. 12 and 13 W. (reestablished in 1911) a 3 in. iron post, with brass cap, marked and witnessed as described by the surveyor general,

East, on a true line, on the S. bdy. of sec. 31.

Over rolling land.

0.95 Intersect 2 in. iron post, with brass cap, marked for closing cor. of secs. 22 and 23, T. 16 $\frac{1}{2}$ N., R. 13 W.

37.00 Wash, course S.

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

By 1st set, 40.01 chs.,

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

40.00m Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for standard $\frac{1}{4}$ sec. cor., with a brass cap,

6. 4th. Standard Parallel North, thru. part of Range 12 West.

Chains.

marked

$$\frac{1}{4} \frac{\begin{array}{c} S C \\ S 31 \end{array}}{1915}$$

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

55.00 Wash, course SW. Ascend.

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 252 ft. above wash, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for standard cor. of secs. 31 and 32, with a brass cap, marked

$$\frac{\begin{array}{c|c} S & C \\ \hline T17N & R12W \\ S31 & S32 \end{array}}{1915}$$

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

Land, rolling, mountainous.

Soil, stony and sandy, 2nd rate.

Undergrowth, palo verde, catclaw, white sage and cacti.

East, on a true line, on the S. bdy. of sec. 32.

Over rolling, mountainous land.

12.40 Spur, slopes SW.; descend SE. slope.

29.87 Enter wash, course SW.

38.00 Leave wash, banks 2 ft. high; ascend.

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

By 1st set. 40.02 chs.,

By 2nd set, 39.98 chs., the mean of which is

40.00 40 ft. above wash, set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for standard $\frac{1}{4}$ sec. cor., with brass cap, marked

$$\frac{1}{4} \frac{\begin{array}{c} S C \\ S 32 \end{array}}{1915}$$

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

44.25 Wash, course SW. Ascend.

Survey of 4th. St. Par. N., through part of R.12 W.3 7

Chains
 54.50 Top of spur, slopes S. 60° W., 290 ft. above 1/4 sec. cor.
 62.90 Top of same spur, slopes N. 80° W.
 72.35 Top of same spur, slopes S. 80° W., desc.

No difference between 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 St. cor. of secs. 32 and 33, with a brass cap, marked

S C	
T 17 N	R 12 W
S 32	S 33

1915

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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, palo verde, cacti, Spanish dagger and white sage.

 East on a true line on the S. bdy. of sec. 33.
 Over rolling land.

1.35 Closing corner of Ts. 16 1/2 N., Rs. 12 and 13 W., established under current Group No. 41, brs. N. 26 lks. from this point.

This corner is an iron post, 3 ft. long, 3 ins. in diam., 12 ins. above ground, with brass cap, marked

T 17 N	R 12 W
S 32	S 33
C C	
S 24	S 19
R 13 W	R 12 W
T 16 1/2 N.	

1911

with a mound of stone, 3 ft. base, 2 ft. high, S. of cor. Move this cor. S. 26 lks. to line, where I reset it; and also move the mound of stone S. of cor. as formerly placed.

Continue line and measurement,

14.20 Draw, course SW.

No difference between measurements of 40.00 chs. by two sets of chainmen.

Chains
40.00

Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for St. $\frac{1}{4}$ sec. cor., with a brass cap, marked

S C
1/4 S 33

1915

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

Land, rolling.

Soil, stony, 3rd. rate.

Undergrowth, palo verde, cat claw and cacti.

Feb. 18, 1915

Survey of 4th. Standard Parallel North, thru. Range 15 West. 9.

Chains.

DATE DIAGRAM.

31	32	33	34	35	36
4-7-15	4-7-15	4-7-15	3-31-15	3-31-15	3-30-15
4-7-15	4-7-15	4-7-15	3-31-15	3-31-15	3-30-15

Lines dated in red surveyed by Fred N. Wardwell, U. S. Surveyor.

Lines dated in green surveyed by Philip L. Inch, U.S. Transitman.

Lines dated in blue were surveyed by Howard G. Mason, U.S. Transitman.

Survey executed jointly by Fred N. Wardwell, U. S. Surveyor

and Philip L. Inch, and Howard G. Mason, U. S. Transitmen, on dates shown

on above diagram, under Assignment Instructions for

Group 46, dated Jan. 28, 1915. The instruments used

are Young and Sons' transits, Nos. 8481 and 8389, re-

spectively, with Smith solar attachments, which were

tested on a meridian established by Polaris observation,

and found to be in good adjustment.

From reestablished standard cor. of Tps. 17 N., Rs. 14 and 15 W., hereinafter described,

West, on a true line on the S. bdy. of sec. 36.

Over rolling, mountainous land; descend W. slope.

8.26 Gulch, course N. 10° E., 180 ft. below sec. cor.; ascend.

12.00 Top of spur, slopes N. 15° W., about 15 chs., 90 ft. above gulch; descend.

14.10 Creek, 1 lk. wide, course N., 53 ft. below top of spur; ascend.

23.33 Road, brs. N. and S., Yucca to Cedar.

26.70 Top of spur, slopes N., about a half mile, 140 ft. above creek; descend.

Difference between measurements of 40.00 chs. by two sets of chainmen is 3 lks.; position of middle point

10. Fourth Standard Parallel North, through Range 15 West.

Chains.

By 1st set, 40.01½ chs.,

By 2nd set, 39.98½ chs., the mean of which is

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground, for standard ¼ sec. cor., with a brass cap, marked

	S	C
¼	S	36
1915		

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

44.76 Creek, 2 lks. wide, course N., 350 ft. below top of spur.

50.45 Road brs. N. and S., Yucca to Cedar; descend.

53.42 Wash, course N., 15°W., 287 ft. below road.

55.97 Same road brs. NW. and SE.; ascend.

57.55 Top of spur, slopes N., 85 ft. above road; descend.

59.43 Same road brs. NE. and SW.

66.45 Same road brs. N. and S.

67.76 Creek, 8 lks. wide, head of Deluge Wash, course N., 148 ft. below top of spur; ascend.

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

By 1st set, 80.01 chs.

By 2nd set, 79.99 chs., the mean of which is

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for standard cor. of secs. 35 and 36, with a brass cap, marked

	S	C
T 17N	R	15W
S35	S36	
1915		

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

Land, rolling, mountainous.

Soil, stony and gravelly, 3rd rate.

Undergrowth, scrub oak, palo verde, bear grass, laurel and catclaw.

Chains	West on a true line on the S. bdy. of sec. 35. Over mountainous land, through dense undergrowth.
14.07	Creek, 3 lks. wide, course N. 70° E., asc. Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks., position of middle point By 1st. set, 40.03 chs. By 2nd. set, 39.97 chs.; the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for St. 1/4 sec. cor., with a brass cap, marked <div style="text-align: center;"> S C <u>1/4 S 35</u> 1915 </div> and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.
41.00	Top of spur, slopes S., 325 ft. above creek, desc.
49.35	Gulch, 10 lks. wide, course S. 60° W., 55 ft. below top of spur, asc. No difference between measurements of 80.00 chs. by two sets of chainmen.
80.00	457 ft. above gulch, set an iron post, 3 ft. long, 3 ins. in diam., 8 ins. in the ground to solid rock, in a mound of stone for ST. cor. of secs. 34 and 35, with a brass cap, marked <div style="text-align: center;"> S C T 17 NR 15 W <u>S 34 S 35</u> 1915 </div> and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor. Land, mountainous. Soil, gravelly and stony with decomposed granite, clay sub soil, 3rd. rate. Undergrowth, scrub oak, cat claw and laurel.
2.50	Asc. over rough mountainous land. Spur slopes NE.; continue ascent to
12.00	Top of spur, slopes NE., 215 ft. above sec. cor., desc.

Chains	
19.53	Gulch, course N. 15° W., 65 ft. below top of spur, ascend.
35.06	Creek, 3 lks. wide, course NE., 300 ft. below gulch, asc. Difference in measurements of 40.00 chs. by two sets of chainmen is 4 lks., position of middle point By 1st. set, 40.02 chs. By 2nd. set, 39.98 chs., the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for St. 1/4 sec. cor., with a brass cap, marked $\begin{array}{c} S C \\ \hline 1/4 S 34 \end{array}$ 1915 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.
45.77	Top of spur, slopes NE., 200 ft. above creek, desc.
46.02	Burch or Granite peak, bears N. 6° E., and Waldron or Diamond Joe peak bears N. 68° 30' E.
56.80	Gulch, 20 lks. wide, course N., 278 ft. below top of spur, asc.
62.70	Top of spur, slopes N., 180 ft. above gulch, desc.
73.48	Gulch, 20 lks. wide, course N. 15° E., asc. Difference between measurements of 80.00 chs. by two sets of chainmen is 8 lks., position of middle point By 1st. set, 80.04 chs. By 2nd. set, 79.96 chs.; the mean of which is
80.00	286 ft. above gulch, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for St. cor. of secs. 33 and 34, with a brass cap, marked $\begin{array}{c} S C \\ T 17 N R 15 W \\ \hline S 33 S 34 \end{array}$ 1915 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. This cor. is under the E. side of a large conglomerate boulder. Land, rough mountainous.

Fourth Standard Parallel N., through R. 15 W.

Chains Soil, gravelly, stony and rocky, 3rd. rate.
 Undergrowth, scrub oak, manzanita, laurel and snow brush.

 West on a true line on the S. bdy. of sec. 33
 Asc. over rough mountainous land, through dense undergrowth.

-3.80 Old road to Yucca, brs. N. 15° W. and S. 15° E.
 9.82 Summit of Hualpai mountain range, bears N. 15° W. and S. 15° E., 136 ft. above sec. cor., desc. W. slope of mts. into Sacramento valley.

26.82 Head of Cottonwood gulch, 10 lks. wide, course N. 60° W., 670 ft. below summit of mountain range.
 Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks., position of middle point
 By 1st. set, 40.01 chs.
 By 2nd. set, 39.99 chs.; the mean of which is

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 20 ins. in the ground to solid rock, in a mound of stone, for St. 1/4 sec. cor., with a brass cap, marked

S C
1/4 S 33

1915

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

55.72 Top of spur, slopes N. 15° W., 216 ft. above 1/4 sec. cor., desc.

59.25 Gulch, course N., 162 ft. below top of spur, asc.

69.25 Top of spur, slopes NW., 230 ft. above gulch, desc.

79.20 Ravine, course N. 15° W., 290 ft. below top of spur.

Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks., position of middle point

By 1st. set, 79.95 chs.

By 2nd. set, 80.05 chs.; the mean of which is

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

S C
 T 17 N | R 15 W
S 32 | S 33

1915

Chains

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

Land, rough mountainous.

Soil, gravelly and stony, clay subsoil, 3rd. rate.

Undergrowth, scrub oak, manzanita, laurel and cat claw.

West on a true line on the S. bdy. of sec. 32.

Asc. over mountainous land, through dense undergrowth.

19.30 Top of spur, slopes NW., 53 ft. above sec. cor., desc.

No difference between measurements of 40.00 chs. by two sets of chainmen.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground to solid rock, in a mound of stone, for St. 1/4 sec. cor., with a brass cap, marked

S C
1/4 S 32

1915

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

51.39 Gulch, 20 lks. wide, course N., 337 ft. below top of spur, asc.

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

By 1st. set, 80.04 chs.

By 2nd. set, 79.96 chs.; the mean of which is

80.00 420 ft. above gulch, set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground to solid rock, in a mound of stone for St. cor. of secs. 31 and 32, with a brass cap, marked

S C
T 17 N | R 15 W
S 31 | S 32

1915

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

Land, rough mountainous.

Soil, gravelly and stony, 3rd. rate.

Undergrowth, scrub oak, manzanita, laurel and palo christe.

Chains.

West, on a true line on the S. bdy. of sec. 31.
Ascend over rough, mountainous land, through dense undergrowth.

11.70 Top of ridge, brs. N. 60° W. and S. 60° E., 87 ft. above sec. cor.; descend.

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

By 1st set, 40.02 chs.,

By 2nd set, 39.98 chs., the mean of which is

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground to solid rock, in a mound of stone, for standard 1/4 sec. cor., with a brass cap, marked

1/4 S C
 S 31

 1915

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

66.53 Dry wash, 30 lks. wide, course N. 75° W.; 1342 ft. below top of ridge; thence over rolling land.

Difference between measurements of 80.00 chs. by two sets of chainmen is 10 lks., position of middle point

By 1st set, 79.95 chs.

By 2nd set, 80.05 chs., the mean of which is

80.00 Set an iron post 3 ft. long, 3 ins. in diam., on top of large boulder, in a mound of stone for cor. of Ts. 17 N., Rs. 15 and 16 W., with a brass cap, marked

 S C
 T 17 N
 R 16 W R 15 W
 S 36 | S 31

1915

and raise a mound of stone, 3 ft. base, 2 1/2 ft. high, N. of cor.

Land, rough, mountainous.

Soil, stony, 3rd rate.

Undergrowth, scrub oak, palo christe, laurel, Spanish dagger and cacti.

DATE DIAGRAM.

31	32	33	34	35	36
4-8-15	4-8-15	4-8-15	4-8-15	4-8-15	4-8-15
4-8-15	4-8-15	4-8-15	4-8-15	4-8-15	4-8-15

Lines dated in red surveyed by Fred N. Wardwell, U. S. Surveyor.

Lines dated in blue surveyed by Howard G. Mason, U.S. Transitman.

Survey executed jointly by Fred N. Wardwell, U. S. Surveyor, and Howard G. Mason, U. S. Transitman, on dates shown on above diagram, under assignment instructions for Group 46, dated January 28, 1915. The instruments used are Young and Sons' transits Nos. 8481 and 8389 respectively, with Smith solar attachments, which are kept in adjustment by repeated tests on a meridian established by Polaris observation.

From the standard corner of Ts. 17 N., Rs. 15 and 16 W., I adopt the bearing to reference point of S. 56° 43' E. as obtained by direct solar observation, for working purposes,

West, on a tangent line, south of sec. 36.

Descend over mountainous land, through dense undergrowth.

17.90 Leave mountainous land; enter rolling, brs. N. and S., 240 ft. below sec. cor.

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

By 1st set, 40.01 chs.

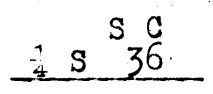
By 2nd set, 39.99 chs., the mean of which is

40.00 N. $\frac{1}{2}$ lk. from tangent, set an iron post 3 ft. long, 1 in. in diam., 6 ins. in the ground to solid rock, in a

Fourth Standard Parallel North through Range 16 West. 17

Chains.

mound of stone for standard $\frac{1}{4}$ sec.cor., with a brass cap, marked



1915

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

50.80 Center of dry wash, 120 lks.wide, course S. 15° W.

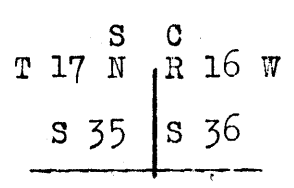
70.00 Leave rolling, enter mountainous land, bears N. and S.; ascend.

74.95 Top of spur, slopes S. about 10 chs., 46 ft. ascent; desc. Difference between measurements of 80.00 chs. by two sets of chainmen is 4 lks.; position of middle point

By 1st set, 80.02 chs.

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

80.00 N. 1 lk., from tangent, 78 ft. below top of spur, set an iron post 3 ft.long, 3 ins. in diam., on surface rock, in a mound of stone, for standard cor.of secs. 35 and 36, with a brass cap, marked



1915

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

Land, rolling, and rolling mountainous.

Soil, gravelly and stony, surface layer of decomposed granite over clay subsoil, 3rd rate.

Undergrowth, ocatillo, palo verde, palo christe, Spanish dagger and cacti.

S.89° 59'W., on a tangent south of sec. 35.

Ascend over rolling, mountainous land.

18. ~~Fourth Standard Parallel North, through Range 16 West~~
Chains.

- 14.95 Top of rock point, projects south.
- 26.85 Top of ridge, brs. NE. and SW., 240 ft. above sec.cor.
- 28.83 Top of small chimney rock; descend.

Difference between measurements of 40.00 chs. by two sets of chainmen is 6 lks.; position of middle point

By 1st set, 40.03 chs.,

By 2nd set, 39.97 chs., the mean of which is

- 40.00 North 2 lks. from tangent, set an iron post 3 ft. long, 1 in. in diam., 8 ins. in the ground to solid rock, in a mound of stone, for standard $\frac{1}{4}$ sec.cor., with a brass cap, marked

S C

$\frac{1}{4}$ S 35

1915

and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor., 238 ft. below top of spyr.

Leave mountainous, enter rolling land, brs. N. and S.

- 73.50 Wash, course NW., small.

No difference between measurements of 80.00 chs. by two sets of chainmen.

- 80.00 N. 3 lks. from tangent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for standard cor. of secs. 34 and 35, with a brass cap, marked

S C

T 17 N | R 16 W

S 34 | S 35

1915

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

Land, rolling, mountainous.

Soil, 1st half mile, stony, 3rd rate; 2nd half mile, sandy, 2nd rate.

Undergrowth, ocatillo, yucca palm, palo christe and cacti.

Fourth Standard Parallel North, through Range 16 West. 19

Chains.

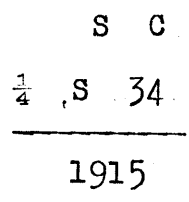
S.89°59'W., on a tangent line, S. of sec. 34.
Over slightly rolling land, through dense undergrowth, in Sacramento Valley.

6.00 Center of dry wash, 1 ch. wide, course S. 60°W.

26.00 Dry wash, 10 lks.wide, course SW.

No difference between measurements of 40.00 chs. by two sets of chainmen.

40.00 North 4 lks.from tangent, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for standard $\frac{1}{4}$ sec. cor., with a brass cap, marked



dig pits 18x18x12 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:

45.00 Enter gulch, 1 ch. wide, course W. from NE.

49.00 Leave gulch, course SW.

56.50 Gulch, 25 ft. deep, course SW.

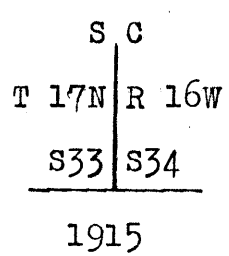
74.10 Dry wash, 10 lks.wide, course S. 80°W.

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

By 1st set, 80.01 chs.

By 2nd set, 79.99 chs., the mean of which is

80.00 North 6 lks.from tangent, set an iron post 3 ft.long, 3 ins. in diam., 24 ins. in the ground for standard cor.of secs.33 and 34, with a brass cap, marked



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

Land slightly rolling.

20. Fourth Standard Parallel North, through Range 16 West.

Chains.

Soil, sandy loam and gravel, 2nd rate.

Undergrowth, yucca palm, ocotillo, palo christe and cacti.

S. $89^{\circ} 58' W.$, on a tangent line, S. of sec. 33.

Over rolling land, through dense undergrowth.

3.80 Dry wash, 15 lks. wide, course S. $60^{\circ} W.$

23.80 Dry wash, 20 lks. wide, course SW.

No difference between measurements of 40.00 chs. by two sets of chainmen.

40.00 North 8 lks. from tangent, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for standard cor. $\frac{1}{4}$ sec. cor., with a brass cap, marked

S C
$\frac{1}{4}$ S 33

 1915
and raise a mound of stone 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.56.80 Dry wash, 10 lks. wide, course S. $70^{\circ} W.$ 68.30 Dry wash, 15 lks. wide, course S. $60^{\circ} W.$

No difference between measurements of 80.00 chs. by two sets of chainmen.

80.00 North 11 lks. from tangent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for standard cor. of secs. 32 and 33, with a brass cap, marked

S C
T 17 N R 16 W
S 32 S 33

 1915
and raise a mound of stone, 2 ft. base, $1\frac{1}{2}$ ft. high, N. of cor.

Land, slightly rolling.

Soil, sandy loam, mixed with surface gravel, 2nd rate.

Undergrowth, yucca palm, catclaw, palo christe, greasewood and ocotillo.

Chains S. 89° 57 $\frac{1}{2}$ ' W. on a tangent line, S. of sec. 32. of sec. 32.

Over rolling land, through dense undergrowth.

2.50 Dry wash, 28 lks. wide, course S. 60° W.

9.00 Dry wash, 5 lks. wide, course S. 80° W.

22.20 Dry wash, 8 lks. wide, course S. 60° W.

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

By 1st. set, 40.01 chs.

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

40.00 N. 14 lks. from tangent, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for St. $\frac{1}{4}$ sec. cor., with a brass cap, marked

S C
1/4 S 32

1915

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

40.70 Dry wash, 20 lks. wide, course S.

45.20 Same wash, course N. 80° W.

49.00 Same wash, course S.

55.70 Dry wash, 25 lks. wide, course SW.

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

By 1st. set, 80.03 chs.

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

80.00 N. 18 lks. from tangent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for St. cor. of secs. 31 and 32, with a brass cap, marked

S C
T 17 N | R 16 W
S 31 | S 32

1915

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

Land, slightly rolling.

Soil, gravelly and sandy loam, 2nd. rate.

Undergrowth, ocotillo, yucca, greasewood and challa.

Fourth Standard Parallel N., through R. 16 W.

Chains S. 89° 57' W. on a tangent line S. of sec. 31.
 Over slightly rolling land, through dense undergrowth.
 No difference between measurements of 40.00 chs. by two sets of chainmen.

40.00 N. 21 lks. from tangent, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for St. 1/4 sec. cor., with a brass cap, marked

S C
1/4 S 31

1915

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

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

By 1st. set, 80.01 chs.

By 2nd. set, 79.99 chs.; the mean of which is

80.00 N. 25 lks. from tangent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for St. cor. of Tps. 17 N., Rs. 16 and 17 W., with a brass cap, marked

S C
 T 17 N
 R 17 W | R 16 W
S 36 | S 31

1915

and dig pits 24 X 30 X 12 ins. crosswise on each line, E. and W., 4 ft. dist. and N. 8 ft. dist., and raise a mound of earth, 5 ft. base, 2 1/2 ft. high, N. of cor.

Land, slightly rolling.

Soil, sandy and gravelly loam, 2nd. rate.

Undergrowth, greasewood, ocotillo, cholla and yucca palms.

Apr. 6, 1910.

S. A. Sawyer.

XO

Survey of Fourth Stand Parallel North, through Range 17 West. 23

Chains.

DATE DIAGRAM.

	31	32	33	34	35	36
4-16-15	4-16-15	4-16-15	4-16-15	4-13-15	4-13-15	4-13-15
4-16-15	4-16-15	4-16-15	4-13-15	4-13-15	4-13-15	4-13-15

Lines dated in red surveyed by Fred N. Wardwell, U. S. Surveyor.

Lines dated in blue surveyed by Howard G. Mason, U. S. Transitman.

Survey executed jointly by Fred N. Wardwell, U. S. Surveyor, and Howard G. Mason, U. S. Transitman, on dates shown on above diagram, under Assignment Instructions for Group 46, dated January 28, 1915, with Young and Sons' transits, Nos. 8481 and 8389, respectively, with Smith solar attachments. The instruments are kept in adjustments by repeated tests on meridians determined by direct solar and Polaris observations.

From standard cor. of Ts. 17 N., Rs. 16 and 17 W., herein before described,

West, on a true line on the S. bdy. of sec. 36.

Over slightly rolling land, through dense undergrowth.

20.00 Dry wash, course S. 60° W.

Difference between measurements of 40.00 chs. by two sets of chainmen is 1 lk.; position of middle point,

By 1st set, 40.00½ chs.

By 2nd set, 39.99½ chs., the mean of which is

40.00 Set an iron post 3 ft. long, 1 in. in diam., 24 ins. in the ground, for standard ¼ sec. cor., with a brass cap, marked

S C
¼ S 36

24. Fourth Standard Parallel North, through Range 17 West.

Chains.

and dig pits, 18x18x12 ins., E. and W. of cor. 3 ft. dist.,
and raise a mound of earth, $3\frac{1}{2}$ ft. base, $1\frac{1}{2}$ ft. high,
N. of cor.

No difference between 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 standard cor. of secs. 35 and 36, with
a brass cap, marked

	S	C	
T 17	N	R	17 W
	S	S	36

1915

dig pits, 24x18x12 ins., crosswise on each line, E. and
W., 3 ft. dist., and N. of cor. 7 ft. dist., and raise a
mound of earth, 4 ft. base, 2 ft. high, N. of cor.

Land, slightly rolling.

Soil, sandy loam, and gravelly, 2nd rate.

Undergrowth, greasewood, yucca palm and cholla.

West, on a true line on the S. bdy. of sec. 35.

Over slightly rolling land, through dense undergrowth.

10.00 Road bet. Yucca and Signal, brs. NW. and SE.

13.85 Telephone line, brs. NW. and SE.

No difference between measurements of 40.00 chs. by two
sets of chainmen.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in
the ground for standard $\frac{1}{4}$ sec. cor., with a brass cap,
marked

	S	C
$\frac{1}{4}$	S	35

1915

dig pits, 18x18x12 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.

51.00 Dry wash, 10 lks. wide, course S. 85° W.

No difference between 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

Chains

the ground for St. cor. of secs. 34 and 35, with a brass cap, marked

	S	C	
T 17 N		R 17 W	
S 34		S 35	

1915

dig pits, 18 X 24 X 12 ins. crosswise on the line, E. and W. 3 ft. and N. of post, 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of cor.

Land, slightly rolling.

Soil, sandy loam and gravelly, 2nd. rate.

Undergrowth, greasewood, yucca, cacti, and ocotillo.

West on a true line on the S, bdy. of sec. 34.

Over slightly rolling land, through dense undergrowth.

35.00 Dry wash, 30 lks. wide, course S. 85° W.

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

By 1st. set, 40.01 chs.

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

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for St. 1/4 sec. cor., with a brass cap, marked

	S	C	
1/4 S 34			

1915

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.

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

By 1st. set, 80.01 chs.

By 2nd. set, 79.99 chs.; the mean of which is

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for St. cor. of secs. 33 and 34, with a brass cap, marked

	S	C	
T 17 N		R 17 W	
S 33		S 34	

1915

Chains

dig pits, 18 X 24 X 12 ins., crosswise of the line, E. and W. 3 ft. and N. of post 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of cor.

Land, slightly rolling.

Soil, sandy loam and gravelly, 2nd. rate.

Undergrowth, greasewood, yucca, ocotillo and cacti.

West on a true line on the S. bdy. of sec. 33.

Over level land, through dense undergrowth.

18.80 Dry wash, 60 lks. wide, course SW.

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

By 1st. set, 40.01 chs.

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

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for St. 1/4 sec. cor., with a brass cap, marked

S C
<u>1/4 S 33</u>

1915

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.

No difference between 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 St. cor. of secs. 32 and 33, with a brass cap, marked

S C
T 17 N R 17 W
<u>S 32 S 33</u>

1915

dig pits, 18 X 24 X 12 ins. crosswise on the line, E. and W. 3 ft., and N. 7 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, N. of cor.

Land, nearly level.

Soil, sandy, 2nd. rate.

Undergrowth, cacti, greasewood, palo christe, and rabbit brush.

Chains West on a true line on the S. bdy. of sec. 32.
 Over nearly level land, through dense undergrowth.
 35.00 Center of dry wash, 1 ch. wide, course S. 60° W.
 No difference between measurements of 40.00 chs. by two sets of chainmen.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for St. 1/4 sec. cor., with a brass cap, marked

S C
1/4 S 32

1915

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

No difference between 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 St. cor. of secs. 31 and 32, with a brass cap, marked

S C
 T 17 N R 17 W
S 31 S 32

1915

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

Land, nearly level.

Soil, sandy, 2nd. rate.

Undergrowth, cacti, greasewood, palo christe and rabbit brush.

West on a true line on the S. bdy. of sec. 31.
 Over slightly rolling land, through dense undergrowth.
 Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks., position of middle point
 By 1st. set, 39.99 chs.
 By 2nd set, 40.01 chs.; the mean of which is

80.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for St. 1/4 sec. cor., with a brass cap, marked

S C
1/4 S 31

1915

Chains digypits, 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.

100.00 Road between Yucca and Needles, bears N. and S.
No difference in measurements of 139.98 chs. by two sets of chainmen.

139.98 ~~In 1828~~ Fall 1828 chs. S. of original standard corner, N. of cor. of Tps. 17 N., Rs. 17 and 18 W., which is a stone, 10 X 10 X 8 ins. above ground, marked and witnessed as described by the surveyor general.

At point of intersection, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for St. cor. of T. 17 N., R. 17 W., with a brass cap, marked

S C
T 17 N
R 17 W
S 31

1915

dig a pit 36 X 36 X 12 ins. in sec. 31, 8 ft. dist., and raise a mound of earth, 4 ft. base, 2 ft. high, NE. of cor.

Land, slightly rolling.

Soil, sandy, 2nd. rate.

Undergrowth, greasewood, yucca palm and cacti.

April 10, 1915.

Chains.

DATE DIAGRAM, 1915.

31	32	33	34	35	36
2-14-15	2-14-15	2-15-15	2-15-15	2-17-15	2-17-15
2-14-15	2-14-15	2-15-15	2-15-15	2-17-15	2-17-15

Retracements and Resurveys on dates shown in red, by Fred N. Wardwell, U.S. Surveyor.

Retracements and Resurveys on dates shown in green by Philip L. Inch, U.S. Transitman.

Retracement and resurvey executed by Fred N. Wardwell, U.S. Surveyor, and Philip L. Inch, U.S. Transitman, under Assignment Instructions for Group 46, dated Jan. 28, 1915, with Young and Sons' transits, Nos. 8481 and 8389 respectively, with Smith solar attachments. The instruments were tested on a meridian determined by Polaris observation, as described in Book "C."

The east 2 miles of R. 13 W. is dependent upon accepted subdivision lines closing upon the Parallel in frac. T. 16 1/2 N., R. 13 W. This portion of the Parallel was formerly resurveyed in May, 1911, under Group No. 4.

RETRACEMENT.

From reestablished standard cor. of Ts. 17 N., Rs. 12 and 13 W., hereinbefore described,

N. 89° 39' W., on a true line, on the S. bdy. of sec. 36.

Over slightly rolling land; ascend.

7.37 Top of low spur, slopes S. 70° W.; descend.

Difference between measurements of 40.12 chs. by two sets of chainmen is 4 lks.; position of middle point,

By 1st set, 40.14 chs.,

By 2nd set, 40.10 chs., the mean of which is

40.12 137 ft. below top of spur. Intersect reestablished standard 1/4 sec. cor. of sec. 36, a 1 in. iron post, with brass cap, marked and witnessed, as described by the surveyor general.

30. Retracement and Resurvey of 4th Stand. Par. N. thro part of R. 13 W. Chains.

Land, rolling.

Soil, sandy, 2nd rate.

Undergrowth, mesquite, catclaw and palo verde.

DEPENDENT RESURVEY.

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

S. $89^{\circ}44'W.$, on true line on W. $\frac{1}{2}$ of S. bdy. of sec. 36.

Over level land, through dense brush.

20.68 Fence, brs. N. and S.

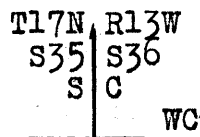
Difference between measurements of 25.09 chs. by two sets of chainmen is 2 lks., position of middle point,

By 1st set, 25.10 chs.,

By 2nd set, 25.08 chs., the mean of which is

25.09 On top of bank of Big Sandy river, set an iron post 3 ft.

long, 3 ins. in diam., 24 ins. in the ground for reestablished witness cor. to standard cor. of secs. 35 and 36, with a brass cap, marked



1915

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

25.38 Foot of bank; enter land, subject to overflow from the Big Sandy river, brs. N. and S.

35.68 Enter channel of river, course S., bank 2 ft. high.

38.09 Point formerly occupied by the witness cor. to reestablished standard cor. of secs. 35 and 36 falls in unsafe position. The witness cor. set in 1911 has been washed away.

Difference between measurements of 40.09 chs. by 2 sets of chainmen is 2 lks., position of middle point,

By 1st set, 40.10 chs.,

By 2nd set, 40.08 chs., the mean of which is

40.09 (Proportional distance) True point for reestablishment of standard cor. of secs. 35 and 36, in bottom of river, now dry.

Retracement and Resurvey of 4th. Std. Par. N. thru Range 13 W. 31

Chains.

Land, level.

Soil, sandy loam, 2nd rate.

Undergrowth, mesquitw, catalaw and palo verde.

S.89°44'W., on a true line, on the S.bdy. of sec.35.

Over level river bottom.

20.00 Leave channel of Big Sandy river, course S., bank 2 ft. high.

20.90 Wire fence brs. N.10°W. and S.10°E.

25.90 Ranch house of W.B. Stevens, brs. N.10 chs. dist.

28.40 Irrigation ditch, flows S.

30.50 Wire fence, brs. N. and S.

33.45 Wire fence, brs. N. and S.15°W.

33.60 Road brs. N. and S.15°W.

No difference in measurement by two sets of chainmen.

40.09 Intersect reestablished standard 1/4 sec. cor. of sec.35, a 1 in. iron post, with brass cap, marked and witnessed as described by the surveyor general.

RETRACEMENT.

From reestablished standard 1/4 sec. cor., described above,

S.89°55'W., on true line, on W. 1/2 of S. bdy. of sec.35.

Over rolling land, through dense undergrowth.

Ascend 125 ft., over E. slope.

Difference bet. measurements of 39.17 chs. by two sets of chainmen is 4 lks., position of middle point,

By 1st set, 39.19 chs.,

By 2nd set, 39.15 chs., the mean of which is

39.17 Intersect closing cor. of secs. 20 and 21 of frac 1. T. 16 1/2 N., R. 13 W., which is a 2 in. iron post, with brass cap, marked and witnessed as described by the surveyor general.

Difference bet. measurements of 40.11 chs. by two sets of chainmen is 6 lks., position of middle point,

By 1st set, 40.14 chs.,

By 2nd set, 40.08 chs., the mean of which is

40.11 Intersect the reestablished standard cor. of secs. 34 and 35, which is a 3 in. iron post, with brass cap, marked and witnessed, as described by the surveyor general.

32. Retracement and Resurvey 4th. Std. Par. N., thru. R. 13 W.

Chains

Land, rolling. Soil, sand, and gravel mixed, 2nd rate.

No timber.

Undergrowth, greasewood, catclaw, palo verde and ocotillo.

Independent Resurvey of 4th. Std. Par., N., thru. part of R13W.

No accepted subdivision lines being dependent on the Parallel west of the reestablished standard cor. of secs. 34 and 35, make independent resurvey, as follows:

West, on a true line on S. bdy. of sec. 34.

Over gently rolling mesa, covered with dense undergrowth.

No difference bet. measurements by two sets of chainmen.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 24-ins. in the ground, for reestablished standard $\frac{1}{4}$ sec. cor., with a brass cap, marked

S C

$\frac{1}{4}$ S. 34

1915

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

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

By 1st set, 80.01 chs.,

By 2nd set, 79.99 chs., the mean of which is

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for reestablished standard cor. of secs. 33 and 34, with a brass cap, marked

S C

T17N R13W

S33 S34

1915

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

Land, slightly rolling.

Soil, sandy and stony, 2nd rate.

Undergrowth, palo verde, rabbit brush, greasewood, cacti and Spanish dagger.

BOOK 3114

Resurvey of the 4th. St. Par. N., through part of R.13 W. 33

Chains

West on a true line on the S. bdy. of sec. 33.

Over rolling land, through scattering undergrowth.

No difference in measurement by two sets of chainmen.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished standard $\frac{1}{4}$ sec. cor., with brass cap, marked

$$\begin{array}{c} \text{S C} \\ \hline \frac{1}{4} \text{ S } 33 \end{array}$$

1915

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

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

By 1st. set, 79.98 chs.

By 2nd. set, 80.02 chs., the mean of which is

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

$$\begin{array}{c} \text{S C} \\ \text{T 17 N | R 13 W} \\ \hline \text{S 32 | S 33} \end{array}$$

1915

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

Land, level.

Soil, mixed sand and gravel, 2nd. rate.

Undergrowth, Palo verde, rabbit brush, greasewood, cacti and Spanish dagger.

West on a true line on the S. bdy. of sec. 32.

Over slightly rolling land.

15.00 Enter dense undergrowth, bears N. and S.

21.20 Top of low spur, slopes N., leave dense undergrowth.

35.00 Dry wash, course NE.

Difference between measurements of 40.00 chs. by two sets

Resurvey of the 4th, St. Par. N., thru part of R. 13 W.

Chains	<p>of chainmen is 6 lks., position of middle point</p> <p>By 1st. set, 40.03 chs.</p> <p>By 2nd. set, 39.97 chs.; the mean of which is-</p>				
40.00	<p>Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished standard $\frac{1}{4}$ sec. cor., with brass cap, marked</p> <p style="text-align: center;"> <table border="0"> <tr><td style="padding: 0 10px;">S C</td></tr> <tr><td style="padding: 0 10px;"><u>1/4 S 32</u></td></tr> <tr><td style="padding: 0 10px;">1915</td></tr> </table> </p> <p>and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor., pits impracticable.</p>	S C	<u>1/4 S 32</u>	1915	
S C					
<u>1/4 S 32</u>					
1915					
46.00	Dry wash, course N. 60° E.				
50.00	Enter scattering cedar, bear N. and S.				
70.45	Dry wash, course NE.				
72.00	Dry wash, course SE.				
	<p>Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks., position of middle point</p> <p>By 1st. set, 80.01 chs.</p> <p>By 2nd. set, 79.99 chs., the mean of which is</p>				
80.00	<p>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, with brass cap, marked</p> <p style="text-align: center;"> <table border="0"> <tr><td style="padding: 0 10px;">S C</td></tr> <tr><td style="padding: 0 10px;">T 17 N R 13 W</td></tr> <tr><td style="padding: 0 10px;">S 31 S 32</td></tr> <tr><td style="padding: 0 10px;">1915</td></tr> </table> </p> <p>and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor., pits impracticable.</p> <p>Land, slightly rolling.</p> <p>Soil, gravelly, 2nd. rate.</p> <p>Undergrowth, rabbit brush, greasewood and palo verde.</p> <p>Timber, small cedars.</p>	S C	T 17 N R 13 W	S 31 S 32	1915
S C					
T 17 N R 13 W					
S 31 S 32					
1915					
	<p>West on e true line on the S. bdy. of sec. 31.</p> <p>Over rolling land, through dense undergrowth and scattering cedars.</p>				
0.20	Dry wash, course NE.				
7.20	Dry wash, course NE.				
14.30	Dry wash, course N. 15° E., asc.				
15.00	Top of low spur, slopes N. 15° E., about 3 chs. dist., desc.				
18.70	Dry wash, course N. 10° E., 29 ft. below top of spur.				

Resurvey of the 4th. St. Par. N., thru part of R. 13 W. 35

Chains

21.60 Dry wash, course NE., asc.

27.20 Top of spur, slopes NE., 70 ft. above wash, desc. slightly.

30.20 Wash, course N. 10° E.

35.00 Wash, course N. 10° E., 23 ft. below top of spur, asc.

36.50 Top of spur, slopes NE., 23 ft. above wash, desc.

37.00 Wash, course NE.

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

By 1st. set, 40.02 chs.

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

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished standard 1/4 sec. cor., with brass cap, marked

S C

1/4 S 31

1915

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

Ascend.

53.55 Top of main spur, slopes N. 20° E., about 1/2 mile, 114 ft. above 1/4 sec. cor., desc. NW. slope.

59.70 Head of dry wash, course N. 10° E., 70 ft. below top of spur, asc.

62.20 Top of small spur, slopes N. 20° E., 20 ft. above wash, enter dense undergrowth, bears NE. and SW., desc.

70.00 Canyon, course N. 30° E., 105 ft. below top of spur, asc.

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

By 1st. set, 80.03 chs.

By 2nd. set, 79.97 chs., the mean of which is

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished standard cor. of T. 17 N., R. 13 and 14 W., with brass cap, marked

S C

T 17 N

R 14 W | R 13 W

S 36 | S 31

1915

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

Chains

N. of cor., pits impracticable.

Land, rolling, and rolling mountainous.

Soil, gravelly and stony, 3rd. rate.

Undergrowth, small cedar, palo verde and sagebrush.

Feb. 14, 1887.

Independent Resurvey of 4th Stand. Parallel N. thru Range 14 W. 37

Chains.

DATE DIAGRAM.

31	32	33	34	35	36
3-22-15	3-9-15	2-15-15	2-15-15	2-14-15	2-14-15

Lines dated in red resurveyed by Fred N. Wardwell, U. S. Surveyor.

No subdivision lines being dependent upon the Parallel in R. 14 W., I make independent resurvey of said line, as follows:

- West, on a true line along the S. bdy. of sec. 36.
- Over rolling land; ascend slightly.
- 1.00 Top of low spur, slopes N.80°E.; descend.
- 9.75 Dry wash, course NE.; ascend.
- 22.00 Top of spur, slopes S., 115 ft. above wash; descend slightly.
- 32.20 Dry wash, course S.80°E.; ascend.
- Difference between measurements of 40.00 chs. by two sets of chainmen is 2 lks.; position of middle point
 - By 1st set, 40.01 chs.
 - By 2nd set, 39.99 chs., the mean of which is
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished standard $\frac{1}{4}$ sec. cor., with brass cap, marked

S C

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

1915
- and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Pits impracticable. Cor. falls on top of spur, slopes SE., 125 ft. above wash.
- 49.75 Spur slopes S.15° E., 10 chs.; descend SW. slope.

38 Resurvey of 4th Standard Parallel N. thru R. 14 West.

Chains.

63.25 Dry wash, course SE., 90 ft. below top of spur; ascend.

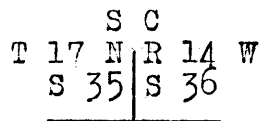
69.50 Top of spur, slopes SE., 160 ft. above wash.

73.70 Descend.

79.90 Dry wash, course, S., 150 ft. below top of spur.

No difference in measurements 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. 35 and 36, with brass cap, marked



1915

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

Land. rolling.

Soil, gravelly and stony, 3rd rate.

Undergrowth, palo verde, cacti and catclaw.

West, on a true line, on S bdy. of sec. 35.

Ascend over rolling, mountainous land.

4.60 Top of spur, slopes SE., about 8 chs., 130 ft. above sec. cor.; descend.

10.00 Foot of 40 ft. descent; along S. slope.

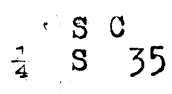
19.85 Top of 204 ft. ascent; descend.

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

By 1st set, 40.02 chs.

By 2nd set, 39.98 chs., the mean of which is

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished standard ¼ sec. cor., with brass cap, marked



1915

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

Chains	Asc. SE. slope.
50.00	Top of 185 ft. ascent, desc. along S. slope.
71.75	Dry wash, course S. 85° E., 29 ft. descent.
	Difference in measurements of 80.00 chs. by two sets of chainmen is 6 lks., position of middle point
	By 1st. set, 80.03 chs.
	By 2nd. set, 79.97 chs., the mean of which is
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished standard cor. of secs. 34 and 35, with brass cap, marked
	S C T 17 N R 14 W <u>S 34 S 35</u> 1915
	and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor., pits impracticable.
	Land, rolling mountainous.
	Soil, gravelly and stony, 3rd. rate.
	Undergrowth, catclaw, scrub oak and palo verde.

	West on a true line on the S. bdy. of sec. 34.
	Asc. over rolling mountainous land.
13.00	Saddle in top of ridge, bears NW. and SE., 220 ft. above sec. cor.
22.00	Foot of 70 ft. descent, asc.
26.40	Top of 45 ft. ascent, spur, slopes SE., desc.
	No difference between measurements by two sets of chainmen.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished standard sec. cor., with brass cap, marked,
	S C <u>1/4 S 34</u> 1915
	and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor., pits impracticable.
52.30	Draw, course SE., 153 ft. below top of spur, asc.

Resurvey of the 4th. St. Par. N., through R. 14 W.

Chains	Difference in measurements of 80.00 chs. by two sets of chainmen is 4 lks., position of middle point By 1st. set, 79.98 chs. By 2nd set, 80.02 chs., the mean of which is										
80.00	525 ft. above draw, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished standard cor. of secs. 33 and 34, with brass cap, marked <div style="text-align: center;"> <table border="0"> <tr><td>S</td><td>C</td></tr> <tr><td>T 17</td><td>N R 14 W</td></tr> <tr><td>S 33</td><td> S 34</td></tr> <tr><td colspan="2"><hr/></td></tr> <tr><td colspan="2">1915</td></tr> </table> </div> and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor., pits impracticable. Land, rolling and rough mountainous. Soil, gravelly and stony, 3rd. rate. Undergrowth, palo verde, catclaw and scrub oak.	S	C	T 17	N R 14 W	S 33	S 34	<hr/>		1915	
S	C										
T 17	N R 14 W										
S 33	S 34										
<hr/>											
1915											
<hr/>											
	West on a true line on the S. bdy. of sec. 33. Asc. over mountainous land.										
3.30	Top of spur, slopes S., 80 ft. above sec. cor., desc.										
8.00	Draw, course SE., 85 ft. below top of spur, asc.										
26.00	Top of spur, slopes S., 315 ft. above draw, desc.										
39.25	Draw, course SE., 85 ft. below top of spur, asc.										
	Difference between measurements of 40.00 chs. by two sets of chainmen is 8 lks., position of middle point By 1st. set, 40.04 chs. By 2nd. set, 39.96 chs., the mean of which is										
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished standard sec. cor., with brass cap, marked <div style="text-align: center;"> <table border="0"> <tr><td>S</td><td>C</td></tr> <tr><td>1/4 S</td><td>33</td></tr> </table> </div> and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.	S	C	1/4 S	33						
S	C										
1/4 S	33										
61.20	Top of ridge, bears N. and S., 445 ft. above draw, desc. Difference between measurements of 80.00 chs. by two sets of chainmen is 2 lks., position of middle point By 1st. set, 79.99 chs. By 2nd. set, 80.01 chs., the mean of which is										

Chains

80.00 225 ft. below top of ridge, set an iron post, 3 ft. long,
 3 ins. in diam., 10 ins. in the ground to solid rock,
 in a mound of stone, for reestablished standard cor. of
 secs. 32 and 33, with brass cap, marked

S C
 T 17 N R 14 W
S 32 | S 33

1915

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

Land, mountainous.

Soil, gravelly and stony, 3rd. rate.

Undergrowth, scrub oak and palo verde.

 West on a true line on the E. bdy. of sec. 32.

Asc. over mountainous land.

8.70 Top of spur, slopes N., 60 ft. above sec. cor., desc.

30.70 Draw, course N. 20° E., 240 ft. below top of spur, asc.

37.00 Top of spur, slopes N., 130 ft. above draw, desc.

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

By 1st. set, 40.02 chs.

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

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 20 ins. in
 the ground to solid rock, in a mound of stone, for re-
 established standard ¼ sec. cor., with brass cap, marked

S C
1/4 S 32

1915

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

43.00 Draw, course NE, 50 ft. below top of spur, asc.

46.90 Spur, brs. NE.; ascend to

59.60 Top of spur, slopes N., 305 ft. above draw, desc.

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

By 1st. set, 80.03 chs.

By 2nd. set, 79.97 chs., the mean of which is

Resurvey of the 4th. St. Par. N., through R. 14 W.

Chains
80.00

400 ft. below top of spur, 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, with brass cap, marked

	S	C	
T 17 N	R 14 W		
S 31	S 32		

1915

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

Land, rolling mountainous.

Soil, gravelly and stony, 3rd. rate.

Undergrowth, scrub oak, scrub elm and mesquite.

West on a true line on the S. bdy. of sec. 31.

Over rough mountainous land.

0.30 Draw, 10 lks. wide, course N. 15° E., asc.

36.30 Top of Queen Summit ridge, bears N. and S., 555 ft. above
draw, desc.

No difference in measurement by two sets of chainmen.

40.00 115 ft. below top of ridge, set an iron post, 3 ft. long,
1 in. in diam., 24 ins. in the ground for reestablished
standard sec. cor., with brass cap, marked

	S	C
1/4 S	31	

1915

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,
N. of cor., pits impracticable., continue to desc.

49.95 Gulch, course NW., 200 ft. below 1/4 sec. cor., asc.

52.85 Top of spur, slopes NW., 45 ft. above gulch, desc.

58.91 Gulch, course N. and telephone line bet. Yucca and Cedar,
bears N. 30° W. and S. 30° E., 165 ft. below top of
spur, asc.

67.20 Top of spur, slopes N. 15° E., 170 ft. above gulch, desc.

71.70 Wash, course N. 60° E., 30 ft. below top of spur, asc.

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

By 1st. set, 80.04 chs.

By 2nd. set, 79.96 chs. the mean of which is

Chains
80.00

186 ft. above wash, set an iron post, 3 ft. long, 3 ins. in diam., 14 ins. in the ground to solid rock, in a mound of stone, for reestablished standard cor. of T_s. 17 N., R_s. 14 and 15 W., with brass cap, marked

S C	
T 17 N	
R 15 W	R 14 W
S 36	S 31

1915

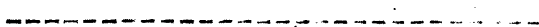
and raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor., pits impracticable.

Land, rough mountainous.

Soil, stony and gravelly, 3rd. rate.

Undergrowth, scrub oak, manzanita and laurel.

March 22, 1915.



44. Retracement of 5th St. Par. N. thro. parts of Rs. 14, 16 and 17 W
Chains,

Work executed by U. S. Transitmen Mans H. Coffin, Jr., and Howard G. Mason, using transits Nos. 8540 and 8298, which are described, with record of approval by the assistant supervisor of surveys for Arizona and California, and field tests, in Book "H." The adjustments were frequently examined and maintained throughout the survey by comparison of the results of solar observations with the true meridian determined by observations on Polaris. The magnetic declination is $14^{\circ}45'W$.

Through part of Range 14 West.

By Howard G. Mason, U.S.T., Feb. 3, 1916.

From the standard $\frac{1}{2}$ sec. cor., on S. bdy. of sec. 33, which is a 1 in. iron post, properly marked, set and witnessed as described by the Surveyor General.

East, on E half of S. bdy. of sec. 33.

40.59 Intersect standard cor. of secs. 33 and 34, which is a 2 in. iron post, properly marked, set and witnessed as described by the surveyor general.

Through part of Range 16 West.

By Howard G. Mason, U.S.T., March 19, 1916.

Preliminary to subdivision of T. 20 N., R. 17 W., I retrace 5th St. Par. N. on S. bdy. of sec. 31, T. 21 N., R. 16 W., as follows:

From the old standard $\frac{1}{2}$ sec. cor., on S. bdy. of sec. 31, which is a 1 in. iron post, marked, set and witnessed as described by the surveyor general.

S. $89^{\circ}55'W$ on S. bdy. of sec. 31 (west half).

89.97 Intersect the old standard closing cor. of T. 21 N., R. 16 W., which is a 3 in. iron post, with brass cap, marked, set, and witnessed as described by the surveyor general.

Thence, North, on W. bdy. of sec. 31.

24.27 Intersect the standard SE. cor. of T. 21 N., R. 17 W., which is a stone marked, set and witnessed as described by the Surveyor General.

Chains.

By Howard G. Mason, U.S.T., March 17, and 19, 1916.
Continue retracement of 5th. Standard Parallel North, on
S. bdrs. of secs. 36, 35 and 34, in R. 17 W., on true
courses, deduced from fallings of random line, as fol-
lows:

From the old standard SE. cor. of T. 21 N., R. 17 W., herein be-
fore described.

S. 89° 55' W., on a true line, on S. bdy. of sec. 36.

39.64 Intersect the old standard $\frac{1}{4}$ sec. cor., which is a stone,
properly marked, set, and witnessed as described by
the surveyor general.

Thence S 89° 17' W., on S. bdy. of sec. 36 (west half).

39.34 Intersect the old standard cor. of secs. 35 and 36, which
is a stone, properly marked, set and witnessed, as de-
scribed by the Surveyor General.

West, on south bdy. of sec. 35.

44.51 Intersect the old standard $\frac{1}{4}$ sec. cor., which is a stone,
properly marked, set and witnessed as described by the
Surveyor General.

Thence N. 89° 45' W., on S. bdy. of sec. 35 (west half).

41.42 Intersect the old standard cor. of secs. 34 and 35, which
is a stone, properly marked, set and witnessed as de-
scribed by the Surveyor General.

46. Retracement of portion of 5th. Standard Par. N. in R. 17 W.

Chains.

By Mans H. Coffin, Jr., U.S.T., March 17, 1916.

S. $89^{\circ} 04' W.$, on S. bdy. of sec. 34.

- 40.15 Intersect the old standard $\frac{1}{4}$ sec. cor., which is a stone, properly marked, set and witnessed as described by the Surveyor General; whence
- The NE. cor. of Klondyke, identical with SE. cor. of Ula-lume, and NW. cor. of March mining claims, all unsurveyed, bears N. $4^{\circ} 36' E.$, 22.43 chs. dist., and
- The SW. cor. of March, identical with the SE. cor. of Klondyke claim, unsurveyed, identical with cor. No. 1 of Mineral Point, and cor. No. 2 of B 1- Metal Lode, both of mineral survey number 2750, bears N. $74^{\circ} 18' E.$, 16.48 chs. dist.

Thence West on S. bdy. of sec. 34 (west half).

- 40.87 Intersect the old standard cor. of secs. 33 and 34, which is a stone properly marked, set and witnessed as described by the Surveyor General.
-

FINAL OATH OF UNITED STATES SURVEYOR.

OK 3/14

I, _____, U. S. Surveyor, do solemnly swear that, in pursuance of special instructions received from the U. S. Surveyor General for _____ bearing date of the _____ day of _____, 191____, 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 _____ of the _____ Meridian, in the State of _____, which are represented in the foregoing field notes as having been executed by me, and under my direction; and I do further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for _____ and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

U. S. Surveyor.

Subscribed by said _____, and sworn to before me } this _____ day of _____, 191____



APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, November 22, 1918

The foregoing field notes of the survey of FOURTH STANDARD PARALLEL NORTH through part of Range 12 West and through Rs. 15, 16 & 17 West, RESURVEY OF _____ FOURTH STANDARD PARALLEL NORTH through part of Range 13 West in the State of Arizona and through Range 14 West RETRACEMENT of FOURTH STANDARD PARALLEL NORTH through part of Range 13 West and the FIFTH STANDARD PARALLEL NORTH through parts of Ranges 14, 16 & 17 West OF THE GILA & SALT RIVER MERIDIAN IN THE STATE OF ARIZONA. executed by Fred N. Wardwell, U.S. Surveyor and Philip L. Inch, Howard G. Mason and Mans H. Coffin Jr. U.S. TRANSITMEN under his special instructions dated Jan. 7 and 29, 1915 for Group 46, Arizona 9100, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank P. Smith

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.