

3115

49

(1)

Book "B"

NOV 21 1918

4-679

(Township Boundaries)

# FIELD NOTES

BOOK 3115

OF THE SURVEY OF THE

West and North bdrs. of Ts. 17, 18, and 19 N., Rs. 15 and 16 W.,

North bdrs. of Ts. 17, 18, and 19 N., R. 17 W.,

and the

West bdrs. of Ts. 20 N., Rs. 15 and 16 W.,

of the RESURVEY of the

East, West, and part of North bdy. of T. 17 N., R. 13 W.,

West and North bdrs. of Ts. 17, 18, and 19 N., R. 14 W.

East bdy. of Township 17 North, Range 18 West, and the

West bdy. of Township 20 North, Range 14 West, and

of the RETRACEMENT of parts of

North bdy. of Tp. 17 N., R. 13 W., and

East bdy. of Tp. 20 N., R. 14 W.,

Of the Gila and Salt River Base and Meridian,

In the State of Arizona.

## EXECUTED BY

Fred N. Wardwell, & Albert Smith, Jr., U.S. Surveyors.

and

Philip L. Inch, Howard G. Mason, Mans H. Coffin, Jr., William N. Nash,  
U. S. Transitmen,

~~In the capacity of U. S. Surveyors~~, under instructions dated January 7, 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, January 22, 1915.

Surveys, Resurveys,  
& Retracements commenced February 18, 1915.

Surveys, Resurveys,  
& Retracements completed May 27, 1916.

Executed under Assignment

Instructions dated Jan. 28, 1915, Nov. 6, 1915 and April 7, 1916.

3115

3115

# INDEX DIAGRAM.

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

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

5th Standard Parallel North

GROUP N<sup>o</sup>46-ARIZONA  
Book "B"

INDEX-DIAGRAM

T.20 N. R.17 W. Subs. in book "N" 3127 83-86	T.20 N. R.16 W. Subs. in book "S" 3132 71-76	T.20 N. R.15 W. Subs. in book "R" 3131 143-145	T.20 N. R.14 W. Subs. in book "K" 3124 146	T.20 N. R.13 W.
60-82	77-79	67-70	140-142	—
T.19 N. R.17 W. Subs. in book "M" 3126 74-76	T.19 N. R.16 W. Subs. in book "P" 3129 64-66	T.19 N. R.15 W. Subs. in book "Q" 3130 137-139	T.19 N. R.14 W. Subs. in book "J" 3123 131-135	T.19 N. R.13 W.
57-61	51-55	37-42	131-135	—
T.18 N. R.17 W. Subs. in book "L" 3125 45-50	T.18 N. R.16 W. Subs. in book "O" 3128 61-66	T.18 N. R.15 W. Subs. in book "I" 3122 125-130	T.18 N. R.14 W. Subs. in book "H" 3121 113-117	T.18 N. R.13 W.
25-29	18-23	7-12	113-117	—
T.17 N. R.17 W. Subs. in book "F" 3119 13-17	T.17 N. R.16 W. Subs. in book "G" 3120 1-6	T.17 N. R.15 W. Subs. in book "E" 3118 105-110	T.17 N. R.14 W. Subs. in book "D" 3117 97-102	T.17 N. R.13 W. Subs. in book "C" 3116 87-92
119-123				93-96

— Township lines surveyed under this group  
Notes in this book 3115

— Township lines retraced or resurveyed under  
this group. Notes in this book. 3115

— Standard lines this group.  
Notes in book "A" 3114

— Accepted surveys

Book No. 3115

BOOK 3115

4th Standard Parallel North

Chains

DATE DIAGRAM, 1915.

Survey executed by Fred N. Wardwell, U. S. Surveyor, under assignment instructions for group No. 46, dated Jan. 28, 1915., with a Young & Sons light mountain transit, No. 8481, equipt with a Smith solar attachment.

From the standard cor. of Ts. 17 N., Rs. 15. and 16 W., on 4th. Standard Parallel North, where, on April. 8, 1915, I established a meridian by direct solar observation, as described in Book "A," of the G. L. S. S., through T. 17 N., and ran North on a true line bet. secs. 31 and 36.

Desc. over rolling mountainous land.

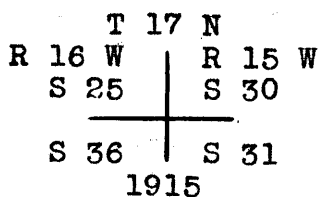
- 5.82 Dry wash, 30 lks. wide, course NW., 57 ft. below St. Twp. cor.
- 11.80 Dry wash, 30 lks. wide, course W., asc.
- 29.00 Top of spur, slopes W., 290 ft. above dry wash, desc.
- 40.00 100 ft. below top of spur, set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked
 

$$\begin{array}{c} 1/4 \text{ S } 36 \mid \text{ S } 31 \\ 1915 \end{array}$$

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.
- 41.15 Ravine, course SW., 22 ft. below 1/4 sec. cor., asc.
- 54.70 Top of ridge, bears W. and S. 60° E., 245 ft. above ravine, desc.
- 80.00 350 ft. below top of ridge, set an iron post, 3 ft. long, 3 ins. in diam., 18 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 25, 30, 31 and 36, with a brass cap, marked

May 3	6
May 3	7
May 3	18
Apr. 28	19
Apr. 10	30
Apr. 10	31

Chains



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

Land, rolling mountainous.

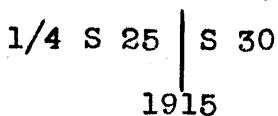
Soil, stony and gravelly, 3rd. rate.

Undergrowth, palo verde, palo christe, cat claw, Spanish  
dagger and giant cactus.

North on a true line bet. secs. 25 and 30.

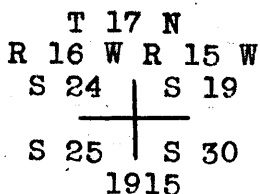
Over rolling mountainous land.

- 1.20 Enter Cottonwood wash, course W.
- 4.80 Leave Cottonwood wash, asc.
- 5.93 Road, bears N. 85° E. and S. 85° W.
- 13.66 Top of spur, slopes N. 85° W., 253 ft. above wash, desc.
- 22.73 Telephone line, bears E. and W.
- 23.67 Gulch, 1.30 chs. wide, course W., 233 ft. below top of  
spur, asc.
- 40.00 208 ft. above gulch, set an iron post, 3 ft. long, 1 in.  
in diam., on surface rock, in a mound of stone, for  
1/4 sec. cor., with a brass cap, marked



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

- 75.93 Top of ridge, bears E. and W., 782 ft. above 1/4 sec.  
cor., desc.
- 80.00 75 ft. below top of ridge, set an iron post, 3 ft. long,  
3 ins. in diam., on surface rock, in a mound of stone,  
for cor. of secs. 19, 24, 25 and 30, with a brass cap,  
marked



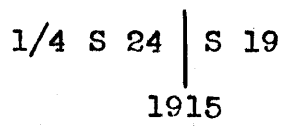
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.

Chains Land, rolling mountainous.  
 Soil, stony and gravelly, 3rd. rate.  
 Undergrowth, palo verde, cat claw, palo christe, Spanish dagger and ocotillo.

North on a true line bet. secs. 19 and 24.

Desc. over rolling mountainous land.

40.00 950 ft. below sec. cor., set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



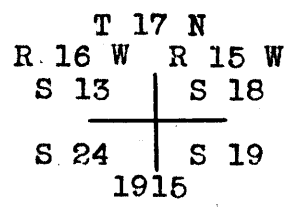
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor., thence over slightly rolling land.

44.00 Enter S. side of basin about 1/2 mile in diameter.

46.00 Dry wash, 1.50 chs. wide, course W.

62.40 Yucca and Copperville road, bears E. and W. Dick Eshom's house, bears E. about 10.00 chs. dist.

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



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

Land, rolling mountainous.

Soil, stony and gravelly, 3rd. rate.

Undergrowth, palo verde, cat claw, palo christe and Spanish dagger.

North on a true line bet. secs. 13 and 18.

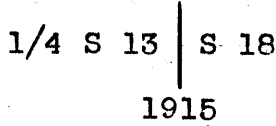
Over rolling land.

2.00 Dry wash, 1 ch. wide, course S. 40° W.

19.95 Leave basin, bears E. and W., asc.

Chains

40.00 410 ft. above basin, set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

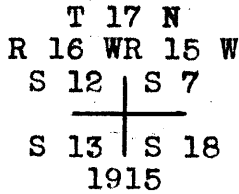


and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

42.00 Desc. E. slope.

53.81 Draw, 30 lks. wide, course SE., 138 ft. below 1/4 sec. cor., asc.

80.00 730 ft. above draw, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for cor. of secs. 7, 12, 13 and 18, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony and gravelly, 3rd. rate.

Undergrowth, oak brush, cat claw, palo verde and cacti.

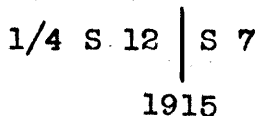
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North on a true line bet. secs. 7 and 12.

Asc. over rolling mountainous land.

22.23 Top of spur, slopes W. about 1/4 mile., desc. slightly

27.23 Begin to asc.

40.00 540 ft. above sec. cor., set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

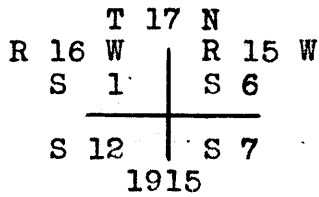


and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor., continue to asc.

52.87 Top of ridge, bears S. 80° E. and W., 90 ft. above 1/4

Chains sec. cor., desc.

80.00 365 ft. below top of ridge, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for cor. of secs. 1, 6, 7 and 12, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, oak brush and cat claw.

-----  
North on a true line bet. secs. 1 and 6.

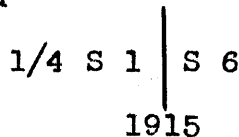
Desc. over rolling mountainous land.

7.69 Dry wash, 20 lks. wide, course N. 80° W., 140 ft. below sec. cor., asc.

23.11 Top of 80 ft. ascent, desc.

34.08 Foot of 344 ft. descent, dry wash, 30 lks. wide, course W.,

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



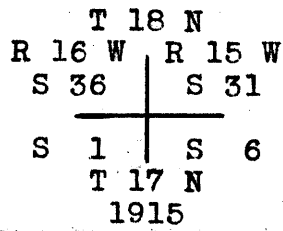
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor., desc.

46.56 Dry wash, 20 lks. wide, course W., 46 ft. below 1/4 sec. cor., asc.

80.00 800 ft. above dry wash, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for cor. of Tps. 17 and 18 N., Rs. 15 and 16 W., with a brass cap, marked



Chains



and raise a mound of stone, 3½ ft. base, 2 ft. high,  
S. of cor.

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, oak brush and cat claw.

May 3, 1915.

Survey of North bdy. of Township 17 North, Range 15 West. 7.

chains.

DATE DIAGRAM.  
1915

May 25	May 24	May 24	May 23	May 23	May 21
6	5	4	3	2	1

Survey executed by Fred N. Wardwell, U. S. Surveyor, on dates shown on above diagram, under assignment instructions for Group No. 46, with a Young and Sons' light mountain transit, No. 8481, provided with a Smith solar attachment, which is kept in adjustment by frequent tests on meridians determined by Polaris and direct solar observations.

From reestablished cor. of Ts. 17 and 18 N., Rs. 14 and 15 W., hereinafter described,

West, on a random line on the N. bdy. of the township.

478.26 Intersect the W. bdy. of the township, 10 lks. S. of the cor. of Ts. 17 and 18 N., Rs. 15 and 16 W., hereinbefore described.

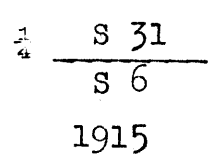
S. 89° 59' E., on a true line, bet. secs. 6 and 31.

Descend over rolling mountainous land.

6.28 Draw, course S. 58 ft. below top cor.; ascend.

29.33 Top of spur, slopes SE., 120 ft. above draw; descend.

38.26 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for  $\frac{1}{4}$  sec. cor., with a brass cap, marked

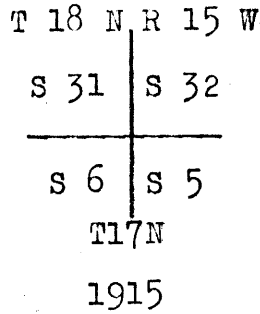


and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.

8. North bdy. of Township 17 North, Range 15 West.

Chains.

- 39.45 Draw, course SE., 112 ft. below top of ridge; ascend.
- 69.60 Top of ridge, brs. N. and S., 730 ft. above draw; descend.
- 78.26 190 ft. below top of ridge, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for cor. of secs. 5, 6, 31 and 32, with a brass cap, marked



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

Land, rolling, mountainous.

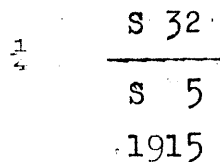
Soil, stony and gravelly, 3rd rate.

Undergrowth, scrub oak and laurel.

s. 89° 59' E., on a true line, bet. secs. 5 and 32.

Descend over rolling, mountainous land.

- 7.70 Head of draw, course S., 44 ft. below sec. cor.; ascend.
- 25.00 Top of spur, slopes S. 30° W., 360 ft. above draw; descend.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface in a mound of stone, for ¼ sec. cor., with a brass cap, marked



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

- 70.36 Creek, 2 lks. wide, course N. 10° E., 900 ft. below top of spur; ascend.

- 80.00 175 ft. above creek, set an iron post, 3 ft. long, 3 ins.

Chains in diam., on surface rock, in a mound of stone, for cor. of secs. 4, 5, 32 and 33, with a brass cap, marked

T 18 N R 15 W		
S 32		S 33
S 5		S 4
T 17 N		
1915		

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

Land, rolling and rough mountainous.

Soil, stony and gravelly, 3rd. rate.

Undergrowth, scrub oak and laurel.

S.  $89^{\circ}59'$  E. on true line bet. secs. 4 and 33.

Asc. over rolling mountainous land.

6.68 Top of spur, slopes N.  $10^{\circ}$  E., 85 ft. above sec. cor., desc.

19.14 Creek, 5 lks. wide, course N., 114 ft. below top of spur,

29.85 Creek, 2 lks. wide, course N., asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for  $1/4$  sec. cor., with a brass cap, marked

$\frac{1}{4}$ S 33	
S 4	
1915	

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

56.54 Top of spur, slopes N. about 15 chs., 517 ft. above creek, desc.

67.42 Draw, course N.  $15^{\circ}$  W., 85 ft. below top of spur, asc.

77.68 Top of spur, slopes N., 340 ft. above draw, desc.

80.00 76 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 cor. of secs. 3, 4, 33 and 34, with a brass cap, marked

T 18 N R 15 W		
S 33		S 34
S 4		S 3
T 17 N		
1915		

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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scrub oak and laurel.

S.  $89^{\circ}59'$  E. on true line bet. secs. 3 and 34.

Desc. over rolling mountainous land.

29.88 Draw, course N.  $10^{\circ}$  E., 450 ft. below sec. cor., asc.

32.20 Top of spur, slopes N. about 5 chs., 18 ft. above draw,  
desc.

33.64 Creek, 2 lks. wide, course N.  $10^{\circ}$  W., 28 ft. below top  
of spur, asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface  
rock, in a mound of stone, for  $1/4$  sec. cor., with a  
brass cap, marked

$$\frac{1/4 \text{ S } 34}{\text{S } 3}$$

1915

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

42.66 Top of spur, slopes N. about 60 chs., 140 ft. above creek,  
desc.

69.64 Draw, course N., 428 ft. below top of spur, asc.

76.11 Top of spur, slopes N. about 20 chs., 58 ft. above draw,  
desc.

80.00 52 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 cor. of secs. 2, 3, 34 and 35, with a brass cap,  
marked

$$\begin{array}{c} \text{T 18 N R 15 W} \\ \text{S 34} \quad | \quad \text{S 35} \\ \hline \text{S } 3 \quad | \quad \text{S } 2 \\ \text{T 17 N} \\ 1915 \end{array}$$

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

Land, rolling mountainous.

Soil, stony and gravelly, 3rd. rate.

Chains Undergrowth, scrub oak and laurel.

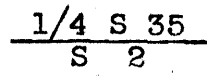
S. 89°59'E. on true line bet. secs. 2 and 35.

Desc. over rolling mountainous land.

24.13 Creek, 5 lks. wide, course E., 350 ft. below sec. cor.,

26.73 Leave creek, course N., asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

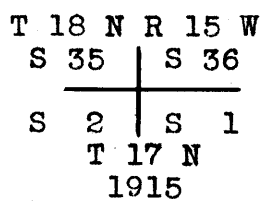


1915

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

71.42 Top of spur, slopes N. about 40 chs., 900 ft. above creek, desc.

80.00 168 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 cor. of secs. 1, 2, 35 and 36, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony and gravelly, 3rd. rate.

Undergrowth, scrub oak and laurel.

S. 89°59'E. on true line bet. secs. 1 and 36.

Desc. over rolling mountainous land.

3.89 Draw, course N. 20° E., 30 ft. below sec. cor., asc.

14.93 Top of spur, slopes N. about 20 chs., 79 ft. above draw, desc.

28.00 Draw, course N. 15° E., 306 ft. below top of spur, asc.

35.24 Top of 14 ft. ascent, desc.

40.00 100 ft. descent, set an iron post, 3 ft. long, 1 in. in

Chains diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

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

1915

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

46.08 Creek, 1 lk. wide, course N., asc.

64.47 Top of ridge, bears N. and S., 310 ft. above creek, desc.

80.00 Reestab. cor. of Ts. 17 & 18 N., Rs. 14 & 15 W., hereinafter described, 275 ft. below top of ridge.

Land, rolling mountainous.

Soil, stony and gravelly, 3rd. rate.

Undergrowth, scrub oak and laurel.

May 25, 1915.

Boundaries of T. 17 N., R. 15 W.  
 Latitudes, departures and closing errors.

Line designated	Bearing	Dist.	Latitudes		Departures	
			N.	S.	E.	W.
South boundary (4th. St. Par. N.)	West	480.00				480.00
West boundary	North	480.00	480.00			
North boundary	S. 89° 59' E.	478.26		.14	478.26	
East boundary	South	480.00		480.00		
Convergency					0.50	
Totals			480.00	480.14	478.76	480.00
Error in lat			0.00	.14		478.76
Error in dep.						1.24

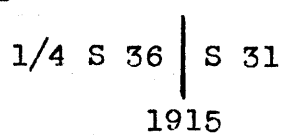
Chains

DATE DIAGRAM, 1915.

Survey executed by Fred N. Wardwell, U. S. Surveyor, under assignment instructions for group No. 46, dated Jan. 28, 1915, with a Young & Sons light mountain transit, No. 8481, equipt with a Smith solar attachment.

At the Standard cor. of Tps. 17 N., Rs. 16 and 17 W., on 4th. Standard Parallel N., described in Book "A", at 8h. Om., a.m., l.m.t., set off 8° 49' N. on the decl. arc, and 34° 48½' N. on the lat. arc, and determine a meridian with the solar, Thence North on a true line bet. secs. 31 and 36. Over slightly rolling land.

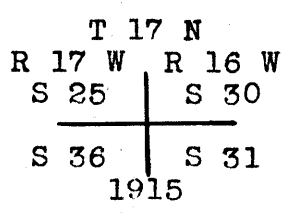
- 17.80 Dry wash, 15 lks. wide, course SW.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for 1/4 sec. cor., with a brass cap, marked



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

- 48.60 Dry wash, 50 lks. wide, 2 ft. deep, course S. 80° W.
- 60.00 Dry wash, 40 lks. wide, 2 ft. deep, course S. 75° W.

- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 25, 30, 31 and 36, with a brass cap, marked



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

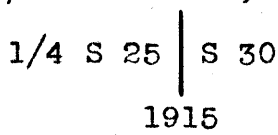
APR 15	6
APR 15	7
APR 13	18
APR 13	19
APR 13	30
APR 13	31



Chains Land, slightly rolling.  
 Soil, sandy and stony, 2nd. rate.  
 Undergrowth, greasewood, yucca palm, palo Christe, cat  
 claw and rabbit brush and cacti.

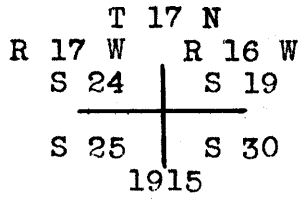
North on a true line bet. secs. 25 and 30.  
 Over slightly rolling land.

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



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

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in  
 the ground for cor. of secs. 19, 24, 25 and 30, with a  
 brass cap, marked



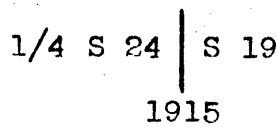
dig pits, 18 X 18 X 12 ins. in each sec. 5 1/2 ft. dist.,  
 and raise a mound of earth, 4 ft. base, 2 ft. high,  
 W. of cor.

Land, slightly rolling.  
 Soil, sandy and stony, 2nd. rate.  
 Undergrowth, greasewood, yucca palm, cat claw, rabbit  
 brush, palo Christe and cacti.

North on a true line bet. secs. 19 and 24.  
 Over slightly rolling land.

7.70 Dry wash, 30 lks. wide, 2 ft. deep, course S. 80° W.

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

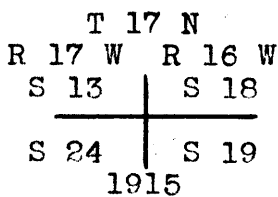


Chains dig pits, 18 X 18 X 12 ins. N. and S. of cor. 3 ft. dist., and raise a mound of earth, 3½ ft. base, 1½ ft. high, W. of cor.

55.92 Telephone line bet. Yucca and Cedar, bears N. 75° W. and S. 75° E.

76.50 Center of dry wash, 170 lks. wide, 1 ft. deep, course W.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 13, 18, 19 and 24, with a brass cap, marked



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

Land, slightly rolling.

Soil, sandy, 2nd. rate.

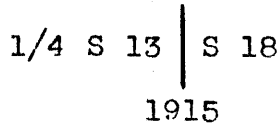
Undergrowth, greasewood, yucca palm, palo Christie, rabbit brush, cat claw and cacti.

North on a true line bet. secs. 13 and 18.

Over slightly rolling land.

28.50 Dry wash, 1 ch. wide, 4 ft. deep, course west.

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



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

51.50 Dry wash, 1 ch. wide, 2 ft. deep, course west.

65.70 Dry wash, 50 lks. wide, 1 ft. deep, course west.

76.50 Road bet. Yucca and Copperville, bears E. and W.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 7, 12, 13 and 18, with a brass cap, marked

Chains

	T 17 N	
R 17 W		R 16 W
S 12		S 7
-----		
S 13		S 18
1915		

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

Land, slightly rolling.

Soil, sandy, 2nd. rate.

Undergrowth, greasewood, yucca palm, palo Christe, rabbit  
brush and cacti.

North on a true line bet. secs. 7 and 12.

Over nearly level land.

- 1.70 Enter Mackenzie wash, course west, 6 ft. deep.
- 18.70 Leave Mackenzie wash.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in  
the ground to bed rock, in a mound of stone, for  $1/4$   
sec. cor., with a brass cap, marked
- |            |  |     |
|------------|--|-----|
| $1/4$ S 12 |  | S 7 |
| 1915       |  |     |
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.
- Asc. rocky SW. slope.
- 50.00 Top of spur, slopes NW., 75 ft. above  $1/4$  sec. cor., desc.
- 55.00 Dry wash, 40 lks. wide, course SW., 40 ft. below top of  
spur.
- 60.00 Top of small butte.
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in  
the ground for cor. of secs. 1, 6, 7 and 12, with a  
brass cap, marked

	T 17 N	
R 17 W		R 16 W
S 1		S 6
-----		
S 12		S 7
1915		

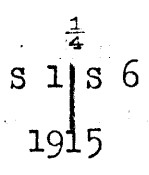
dig pits, 18 X 18 X 12 ins. in each sec.  $5\frac{1}{2}$  ft. dist.,  
and raise a mound of earth, 4 ft. base, 2 ft. high,  
W. of cor.

Chains.

Land, slightly rolling.  
Soil, sandy and stony, 2nd and 3rd rate.  
Undergrowth, greasewood, yucca palm, catclaw and cacti.

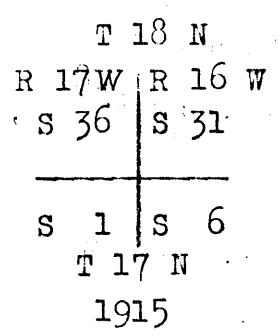
-----  
North, on a true line, mbet. secs. 1 and 6.  
Over rolling, mountainous land.

- 2.80 Enter dry wash, 4 ft. deep, course west.
- 6.30 Leave wash; ascend.
- 24.10 Top of 370 ft. ascent; descend along W. side of butte.
- 33.20 Foot of 115 ft. descent; ascend SW. slope.
- 40.00 Set an iron post 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for  $\frac{1}{4}$  sec. cor., with a brass cap, marked



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

- 47.90 Top of 285 ft. ascent, spur slopes S. 20° W.; descend.
- 52.00 Ravine, course W., 60 ft. below top of spur; ascend.
- 76.00 Top of spur, slopes N. 60° W., 530 ft. above ravine; descend.
- 80.00 245 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 cor. of Ts. 17 and 18 N., Rs. 16 and 17 W., with a brass cap, marked



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

Land, rolling, mountainous.  
Soil, stony, 3rd rate.  
Undergrowth, greasewood, catclaw and cacti.

April 15, 1915.

18. Survey of North bdy. of Township 17 North, Range 16 West.

Chains.

DATE DIAGRAM.  
1915

May 8	May 8	May 7	May 6	May 6	May 6
6	5	4	3	2	1

Survey executed by Fred N. Wardwell, U. S. Surveyor, under assignment instructions for Group No. 46, with a Young and Sons' light mountain transit, No. 8481, provided with a Smith solar attachment, which is kept in adjustment by frequent tests on meridians determined by Polaris and direct solar observations.

From the corner of Ts. 17 and 18 N., Rs. 15 and 16 W., which is a 3 inch iron post, hereinbefore described, West, on a random line on the N. bdy. of the township.

479.53 Intersect the W. bdy. of the township, 15 lks.S. of the cor. of Tps. 17 and 18 N., Rs. 16 and 17 W., hereinbefore described,

The falling of 15 lks.S. in 6 miles of line gives a return true course of S. 89° 59' E.

S. 89° 59' E., on a true line, bet. secs. 6 and 31.

Descend over rolling mountainous land.

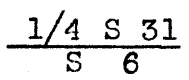
11.28 Dry wash, 20 lks. wide, course N., 230 ft. below township cor. Ascend.

21.60 Top of spur, slopes N., about 15 chs., 100 ft. above dry wash; descend.

Chains asc.

21.60 Top of spur, slopes N., about 15 chs., 100 ft. above dry wash, desc.

39.53 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



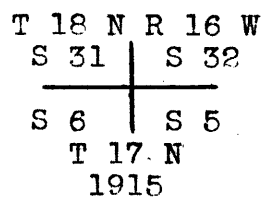
1915

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

45.10 Dry wash, 40 lks. wide, course NW., 270 ft. below top of spur.

54.40 Same dry wash, course SW., asc.

79.53 560 ft. above dry wash, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 5, 6, 31 and 32, with a brass cap, marked



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

Land, rolling mountainous.

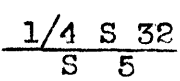
Soil, stony, 3rd. rate.

Undergrowth, oak brush, palo verde and cat claw.

S. 89° 59' E. on a true line bet. secs. 5 and 32.

Asc. over rolling mountainous land.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor. with a brass cap, marked



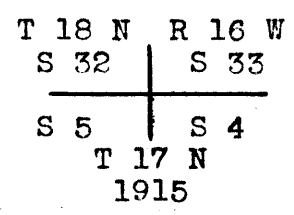
1915

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

Chains

43.95 Top of ridge, bears NE. and SW., 750 ft. above sec. cor. Descend.

80.00 280 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 4, 5, 32 and 33, with a brass cap, marked



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

Land, rough mountainous.

Soil, stony, 3rd. rate.

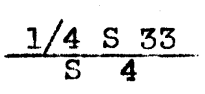
Undergrowth, oak brush and cat claw.

S. 89° 59' E. on a true line bet. secs. 4 and 33.

Desc. over rolling mountainous land.

28.82 Draw, course S., 615 ft. below sec. cor., asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 8 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



1915

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

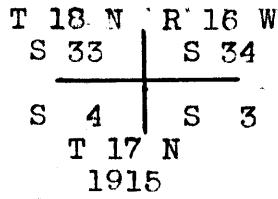
54.95 Top of ridge, bears N. 15° E. and S. 15° W., 715 ft. above draw, desc.

71.30 Head of rocky draw, course S., 267 ft. below top of ridge, asc.

78.12 Top of spur, slopes S. about 30 chs., 100 ft. above draw.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 6 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 3, 4, 33 and 34, with a brass cap, marked

Chains



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, oak brush and cat claw.

S. 89° 59' E. on a true line bet. secs. 3 and 34.

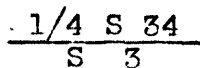
Desc. over rolling mountainous land.

14.77 Dry wash, 30 lks. wide, course S., 348 ft. below sec. cor.,  
asc.

17.20 Top of spur, slopes S., about 20 chs., 40 ft. above dry  
wash, desc.

35.40 Low saddle in ridge, bearing N. 20° W. and S. 10° E.,  
57 ft. below top of spur

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock  
rock, in a mound of stone, for 1/4 sec. cor., with a  
brass cap, marked



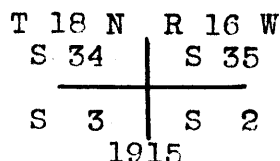
1915

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

65.56 Copper creek, 4 lks. wide, course S., 420 ft. below 1/4  
sec. cor., asc.

75.15 Road, bears N. and S.

80.00 100 ft. above Copper creek, set an iron post, 3 ft. long,  
3 ins. in diam., on surface rock, in a mound of stone,  
for cor. of secs. 2, 3, 34 and 35, with a brass cap,  
marked



and raise a mound of stone, 2 ft. base, 1½ ft. high,  
W. of cor. U.S.L.M., No. 2, bears N. 61° 13' E., 19.81  
chs. dist., a granite stone, 6 X 6 X 3 ins. above



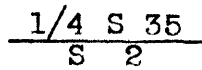
Chains

ground, marked U.S.M.M., No. 2.  
Land, rolling mountainous.  
Soil, stony, 3rd. rate.  
Undergrowth, oak brush and cat claw.

S. 89° 59' E. on a true line bet. secs. 2 and 35.

Over rolling mountainous land.

- 0.00 Top of spur, slopes S. 10° W., desc.
- 10.10 Dry wash, 50 lks. wide, course S., 90 ft. below top of spur, asc.
- 13.42 Top of spur, slopes S. about 15 chs., 42 ft. above dry wash, desc.
- 16.30 Dry wash, 20 lks. wide, course S., 18 ft. below top of spur, asc.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

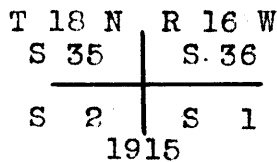


1915

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

- 62.55 Top of spur, slopes S. 20° W., about 20 chs., 1000 ft. above dry wash, desc.

- 80.00 30 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 cor. of secs. 1, 2, 35 and 36, with a brass cap, marked



T 17 N  
and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scrub oak, buck brush and cat claw.

Chains S. 89° 59' E. on a true line bet. secs. 1 and 36.  
 Desc. over rolling mountainous land.

10.84 Draw, course S. 40° W., 112 ft. below sec. cor., asc.

33.16 Top of spur, slopes S. 60° W., about 20 chs., 420 ft. above draw, desc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

$$\frac{1/4 \text{ S } 36}{\text{S } 1}$$
 1915

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

51.66 Draw, course S., 500 ft. below top of spur, asc.

59.42 Foot of cliffs, 60 ft. high, bear N. and S.

60.30 Top of rocky spur, slopes S. 20° W., 467 ft. above draw, desc.

80.00 Cor. of Tps. 17 and 18 N., Rs. 15 and 16 W., hereinbefore described, 167 ft. below spur.

Land, rough mountainous.  
 Soil, stony, 3rd. rate.  
 Undergrowth, buck brush, oak brush and cat claw.

May 8, 1915.

Boundaries of T. 17 N., R. 16 W.  
 Latitudes, departures and closing errors.

Line designated	Bearing	Dist.	Latitudes		Departures.	
			N.	S.	E.	W.
South boundary (4th. Std. Par. N.)	West	480.00				480.00
West boundary	North	480.00	480.00			
North boundary	S. 89° 59' E.	479.53		0.14	479.53	
East boundary	South	480.00		480.00		
Convergency					0.51	
Totals			480.00	480.14	480.04	480.00
Error in lat.				480.00		
Error in dep.				0.14	480.00	
					0.04	

May 8, 1915.



Chains

DATE DIAGRAM, 1915.

Apr. 17	Apr. 17	Apr. 17	Apr. 17	Apr. 17	Apr. 17
6	5	4	3	2	1

Survey executed by Fred N. Wardwell, U. S. Surveyor, with a Young & Sons transit, No. 8481, provided with a solar attachment.

At the cor. of Tps. 17 and 18 N., Rs. 16 and 17 W., which is a 3 inch iron post, hereinbefore described, at 8h. 0m., a. m., l.m.t., set off 10° 16' N. on the decl. arc, and 34° 54' N. on the lat. arc, and determine a meridian with the solar, Thence

West on a tangent line S. of sec. 36.

Asc. over rolling land.

7.20 Top of spur, slopes NW., 84 ft. above twp. cor., desc.  
 40.00 75 ft. below top of spur, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for 1/4 sec. cor., with a brass cap, marked

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

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., thence over level land.

58.80 Dry wash, 180 lks. wide, course S. 20° W.

80.00 N. 1 lk. from tangent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 1, 2, 35 and 36, with a brass cap, marked

$$\begin{array}{c} \text{T 18 N} \quad \text{R 17 W} \\ \text{S 35} \quad | \quad \text{S 36} \\ \hline \text{S 2} \quad | \quad \text{S 1} \\ \text{T 17 N} \\ 1915 \end{array}$$

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.

Chains Land, rolling and level.  
Soil, sandy, 2nd. rate.  
Undergrowth, cacti, greasewood, cat claw and rabbit brush.

West on a tangent, S. of sec. 35.

Over level land.

2.60 Enter dry wash, course S. 30° W.

10.10 Leave wash.

40.00 N. 2 lks. from tangent, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for 1/4 sec. cor., with a brass cap, marked

$$\frac{1/4 \text{ S } 35}{\text{S } 2}$$

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.

80.00 N. 3 lks. from tangent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 2, 3, 34 and 35, with a brass cap, marked

$$\begin{array}{c} \text{T 18 N} \quad \text{R 17 W} \\ \text{S 34} \quad | \quad \text{S 35} \\ \hline \text{S 3} \quad | \quad \text{S 2} \\ \text{T 17 N} \\ 1915 \end{array}$$

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

Land, level.

Soil, sandy, 2nd. rate.

Undergrowth, cacti, greasewood, cat claw and rabbit brush.

West on a tangent, S. of sec. 34.

Over level land.

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

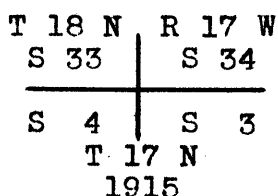
$$\frac{1/4 \text{ S } 34}{\text{S } 3}$$

1915

Chains

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

80.00 N. 6 lks. from tangent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 3, 4, 33 and 34, with a brass cap, marked



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

Land, level.

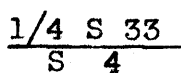
Soil, sandy, 2nd. rate.

Undergrowth, cacti, greasewood, yucca palm and rabbit brush.

West on a tangent, S. of sec. 33.

Over level land.

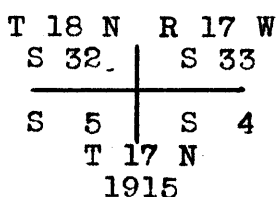
40.00 N. 8 lks. from tangent, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for 1/4 sec. cor., with a brass cap, marked



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.

80.00 N. 11 lks. from tangent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 4, 5, 32 and 33, with a brass cap, marked



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

Chains Land, level.  
 Soil, sandy, 2nd. rate.  
 Undergrowth, cacti, greasewood, yucca palm and rabbit  
 brush.

West on a tangent, S. of sec. 32.

Over level land.

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

$$\frac{1/4 \text{ S } 32}{\text{S } 5}$$

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.

80.00 N. 18 lks. from tangent, set an iron post, 3 ft. long,  
 3 ins. in diam., 24 ins. in the ground for cor. of secs.,  
 5, 6, 31 and 32, with a brass cap, marked

$$\begin{array}{ccc} \text{T } 18 \text{ N} & & \text{R } 17 \text{ W} \\ \text{S } 31 & | & \text{S } 32 \\ \hline \text{S } 6 & | & \text{S } 5 \\ & \text{T } 17 \text{ N} & \\ & 1915 & \end{array}$$

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, level.

Soil, sandy, 2nd. rate.

Undergrowth, cacti, greasewood, yucca palm and rabbit  
 brush.

West on a tangent, S. of sec. 31.

Over level land.

14.10 Dry wash, 50 lks. wide, course SW.

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

Chains

$\frac{1}{4}$  S 31  
S 6

1915

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.

59.20 Dry wash, 2 chs. wide, course SW.

87.50 Dry wash, 50 lks. wide, course S. 30° W.

110.00 Dry wash, 2 chs. wide, course SW.

139.27 N. 30 lks. from tangent, intersect the W. bdy. of the twp. 18.14 chs. S. 0° 6' W. of the old cor. of Tps. 17 and 18 N., Rs. 17 and 18 W., which is a basalt stone, 14 X 14 X 16 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 closing cor. of Tps. 17 and 18 N., R. 17 W., with a brass cap, marked

	T 18 N
	R 17 W
	S 31
	C
	S 6
	T 17 N
	1915

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

Land, level.

Soil, sandy and gravelly, 2nd. rate.

Undergrowth, Cacti, greasewood, yucca palm, cat claw and rabbit brush.

April 17, 1915.



Boundaries of T. 17 N., R. 17 W.  
 Latitudes, departures and closing errors.

Line designated	Bearing	Dist- ance	Latitudes		Departures	
			N.	S.	E.	W.
South boundary (4th. Std. Par. N.)	West	539.98				539.98
East bdy.	North	18.28	18.28			
East bdy.	N. 0° 8' E.	79.97	79.97		0.18	
East bdy.	N. 0° 6' E.	39.97	39.97		0.07	
East bdy.	N. 0° 7' E.	40.03	40.03		0.08	
East bdy.	N. 0° 5' E.	80.00	80.00		0.12	
West boundary.	N. 0° 4' E.	40.00	40.00		0.05	
East bdy.	N. 0° 2' E.	40.00	40.00		0.02	
East bdy.	N. 0° 4' E.	39.96	39.96		0.05	
East bdy.	N. 0° 6' E.	40.04	40.04		0.07	
East bdy.	N. 0° 9' E.	39.90	39.90		0.10	
East bdy.	N. 0° 6' E.	22.06	22.06		0.04	
North bdy.	East	539.27			539.27	
East bdy.	South	480.00		480.00		
Convergency-----						0.57
Totals-----			480.21	480.00	540.62	539.98
Error in lat.-----			<u>480.00</u>			
			0.21			
Error in dep.-----					<u>539.98</u>	
					0.64	

April 17, 1915.

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Surveyor.

Chains

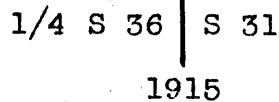
DATE DIAGRAM,  
1915.

Survey executed by Howard G. Mason, U. S. Transitman, under assignment instructions for group 46, dated Nov. 6, 1915. The instrument used is a Young & Sons light mountain transit, No. 8298, provided with a Smith solar attachment. For field test of instrument on a meridian established by Polaris observation, see Book "H." and division of T. 18 N., R. 15 W.

Dec. 11, 1915; At the cor. of Tps. 17 and 18 N., Rs. 15 and 16 W., which is a 3 inch iron post and stone mound, hereinbefore described, at 9h. 0m., a.m., l.m.t., set off 22° 55' S. on the decl. arc, and 34° 54' N. on the lat. arc, and determine a meridian with the solar, Thence,

North bet. secs. 31 and 36.  
Asc. over rolling mountainous land.

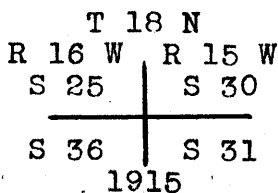
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



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

45.60 Top of ridge, bears E. and SW., 760 ft. above Twp. cor. desc.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 22 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 25, 30, 31 and 36, with a brass cap, marked



Dec. 18	6
Dec. 17	7
Dec. 17	18
Dec. 14-16	19
Dec. 13	30
Dec. 11	31

Chains and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor., 150 ft. below top of ridge.

Land, rough mountainous.

Soil, stony, 3rd. rate.

Undergrowth, dense scrub oak, mountain mahogany, cat claw and cacti.

At the cor. of secs. 25, 30, 31 and 36, at apparent noon, - I set off 22° 57' S. on the decl. arc, and observe the sun on the meridian for lat. The resulting latitude is 34° 55' N.

Dec. 13, 1915; At the cor. of secs. 25, 30, 31 and 36, at 10h. 0m., a.m., l.m.t., set off 23° 5½' S. on the decl. arc, and 34° 55' N. on the lat. arc, and determine a meridian with the solar, North bet. secs. 25 and 30.

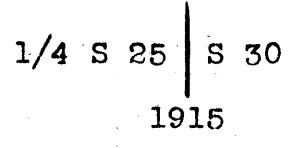
Desc. over rough mountainous land.

22.69 Canyon, course NW., 413 ft. below sec. cor., asc.

38.08 Top of rocky spur, slopes NW., 220 ft. above canyon, desc.

36.92 Canyon, course W., 300 ft. below top of spur, asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

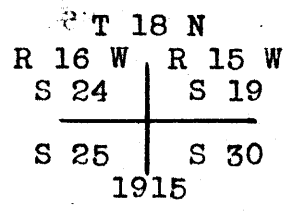


and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

61.28 Top of spur, slopes SW., 827 ft. above canyon, desc.

71.37 Gulch, course SW., 93 ft. below top of spur, asc.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 8 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 19, 24, 25 and 30, with a brass cap, marked



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

Chains

W. of cor., 20 ft. above gulch.

Land, rough mountainous.

Soil, stony, 3rd. rate.

Undergrowth, dense scrub oak, mountain mahogany and manzanita:

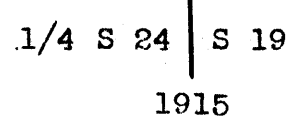
Dec. 14, 1915; At the cor. of secs. 19, 24, 25 and 30, at 9h. Om., a.m., l.m.t., set off 23° 9' S. on the decl. arc, and 34° 55½' N. on the lat. arc, and determine a meridian with the solar, North bet. secs. 19 and 24.

Asc. slightly over rolling SW. slope.

23.35 Top of spur, slopes W., 55 ft. above sec. cor., desc.

37.20 Ravine, course W., 430 ft. below top of spur, asc.

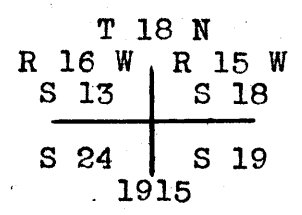
40.00 Set an iron post, 3 ft. long, 1½ in. in diam., 12 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor., 50 ft. above ravine.

Dec. 16, 1915; I commence at the 1/4 sec. cor. and continue same line north, desc. over rolling NW. slope.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 13, 18, 19 and 24, with a brass cap, marked



and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor., 425 ft. below 1/4 sec. cor.

Land, rolling and rough mountainous.

Soil, stony, 3rd. rate.

Undergrowth, dense scrub oak, manzanita and mountain mahogany.

- Chains Dec. 17, 1915; At the cor. of secs. 13, 18, 19 and 24, at 8h. 30m., a.m., l.m.t., set off 23° 18' S. on the decl. arc, and 34° 56' N. on the lat. arc, and determine a meridian with the solar. Thence North bet. secs. 13 and 18.
- Asc. slightly over rolling W. slope.
- 24.32 Trail, bears NE. and SW.
- 31.22 Gulch, course SW.
- 40.00 395 ft. above sec. cor., set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked
- |          |  |      |
|----------|--|------|
| 1/4 S 13 |  | S 18 |
| 1915     |  |      |
- and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor., continue to asc.
- 51.80 Summit of main ridge of the Hualpai mountains, bears NW. and SE., 500 ft. above 1/4 sec. cor., asc. along SE. slope of ridge.
- 75.00 Summit of same ridge, bears NE. and SW., 248 ft. above first crossing, desc.
- 80.00 96 ft. below summit, set an iron post, 3 ft. long, 3 ins. in diam., 18 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 7, 12, 13 and 18, with a brass cap, marked
- |        |        |      |
|--------|--------|------|
| T 18 N |        |      |
| R 16 W | R 15 W |      |
| S 12   |        | S 7  |
| S 13   |        | S 18 |
| 1915   |        |      |
- and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.
- Land, rough mountainous.
- Soil, rocky, 4th. rate.
- Undergrowth, dense scrub oak, manzanita and mountain mahogany.



## Chains

- 4.00 Top of ridge, bears SE. and NW., 77 ft. above sec. cor. desc.
- 29.68 Ravine, course SE., 228 ft. below top of ridge, asc.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

$$\begin{array}{c} 1/4 \text{ S } 1 \quad | \quad \text{S } 6 \\ \hline 1915 \end{array}$$

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

- 42.35 Top of spur, slopes E., 350 ft. above ravine, desc.
- 69.16 Ravine, course NE., 500 ft. below top of spur, asc.
- 77.82 Summit of main ridge of the Hualpai mountains, bears NE. and SW., 118 ft. above ravine.
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of Tps. 18 and 19 N., Rs. 15 and 16 W., with a brass cap, marked

$$\begin{array}{c} \text{T } 19 \text{ N} \\ \text{R } 16 \text{ W} \quad | \quad \text{R } 15 \text{ W} \\ \text{S } 36 \quad | \quad \text{S } 31 \\ \hline \text{S } 1 \quad | \quad \text{S } 6 \\ \text{T } 18 \text{ N} \\ 1915 \end{array}$$

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

Land, rough mountainous.

Soil, stony, 3rd. rate.

Undergrowth, dense scrub oak, mountain mahogany and manzanita.

Dec. 18, 1915.

-----  
U. S. Surveyor.

Survey of North Bdy. of T. 18 N., R. 15 W.

DATE DIAGRAM, 1915.

Dec. 18-20	Dec. 20	Dec. 20-21	Dec. 21	Dec. 21	Dec. 22
6	5	4	3	2	1

Chains Dec. 18, 1915; ~~reference~~ At the cor. of Twps. 18 and 19 N., Rs. 15 and 16 W., hereinbefore described, at 3h. 0m., p. m., l.m.t., set off 23° 21' S. on the decl. arc, and 34° 59' N. on the lat. arc, and determine a meridian with the solar, Thence East on a random line bet. secs. 6 and 31.

37.70 Set temp. 1/4 sec. cor.

Dec. 18, 1915.-

Dec. 20, 1915; ~~reference~~ At the temp. 1/4 sec. cor. bet. secs. 6 and 31, and at 9h. 0m., a.m., l.m.t., set off 23° 23½' S. on the decl. arc, and 34° 59' N. on the lat. arc, and determine a meridian with the solar, Thence continue measurement, East on a random line bet. secs. 6 and 31. (E ½).

77.70 Set temp. cor. for secs. 5, 6, 31 and 32.

East on a random line bet. secs. 5 and 32.

40.00 Set temp. 1/4 sec. cor.

80.00 Set temp. cor. for secs. 4, 5, 32 and 33.

East on a random line bet. secs. 4 and 33.

40.00 Set temp. 1/4 sec. cor.

Dec. 20, 1915.

Dec. 21, 1915; ~~reference~~ At the temp. 1/4 sec. cor. of secs. 4 and 33, and at 8h. 30m., a. m., l.m.t., set off 23° 25' S. on the decl. arc, and 34° 59' N. on the lat. arc, and determine a meridian with the solar, Thence continue measurement,

East on a random line bet. secs. 4 and 33. (E. ½);

80.00 Set temp. cor. for secs. 3, 4, 33 and 34.

East on a random line bet. secs. 3 and 34.



Chains

40.00 Set temp. 1/4 sec. cor.  
 80.00 Set temp. cor. for secs. 2, 3, 34 and 35.  
 At the temp. cor. of secs. 2, 3, 34 and 35, Dec. 21, 1915,  
 at apparent noon, I set off 23° 25' S. on the decl.  
 arc, and observe the sun on the meridian for lat. The  
 resulting latitude is 34° 59' N.

-----  
East on a random line bet. secs. 2 and 35.

40.00 Set temp. 1/4 sec. cor.  
 80.00 Set temp. cor. for secs. 1, 2, 35 and 36.  
 Dec. 21, 1915.

-----  
 Dec. 22, 1915; At the temp. cor. of secs. 1,  
 2, 35 and 36, at 10h. 0m., a. m., l.m.t., set off  
 23° 25' S. on the decl. arc, and 34° 59' N. on the lat.  
 arc, and determine a meridian with the solar.

-----  
East on a random line bet. secs. 1 and 36.

40.00 Set temp. 1/4 sec. cor.  
 80.18 Intersect reestablished cor. of T. 18 and 19 N., R. 14.,  
 and 15 W., hereinafter described. True return course of  
 this Tp. bdy. is therefore west.

-----  
West on a true line bet. secs. 1 and 36.

Desc. over rolling mountainous land.

10.98 Ravine, course NE., 182 ft. below sec. cor., asc.  
 27.38 Top of spur, slopes N., 293 ft. above ravine, desc.  
 33.83 Ravine, course NE., 74 ft. below top of spur, asc.  
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in  
 the ground to bed rock, in a mound of stone, for 1/4  
 sec. cor., with a brass cap, marked

1/4 S 36  
 S 1

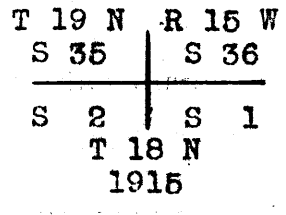
1915

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

67.81 Top of spur, slopes NE., 543 ft. above ravine, desc.  
 80.00 50 ft. below top of spur, set an iron post, 3 ft. long,

North Edy. of T. 18 N., R. 15 W.

Chains 3 ins. in diam., 14 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 1, 2, 35 and 36, with a brass cap, marked



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

Land, rough mountainous.  
Soil, stony and rocky, 4th. rate.  
Undergrowth, dense scrub oak, mountain mahogany and manzanita.

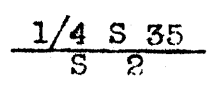
West on a true line bet. secs. 2 and 35.

Desc. over rolling mountainous land.

20.03 Ravine, course N., 162 ft. below sec. cor., asc.

26.38 Top of spur, slopes N., 222 ft. above ravine, desc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 8 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



1915

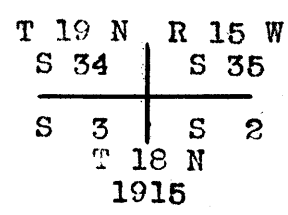
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

52.35 Ravine, course NW., 340 ft. below top of spur, asc.

68.93 Top of spur, slopes NE., 500 ft. above ravine.

72.43 Desc.

80.00 118 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 16 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 2, 3, 34 and 35, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 4th. rate.

Undergrowth, dense scrub oak, mountain mahogany and  
manzanita.

West on a true line bet. secs. 3 and 34.

Desc. over rolling mountainous land.

- 11.23 Ravine, course NW., 200 ft. below sec. cor., asc.  
14.48 Top of spur, slopes N., 148 ft. above ravine, desc.  
18.40 Ravine, course N., 90 ft. below top of spur, asc.  
27.45 Top of spur, slopes NW., 194 ft. above ravine, desc.  
35.26 Gulch, course NW., 214 ft. below top of spur, asc.  
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in  
the ground for  $\frac{1}{4}$  sec. cor., with a brass cap, marked

$$\frac{1/4 \text{ S } 34}{\text{S } 3}$$

1915

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

- 60.18 Top of spur, slopes N., 310 ft. above gulch, desc.  
75.68 Gulch, course NE., 314 ft. below top of spur.  
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in  
the ground for cor. of secs. 3, 4, 33 and 34, with a  
brass cap, marked

$$\begin{array}{ccc} \text{T } 19 \text{ N} & & \text{R } 15 \text{ W} \\ \text{S } 33 & | & \text{S } 34 \\ \hline \text{S } 4 & | & \text{S } 3 \\ \text{T } 18 \text{ N} & & \\ 1915 & & \end{array}$$

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

Land, rough mountainous.

Soil, stony, 4th. rate.

Undergrowth, dense scrub oak, mountain mahogany and  
manzanita.

Chains West on a true line bet. secs. 4 and 33.  
 Desc. over rolling mountainous land.

14.68 Gulch, course NE., 45 ft. below sec. cor., asc.

25.38 Top of spur, slopes N., 165 ft. above gulch, desc. over rolling land.

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

$$\frac{1/4 \text{ S } 33}{\text{S } 4}$$

1915

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

56.00 Feet of 13 ft. descent, asc.

80.00 200 ft. ascent, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 4, 5, 32 and 33, with a brass cap, marked

$$\begin{array}{ccc} \text{T } 19 \text{ N} & & \text{R } 15 \text{ W} \\ \text{S } 32 & | & \text{S } 33 \\ \hline \text{S } 5 & | & \text{S } 4 \\ \text{T } 18 \text{ N} & & \\ 1915 & & \end{array}$$

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

Land, rolling mountainous.  
 Soil, stony, 3rd. rate.  
 Undergrowth, scrub oak, mountain mahogany and manzanita.

---

West on a true line bet. secs. 5 and 32.  
 Desc. over rolling land.

24.42 Wash, course NE., 155 ft. below sec. cor., thence over slightly rolling land.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

$$\frac{1/4 \text{ S } 32}{\text{S } 5}$$

1915

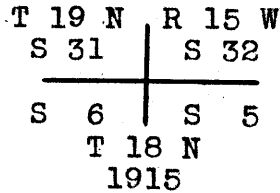
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

Chains

46.23 Same wash, course SE.

57.18 Same wash, course NE.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 12 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 5, 6, 31 and 32, with a brass cap, marked



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

Land, rolling.

Soil, stony, 3rd. rate.

Undergrowth, dense scrub oak, manzanita and mountain mahogany.

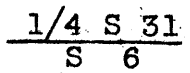
West on a true line bet. secs. 6 and 31.

Asc. over rolling mountainous land.

16.68 Top of spur, slopes SE., 290 ft. above sec. cor., desc.

32.68 Ravine, course SE., 80 ft. below top of spur, asc.

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



1915

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

63.10 Top of spur, slopes SE., 730 ft. above ravine, desc.

69.88 Top of summit of main range of the Hualpai mountains, bears NE. and SW., 115 ft. below top of spur. desc.

76.30 Head of ravine, course NW., 175 ft. below top of range, asc.

77.88 Cor. of Tps. 18 and 19 N., Rs. 15 and 16 W., hereinbefore described, 34 ft. above ravine.

Land, rough mountainous.

Soil, stony, 3rd. rate.

Chains Undergrowth, dense manzanita, scrub oak and mountain mahogany.

Boundaries of T. 18 N., R. 15 W.  
Latitudes, departures and closing errors.

Line designated	Bearing.	Dist- ance.	Latitudes.		Departures.	
			N.	S.	E.	W.
South boundary	N.89°59'W.	478.26	.14			478.26
West boundary	North	480.00	480.00			
North boundary	East	477.88			477.88	
East boundary	South	480.00		480.00		
Convergency					0.51	
Totals			480.14	480.00	478.39	478.26
			480.00			
Error in lat.			0.14		478.26	
Error in dep.						0.13

Dec. 22, 1915.



Chains

DATE DIAGRAM,  
1916.

Feb. 9, 1916; Survey executed by Howard G. Mas-  
on, U. S. Transitman, under assignment instru-  
ctions for group 46, dated Nov. 6, 1915.

The instrument used is a Young & Sons light  
mountain transit, No. 8298, equipt with a  
Smith solar attachment, which is kept in ad-  
justment by repeated and frequent tests on a  
meridian established by an observation on  
Polaris.

At the cor. of Tps. 17 and 18 N.,  
Rs. 16 and 17 W., which is a 3 inch iron  
post and mound of stone, hereinbefore described,  
at 10h. Om., a. m., l.m.t. set off 14° 54'  
S. on the decl. arc, and 34° 54' N. on the  
lat. arc, and determine a meridian with the  
solar, Thence

North bet. secs. 31 and 36.

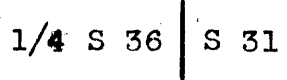
Desc. over rolling land.

8.60 Foot of 334 ft. descent, asc.

13.50 Rocky spur, slopes NW., 52 ft. ascent, desc.

19.10 Foot of 275 ft. descent, enter level land, bears NW.  
Wash, also wash, course NW.

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



1916

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

48.70 Point of rocky spur, brs. NW.

50.00 Wash, course NW.

71.00 Leave level land, asc. S. slope.

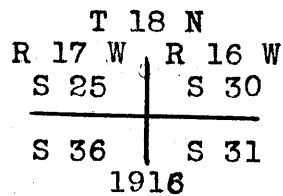
80.00 200 ft. above level land, set an iron post, 3 ft. long,  
3 ins. in diam., 10 ins. in the ground to bed rock, in

Feb. 18	6
Feb. 17	7
Feb. 17	18
Feb. 17	19
Feb. 16	30
Feb. 9	31



Chains

a mound of stone for cor. of secs. 25, 30, 31 and 36,  
with a brass cap, marked



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

Land, rolling hills.

Soil, stony and sandy, 3rd. rate.

Undergrowth, scattering cat claw and cacti.

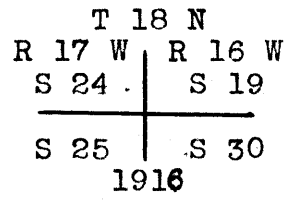
Feb. 16, 1916; ~~reference~~ At the cor. of secs. 25, 30,  
31 and 36, ~~and~~ at 9h. 0m., a.m., l.m.t., set off  $12^{\circ}$   
 $36'$  S. on the decl. arc, and  $34^{\circ} 55'$  N. on the lat.  
arc, and determine a meridian with the solar, Thence  
North bet. secs. 25 and 30.

Asc. over rolling mountainous land.

- 8.70 Top of ridge, bears NW. and SE., 300 ft. above sec. cor.,  
desc.
- 22.56 Ravine, course SE., 270 ft. below top of ridge, asc.
- 39.43 Top of ridge, bears NE. and SW., 368 ft. above ravine,  
desc.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface  
rock, in a mound of stone, for  $1/4$  sec. cor., with a  
brass cap, marked
- |            |  |      |
|------------|--|------|
| $1/4$ S 25 |  | S 30 |
| 1916       |  |      |
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.
- 45.17 Head of gulch, course NW., 215 ft. below top of ridge,  
asc.
- 55.62 Top of spur, slopes NW., 40 ft. above gulch, desc.
- 64.00 Ravine, course SW., 106 ft. below top of spur, asc.
- 80.00 225 ft. above ravine, set an iron post, 3 ft. long, 3 ins.  
in diam., 18 ins. in the ground to bed rock, in a mound  
of stone, for cor. of secs. 19, 24, 25 and 30, with a

Chains

brass cap, marked



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

Land, rough mountainous.

Soil, rocky, 4th. rate.

Undergrowth, scattering cat claw, cacti and palo verde.

Feb. 17, 1916; At the cor. of secs. 19, 24, 25 and 30, at 9h. 0m., a. m., l.m.t. set off 12° 15' S. on the decl. arc, and 34° 55½' N. on the lat. arc, and determine a meridian with the solar, Thence North bet. secs. 19 and 24.

Asc. slightly over rolling mountainous land.

5.00

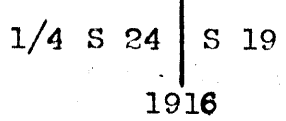
Top of ridge, bears NE. and SW., 57 ft. above sec. cor., desc. over rolling land.

14.30

Over rolling E. slope.

40.00

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



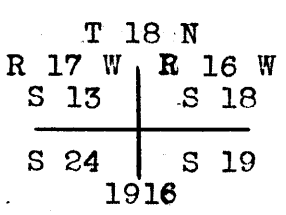
and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor., 336 ft. below top of ridge, continue to desc.

65.68

Willow creek, course NW., running water, 300 ft. below 1/4 sec. cor., asc.

80.00

100 ft. above creek, set an iron post, 3 ft. long, 3 ins. in diam., 16 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 13, 18, 19 and 24, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scattering palo verde, cat claw and cacti.

North bet. secs. 13 and 18.

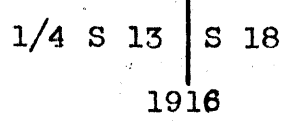
Asc. over rolling mountainous land.

16.10 Top of spur, slopes SW., 280 ft. above sec. cor., desc.

26.30 Gulch, course SW., 154 ft. below top of spur, asc.

31.75 Top of spur, slopes SW., 56 ft. above gulch, desc. over rolling land.

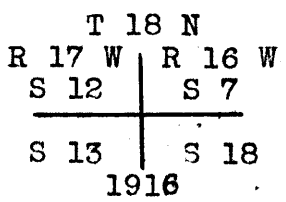
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 18 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor., 116 ft. below top of spur, continue to desc.

73.70 Rock creek, course NW., running water, 150 ft. below 1/4 sec. cor.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 18 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 7, 12, 13 and 18, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scattering cacti, cat claw, palo christe and scrub cedar timber.

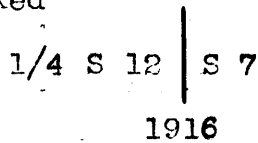
Chains Feb. 17, 1916; at apparent noon at the cor. of secs. 7, 12, 13 and 18 I set off 12° 13' S. on the decl. arc, and observe the sun on the meridian for lat. The resulting latitude is 34° 57' N.

North bet. secs. 7 and 12.

Over rolling land.

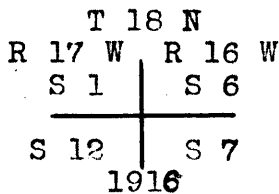
- 5.00 Foot of slope, bears NE. and SW., asc.
- 14.60 Top of spur, slopes E., 180 ft. ascent, desc.
- 20.50 Gulch, course SE., 77 ft. below top of spur, asc.
- 38.50 Top of ridge, bears E. and W., 380 ft. above gulch, desc.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface

rock, in a mound of stone, for 1/4 sec. cor. with a brass cap, marked



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

- 47.90 Gulch, course W., 296 ft. below top of ridge, asc.
- 72.50 Rocky spur, slopes SW., 496 ft. above gulch, desc.
- 80.00 255 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 1, 6, 7 and 12, with a brass cap, marked



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

Land, rolling and rough mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scatterind cat claw, cacti, palo christe and scrub cedar.

Feb. 18, 1916; At the cor. of secs. 1, 6, 7 and 12, at 8h. 0m., a. m., l.m.t., set off 11° 54'

Chains

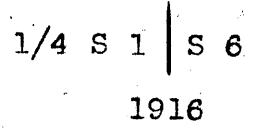
S. on the decl. arc, and 34° 58' N. on the lat. arc, and determine a meridian with the solar, thence,

North bet. secs. 1 and 6

Ascend. overrolling land.

5.00 Top of spur, slopes NW., 34 ft. above sec. cor., desc.

40.00 516 ft. below top of spur, set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

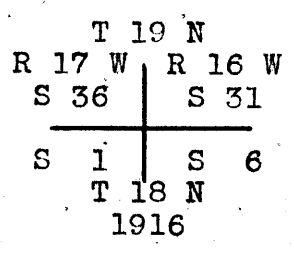


and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor., continue to desc.

54.85 Wash, 50 lks. wide, course SW., 120 ft. below 1/4 sec. cor.,

74.80 Foot of rocky slope, bears NE. and SW., asc.

80.00 211 ft. above wash, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for cor. of Tps. 18 and 19 N., Rs. 16 and 17 W., with a brass cap, marked



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

Land, rolling and rough mountainous.

Soil, rocky, 4th. rate.

Undergrowth, scattering cacti, palo christe and scrub cedar.

Feb. 18, 1916.

DATE DIAGRAM, 1916.

Apr. 24	Apr. 24	Apr. 25	Apr. 25	Apr. 25	Apr. 25
6	5	4	3	2	1

Chains Apr. 24, 1916; Survey executed by Mans H. Coffin, Jr., U.S. Transitman, under assignment instructions for group 46, with a Young & Sons light mountain transit, No. 8540, provided with a Smith solar attachment, which is kept in adjustment on a meridian determined by a Polaris observation.

At the cor. of Tps. 18 and 19 N., Rs. 16 and 17 W., which is a 3 inch iron post and mound of stone, hereinbefore described, at 9h. 0m., a. m., l.m.t., set off 12° 55' N. on the decl. arc, and 34° 59' N. on the lat. arc, and determine a meridian with the solar, Thence,

39.50 East on a random line on the N. bdy. of the twp. Set temp. 1/4 sec. cor., thereafter setting temp. cors. at intervals of 40.00 chs., and at

479.73 Fall 84 lks. N. of corner of T. 18 N., R. 16 W. of Tps. 18 and 19 N., Rs. 15 and 16 W., which is a 3 inch iron post and mound of stone, hereinbefore described.

N. 89° 54' W. on a true line bet. secs. 1 and 36.

Desc. over rolling mountainous land.

37.23 Creek, 10 lks. wide, course NW., 600 ft. below twp. cor. asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

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

1916

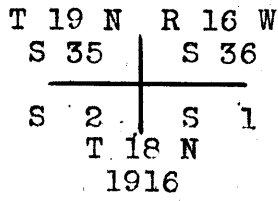
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.

52.93 Top of spur, slopes NE., 329 ft. above creek, desc.

Chains

63.23 Creek, 6 lks. wide, course NE., 182 ft. below top of spur, asc.

80.00 615 ft. above creek, set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground to bed rock, in a mound of stone for cor. of secs. 1, 2, 35 and 36, with a brass cap, marked



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

Land, rolling and rough mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scrub oak, manzanita and cacti.

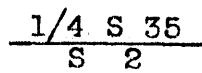
N. 89° 54' W. on a true line bet. secs. 2 and 35.

Asc. over rough mountainous land.

10.00 Top of spur, slopes NE., 180 ft. above sec. cor., desc.

22.73 Creek, 8 lks. wide, course NE., 217 ft. below top of spur, asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



1916

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

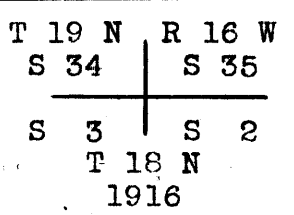
47.00 Top of spur, slopes NE., 730 ft. above creek, desc.

58.23 Ravine, course NE., 280 ft. below top of spur, asc.

68.73 Top of spur, slopes NE., 154 ft. above ravine, desc.

80.00 218 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 2, 3, 34 and 35, with a brass cap, marked

Chains



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

Land, rough mountainous.

Soil, stony, 3rd. rate.

Undergrowth, mountain mahogany, scrub oak and cacti.

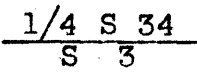
N. 89° 54' W. on a true line bet. secs. 3 and 34.

Desc. over rolling mountainous land.

8.33 Creek, 2 lks. wide, course NW., 298 ft. below sec. cor.,  
asc.

20.43 Top of spur, slopes NW., 255 ft. above creek, desc.

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

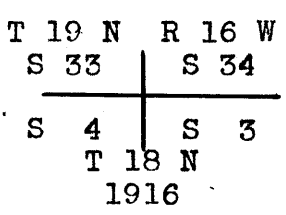


1916

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

72.23 Draw, course NW., 1172 ft. below top of spur, asc.

80.00 64 ft. above draw, set an iron post, 3 ft. long, 3 ins.  
in diam., 16 ins. in the ground to bed rock, in a mound  
of stone, for cor. of secs. 3, 4, 33 and 34, with a  
brass cap, marked



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

Land, rolling mountainous and small cliffs.

Soil, stony, 3rd. rate.

Timber, scattering small pine on N. slopes.

Undergrowth, scrub oak, mountain mahogany and manzanita.



Chains N. 89° 54' W. on a true line bet. secs. 4 and 33.  
 Asc. over rolling mountainous land.

9.13 Top of spur, slopes NW., 196 ft. above sec. cor., desc.

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

$$\frac{1/4 \text{ S } 33}{\text{S } 4}$$

1916

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

80.00 1079 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 14 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 4, 5, 32 and 33, with a brass cap, marked

T 19 N	R 16 W
S 32	S 33
S 5	S 4
T 18 N	
1916	

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

Land, rolling mountainous.  
 Soil, stony, 3rd. rate.  
 Undergrowth, dense scrub oak, mountain mahogany, manzanita and cacti.

---

N. 89° 54' W. on a true line bet. secs. 5 and 32.  
 Desc. over rolling mountainous land.

24.33 Creek, 2 lks. wide, course SW., 246 ft. below sec. cor., asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

$$\frac{1/4 \text{ S } 32}{\text{S } 5}$$

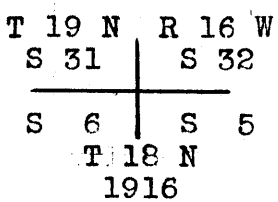
1916

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

Chains

58.73 Top of ridge, bears NE. and SW., 173 ft. above creek, desc.

80.00 480 ft. below top of ridge, set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 5, 6, 31 and 32, with a brass cap, marked



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

Land, rolling mountainous.

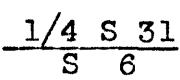
Soil, stony, 3rd. rate.

Undergrowth, scattering palo christe, scrub oak and cacti.

N. 89° 54' W. on a true line bet. secs. 6 and 31.

Desc. over rolling land.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked



1915

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

43.23 Draw, course SW., with small spring in bottom, 50 lks. N. of line, 550 ft. below sec. cor., asc.

79.73 Cor. of Tps. 18 and 19 N., Rs. 16 and 17 W., hereinbefore described, 172 ft. above draw.

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scattering palo christe and small juniper.

April 25, 1916.

Boundaries of T. 18 N., R. 16 W.  
 Latitudes, departures and closing errors.

Line designated	Bearing	Dist- ance	Latitudes		Departures	
			N.	S.	E.	W.
South boundary	N.89° 59' W	479.53	0.14			479.53
West boundary	North	480.00	480.00			
North boundary	S.89° 54' E.	479.73		0.84	479.73	
East boundary	South	480.00		480.00		
Convergency					0.51	
Totals			480.14	480.84	480.24	479.53
Error in lat.				480.14		
				0.70		
Error in dep.					479.53	
					0.71	

DATE DIAGRAM, 1916.

Mar. 3	Mar. 2	Feb. 19	Feb. 19	Feb. 18	Feb. 18
6	5	4	3	2	1

Survey executed by Howard G. Mason, U. S. Transitman.

Chains At the cor. of Tps. 18 and 19 N., Rs. 16 and 17 W., which is a 3 inch iron post and mound of stone, hereinbefore described, on Feb. 18, 1916, set off 11° 53 $\frac{1}{2}$ ' S. on the decl. arc, and 34° 59' N. on the lat. arc, at 10h. 0m., a. m., l.m.t., and determine a meridian with the solar, Thence

West on a true line bet. secs. 1 and 36.

Asc. over rolling mountainous land.

14.00 Top of 267 ft. ascent, desc.

38.60 Foot of 190 ft. descent, asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 8 ins. in the ground to bed rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

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

1916

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

44.30 Top of 187 ft. ascent, spur, slopes S., desc.

80.00 570 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 12 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 1, 2, 35 and 36, with a brass cap, marked

T 19 N	R 17 W
S 35	S 36
S 2	S 1
T 18 N	
1916	

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

Land, rolling mountainous.

Soil, stony, 4th. rate.

Undergrowth, cacti, cat claw and palo verde.

Chains Feb. 18, 1916; at the cor. of secs. 1, 2, 35 and 36, at apparent noon I set off  $11^{\circ} 52'$  S. on the decl. arc, and observe the sun on the meridian for lat. The resulting latitude is  $34^{\circ} 59'$  N.

West on a true line bet. secs. 2 and 35.

Asc. over rolling mountainous land.

34.50 Top of rocky ridge, bears NE. and SW., 960 ft. above sec. cor., desc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for  $1/4$  sec. cor., with a brass cap, marked

$$\frac{1/4 \text{ S } 35}{\text{S } 2}$$

1916

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

80.00 1173 ft. below top of ridge, set an iron post, 3 ft. long, 3 ins. in diam., 14 ins. in the ground to bed rock, in a mound of stone, for cor. of secs. 2, 3, 34 and 35, with a brass cap, marked

$$\begin{array}{c} \text{T } 19 \text{ N} \quad \text{R } 17 \text{ W} \\ \text{S } 34 \quad | \quad \text{S } 35 \\ \hline \text{S } 3 \quad | \quad \text{S } 2 \\ \text{T } 18 \text{ N} \\ 1916 \end{array}$$

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

Land, rough mountainous.

Soil, rocky, 4th. rate.

Undergrowth, cacti, cat claw and palo verde.

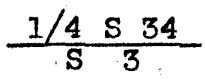
Feb. 19, 1916; At the cor. of secs. 2, 3, 34 and 35, at 8h. Om., a. m., l.m.t., set off  $11^{\circ} 33'$  S. on the decl. arc, and  $34^{\circ} 59'$  N. on the lat. arc, and determine a meridian with the solar, and Trance

West on a true line bet. secs. 3 and 34.

Asc. over rolling mountainous land.

Chains

- 7.30 Top of 74 ft. ascent, desc.
- 13.10 Foot of 86 ft. descent, asc.
- 26.40 Top of 178 ft. ascent, spur, slopes N., desc.
- 39.50 Gulch, course NW., 209 ft. below top of spur, asc.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for 1/4 sec. cor., with a brass cap, marked

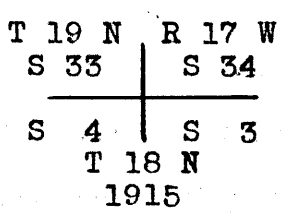


1916

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

- 55.50 Top of spur, slopes NW., 316 ft. above 1/4 sec. cor., desc.

- 80.00 445 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 cor. of secs. 3, 4, 33 and 34, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scattering cacti, cat claw and palo verde.

Feb. 19, 1916; at the cor. of secs. 3, 4, 33 and 34, at apparent noon, I set off 11° 31' S. on the decl. arc, and observè the sun on the meridian for lat. The resulting latitude is 34° 59' N.

Thence

West on a true line bet. secs. 4 and 33.

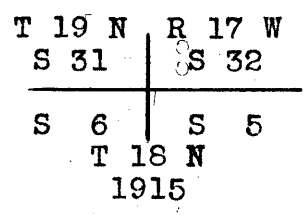
Desc. over rolling land.

- 4.50 65 ft. below sec. cor., foot of hills, bear NE. and SW.,

- Chains enter level land.
- 27.00 Wash, 80 lks. wide, course NW.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for 1/4 sec. cor., with a brass cap, marked
- $$\frac{1/4 \text{ S } 33}{\text{S } 4}$$
- 1916
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.
- 44.50 Dry wash, 40 lks. wide, course SW.
- 74.50 Dry wash, 60 lks. wide, course SW.
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 4, 5, 32 and 33, with a brass cap, marked
- $$\begin{array}{c} \text{T } 19 \text{ N} \quad \text{R } 17 \text{ W} \\ \text{S } 32 \quad | \quad \text{S } 33 \\ \hline \text{S } 5 \quad | \quad \text{S } 4 \\ \text{T } 18 \text{ N} \\ 1916 \end{array}$$
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor.
- Land, mostly level.
- Soil, sandy and stony, 3rd. rate.
- Undergrowth, scattering greasewood, cat claw and cacti.
- 
- Mar. 2, 1916; I commenced At the cor. of secs. 4, 5, 32 and 33, at 8h. 0m., a.m., l.m.t., set off  $7^{\circ} 8' \text{ S.}$  on the decl. arc, and  $34^{\circ} 59' \text{ N.}$  on the lat. arc, and determine a meridian with the solar, Thence West on a true line bet. secs. 5 and 32.
- Over level land.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for 1/4 sec. cor., with a brass cap, marked
- $$\frac{1/4 \text{ S } 32}{\text{S } 5}$$
- 1916
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in

Chains

the ground for cor. of secs. 5, 6, 31 and 32, with a brass cap, marked



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

Land, level and slightly rolling.

Soil, sandy and stony, 3rd. rate.

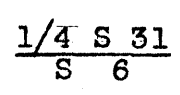
Undergrowth, scattering greasewood, cat claw and cacti.

March 3, 1916; At the cor. of secs. 5, 6, 31 and 32, at 9h. 0m., a. m., l.m.t., set off 6° 44 1/2' S. on the decl. arc, and 34° 59' N. on the lat. arc, and determine a meridian with the solar, thence, West on a true line bet. secs. 6 and 31.

Over slightly rolling land.

38.30 Dry wash, course SW.

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



1916

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

113.30 Main line of the Atchison, Topeka and Santa Fe rail road, bears N. 9° 14' E. and S. 9° 14' W.

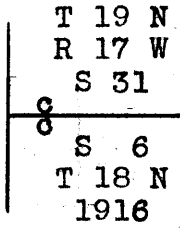
115.50 Road, parallel to rail road., National highway.

137.90 Intersect the W. bdy. of the twp. 16.68 chs. S. of the closing cor. of Tps. 18 N., Rs. 17 and 18 W., which is a malpais stone, 12 X 12 X 5 ins. above ground, marked and witnessed as described by the surveyor general.

At the point of intersection, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for closing cor. of Tps. 18 and 19 N., R. 17 W., with a



Chains brass cap, marked



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

Land, slightly rolling.

Soil, sandy and stony, 3rd. rate.

Undergrowth, scattering greasewood, ocotillo and cacti.

March 3, 1916.

Boundaries of T. 18 N., R. 17 W.  
Latitudes, departures and closing errors.

Line designated	Bearing	Dist- ance	Latitudes		Departures	
			N.	S.	E.	W.
South boundary	West	539.27				539.27
West boundary	North N. 0° 6' E.	461.42 18.14	461.42 18.14		.03	
North bdy.	East	537.90			537.90	
East bdy.	South	480.00		480.00		
Convergency					0.57	
Totals			479.56	480.00	538.50	539.27
Error in lat.			479.56		0.44	
Error in dep.					538.50	0.77

March 3, 1916.

S. S. S. S. S. S. S. S. S.

Survey of W. and N. boundaries of T. 19 N., R. 15 W.

Chains

The surveys described in the following field notes were begun by Albert Smith, Jr., U. S. Surveyor, chief of party, using transit number 8583, working jointly with Ray D. Armstrong, U. S. Transitman, associate, using transit number 8396, up to May 19, 1916, when Mr. Smith went on sick leave and Mr. Armstrong assumed charge of the party. Work thereafter was continued by him jointly with William L. Nash, U. S. Transitman, associate, using transit number 8583.

The instruments are Young and Sons' light mountain transits with Smith solar attachments. The horizontal limbs are provided with two double verniers reading to single minutes of arc, which is also the least count of the verniers of the latitude and declination arcs.

The transits were approved by the assistant supervisor of surveys for Arizona and California, subject to satisfactory field tests, under assignment instructions for groups 41 and 42, on Nov. 29, 1915.

Test of Instruments.

Apr. 14, 1916.-- Albert Smith, Jr., Observer.

At my camp near the center of sec. 23, in latitude  $35^{\circ}01'N.$ , longitude  $113^{\circ}51'W.$ , at 4h 00m, p.m., l.m.t., I set off  $35^{\circ}01'$  on the lat. arc,  $9^{\circ}34\frac{1}{2}'N.$  on the decl. arc, and determine a meridian with the solar, marking a point in the same by a tack driven in a wooden stake firmly set in the ground 5 chs. N. of my station.

Apr. 15, 1916.

At the above station, at 5h 58.3m, l.m.t., I observe Polaris at eastern elongation, in accordance with instructions in the Manual, and mark a point in the line thus determined by a nail driven in a wooden stake firmly set in the ground east of the point established last night.

At 7h 45m, a.m., I turn off the azimuth of Polaris  $1^{\circ}23'$  to the west, and mark the meridian thus determined by a tack driven in a wooden stake approximately in line with that set by the solar, the difference in direction being less than one minute of arc.

At 8h 00m, a.m., l.m.t., I set off  $35^{\circ}01'$  on the lat. arc,  $9^{\circ}48'N.$  on the decl. arc; and determine a meridian with the solar, which agrees within less than one minute of arc with the positions previously defined.

The observations with the solar above described were duplicated at the same station by Mr. Armstrong with transit number 8396, securing practically identical results.

The positions defined for the meridian by a.m. and p.m. observations with both transits agreeing within less than one minute of arc with the true meridian as determined by observation on Polaris, it is concluded that the adjustments are satisfactory. Level and collimation adjustments were previously examined and found satisfactory.

The magnetic bearing of the true meridian, at 8h 00m, a.m., l.m.t., is  $N.14^{\circ}45'W.$  The angle thus determined gives for the magnetic declination,  $14^{\circ}45'E.$

Chains

DATE  
DIAGRAM  
1916

May 13  
6  
May 10  
7  
May 8  
18  
May 3  
19  
May 2  
30  
April 28  
31

From the cor. of Tps. 18 and 19 N., Rs. 15 and 16 W.,  
hereinbefore described,

North, bet. secs. 31 and 36,  
over mountainous land, through dense undergrowth.  
Desc. broken N. slope 640 ft.  
Gulch, course NW. Asc. 75 ft. on S. slope.  
On spur sloping W.,  
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

$\frac{1}{4}$   
S36 | S31

1916

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

Desc. 120 ft., on N. slope.  
Gulch, course W. Asc. 65 ft., on broken S. slope.  
Spur slopes W. Desc. NW. slope 380 ft.  
Gulch, course W. Asc. 340 ft., on S. slope.  
Spur slopes W. Desc. 70 ft., on N. slope.  
Set a granite stone, 14x8x6 ins., 10 ins. in the ground,  
for cor. of secs. 25, 30, 31 and 36, marked with one  
notch on S. and five notches on N. edge, and raise a  
mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor.  
Impracticable to set iron post at this point.

Land, mountainous.  
Soil, rocky; 4th rate.  
No timber.  
Undergrowth, scrub oak, mahogany, crucifixion thorn, and  
manzanita.

North bet. secs. 25 and 30,  
over mountainous land, through dense undergrowth.  
Desc. 150 ft., on N. slope.  
Gulch, course W. Asc. 150 ft., on S. slope.  
Spur slopes W. Desc. 380 ft., on N. slope.  
Ravine, course W. Asc. broken SW. slope.  
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

$\frac{1}{4}$   
S25 | S30

1916

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

Spur, 280 ft. above ravine, slopes W. Desc. 85 ft., along  
NW. slope.  
Ravine, course W. Asc. 55 ft., on broken S. slope.  
Spur slopes W. Desc. 70 ft., along broken W. slope.  
Head of draw, course SW. Asc. 65 ft., on SE. slope.  
Spur slopes SW. Desc. 120 ft., on NW. slope.  
Set a granite stone, 24x8x6 ins., 18 ins. in the ground,  
for cor. of secs. 19, 24, 25 and 30, marked with two  
notches on S. and four notches on N. edge, and raise a  
mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor.  
Impracticable to set iron post at this point.

Land, mountainous.  
Soil, 3rd rate; rocky.  
No timber.  
Undergrowth, oak brush, mahogany, manzanita and crucifixion  
thorn.

Chains

North bet. secs. 19 and 24,  
 over mountainous land, through dense undergrowth.  
 Desc. 40 ft., on NW. slope.

2.96 Stream, 2 lks. wide, course SW. Asc. 325 ft., on broken S. slope.

16.40 Spur slopes W. Asc. along W. slope.

24.40 Head of small draw, course SW.

25.50 Spur slopes SW. Asc. broken SW. slope.

29.30 Enter dense timber bearing E. and W.

38.60 Spur slopes W. Desc. NW. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 22 ins. in the ground, (impracticable to set post farther in the ground) for  $\frac{1}{4}$  sec. cor., with brass cap, marked

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

from which  
 A pinyon, 7 ins. diam., bears N.43 $\frac{1}{2}$ °W., 21 lks. dist., marked  $\frac{1}{4}$  S24 BT, and  
 A pinyon, 10 ins. diam., bears N.66 $\frac{1}{2}$ °E., 36 lks. dist., marked  $\frac{1}{4}$  S19 BT.

Continue descent on N. slope.

51.00 Spring branch, 1 lk. wide, course WSW. Leave dense timber bearing E. and W., and continue through dense undergrowth. Asc. 380 ft., on broken S. slope.

66.15 Spur slopes W. Desc. 100 ft., on N. slope, entering dense timber bearing E. and W.

70.80 Ravine, course NW. Asc. 45 ft., along broken W. slope.

78.50 Spur slopes W. Desc. N. slope.

80.00 Set a granite stone, 16x10x8 ins., 14 ins. in the ground, for cor. of secs. 13, 18, 19 and 24, marked with three notches on each of N. and S. edges, from which  
 A pinyon, 6 ins. diam., bears N.40 $\frac{1}{2}$ °E., 90 lks. dist., marked T19N R15W S18 BT,  
 A pinyon, 8 ins. diam., bears S.63°E., 144 lks. dist., marked T19N R15W S19 BT,  
 A pinyon, 14 ins. diam., bears S.41 $\frac{1}{2}$ °W., 35 lks. dist., marked T19N R16W S24 BT, and  
 A pinyon, 12 ins. diam., bears N.49 $\frac{1}{2}$ °W., 100 lks. dist., marked T19N R16W S13 BT.  
 Impracticable to set iron post at this point.

Land, mountainous.  
 Soil, 4th rate; rocky.  
 Timber, pinyon pine.  
 Undergrowth, oak brush, mahogany and cactus.

North bet. secs. 13 and 18,  
 over mountainous land, through dense undergrowth. Leave heavy growth of timber at cor., bearing NE. and SW.  
 Desc. 100 ft., on NW. slope.

6.00 Walnut Springs branch, stream 2 lks. wide, course SW. Asc. broken S. slope.

6.10 Walnut Creek Mining and Milling Company's roak bears NE. to mine and SW. to Drake station.

28.70 Spur ridge, 660 ft. above stream, extends W. Thence along W. slope.

29.60 Walnut Creek Mining and Milling Company's compressor house bears S.77°17'E.

33.90 Enter dense timber bearing E. and W.

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

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

Chains

from which  
 A pinyon, 8 ins. diam., bears N.86°E., 21 lks. dist.,  
 marked  $\frac{1}{4}$  S18 BT, and  
 A pinyon, 14 ins. diam., bears S.84 $\frac{1}{2}$ °W., 19 lks. dist.,  
 marked  $\frac{1}{4}$  S13 BT.  
 Continue along broken N. slope.  
 41.00 Desc. NW. slope.  
 50.00 Ravine, 430 ft. below ridge, course W. Asc. broken S. slope.  
 75.00 Spur slopes W. Thence along W. slope.  
 79.10 Spur ridge, 825 ft. above ravine, extends W. Desc. 35  
 ft., on N. slope.  
 80.00 Set a granite stone, 24x12x10 ins., 18 ins. in the ground,  
 for cor. of secs. 7, 12, 13 and 18, marked with 4 notches  
 on S. and 2 notches on N. edge, and raise a mound of  
 stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor.  
 Impracticable to set iron post at this point.

Land, mountainous.  
 Soil, rocky; 3rd rate.  
 Timber, pinyon pine.  
 Undergrowth, oak brush, manzanita and mahogany.

North bet. secs. 7 and 12,  
 over mountainous land, through scattering timber and  
 dense undergrowth. Desc. N. slope.  
 13.40 Mouth of tunnel 125 ft. long, extending N. and S., bears  
 W., 100 lks. dist.  
 17.90 Deep ravine, 640 ft. below sec. cor., course W. Asc. 255  
 ft., on S. slope.  
 32.30 Spur slopes W. Desc. 190 ft., on N. slope.  
 37.60 Ravine, course W. Asc. S. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

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

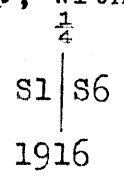
from which  
 A pinyon, 14 ins. diam., bears S.34 $\frac{1}{4}$ °E., 75 lks. dist.,  
 marked  $\frac{1}{4}$  S7 BT, and  
 A pinyon, 6 ins. diam., bears N.39°W., 27 lks. dist.,  
 marked  $\frac{1}{4}$  S12 BT.  
 Continue to asc. S. slope.  
 44.10 Spur, 120 ft. above ravine, slopes W. Desc. 500 ft., on  
 NW. slope.  
 48.25 Ravine, course W. Asc. 225 ft. on S. slope.  
 56.10 Spur ridge extends W. Desc. 365 ft., on N. slope.  
 68.35 Ravine, course W. Asc. 340 ft., on S. slope.  
 75.00 Spur ridge extends W. Desc. 215 ft., on N. slope.  
 80.00 Set a granite stone, 20x12x8 ins., 15 ins. in the ground,  
 for cor. of secs. 1, 6, 7 and 12, marked with five  
 notches on S. and one notch on N. edge, and raise a  
 mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor.  
 No bearing trees available. Impracticable to set iron  
 post at this point.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 Timber, pinyon pine.  
 Undergrowth, oak brush and manzanita.

North bet. secs. 1 and 6,  
 over mountainous land, through scattering timber and dense  
 undergrowth. Desc. 100 ft., on N. slope.  
 1.90 Ravine, course W. Asc. SW. slope.  
 16.56 Pinyon tree, 10 ins. diam., on line, which I mark with  
 two notches on each of N. and S. sides.

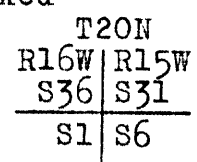
Chains

25.20 Spur, 425 ft. above ravine, slopes W. Asc. 540 ft., on W. slope.  
 31.90 Spur slopes W. Desc. NW. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked



from which  
 A pinyon, 12 ins. diam., bears N.69°E., 24 lks. dist., marked  $\frac{1}{4}$  S6 BT, and  
 A pinyon, 6 ins. diam., bears S.32 $\frac{1}{4}$ °W., 27 lks. dist., marked  $\frac{1}{4}$  S1 BT.

Continue to desc. on N. slope.  
 43.70 Ravine, 310 ft. below spur, course SW. Asc. S. slope.  
 60.40 Spur ridge, 700 ft. above ravine, extends WSW.  
 61.60 Head of draw, course W. Asc. 900 ft., on W. slope.  
 72.00 Spur ridge bears W. Desc. 225 ft., on NW. slope.  
 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of Tps. 19 and 20 N., Rs. 15 and 16 W., with brass cap, marked



T19N  
 1916

from which  
 A pinyon, (double), 18 ins. diam., bears N.80°45'E., 33 lks. dist., marked T20N R15W S31 BT,  
 A pinyon, 8 ins. diam., bears S.22 $\frac{1}{2}$ °E., 44 lks. dist., marked T19N R15W S6 BT,  
 A pinyon, 14 ins. diam., bears S.14°45'W., 40 lks. dist., marked T19N R16W S1 BT, and  
 A pinyon, 16 ins. diam., bears N.43°W., 44 lks. dist., marked T20N R16W S36 BT.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 Timber, pinyon pine.  
 Undergrowth, oak brush, mahogany and manzanita.

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 DATE DIAGRAM - 1916

May 16	May 22	May 24	May 24	April 21	April 21
N. Bdy., T. 19 N., R. 15 W.					

From the cor. of Tps. 19 and 20 N., Rs. 14 and 15 W., (hereinafter described,  
 West, on a random line on N. bdy. of Tp., setting temp. cors. at intervals of 40 chs. At 477.08 chs. fall 51 lks. N. of the cor. of Tps. 19 and 20 N., Rs. 15 and 16 W., hereinbefore described. The true return course is therefore N.89°56'E.

Thence N.89°56'E., on a true line, bet. secs. 6 and 31, over mountainous land, through scattering timber and dense undergrowth. Desc. 225 ft., along broken N. slope.  
 26.10 Stream, 2 lks. wide, course NW. Asc. 290 ft., on SW. slope.  
 35.40 Spur extends NW 15 chs. Desc. along N. slope.  
 37.08 Set an iron post, 3 ft. long, 1 in. diam., 14 ins. in the ground, surrounded by a mound of stone, (impracticable to set post farther in the ground) for  $\frac{1}{4}$  sec. cor., with brass cap, marked

Chains

S 31  
1/4 -----  
S 6  
1916

- and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, N. of cor.
- 41.40 Stream, 240 ft. below spur, course NW. Width, 2 lks. Asc. 325 ft., on SW. slope.
- 53.00 Spur slopes NW. Asc. 120 ft., along N. slope.
- 61.50 Spring branch, course NW. Asc. 710 ft., on broken rocky N. slope.
- 75.70 Main divide bears N. and S. Desc. 95 ft., on rocky NE. slope.
- 77.08 Set a granite stone, 26x14x6 ins., 19 ins. in the ground, for cor. of secs. 5, 6, 31 and 32, marked with five notches on E. and 1 notch on W. edge, and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Land, rough mountainous.  
Soil, rocky; 4th rate.  
Timber, yellow pine.  
Undergrowth, oak brush, mahogany, manzanita and thorn brush.

- 10.80 N. 89° 56' E., bet. secs. 5 and 32, over mountainous land, through dense undergrowth. Desc. on NE. slope.
- 40.00 Enter scattering yellow pine timber bearing N. and SW. Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the ground, surrounded by a mound of stone, (impracticable to set post farther in the ground) for 1/4 sec. cor., with brass cap, marked

S 32  
1/4 -----  
S 5  
1916

- from which
- A yellow pine, 20 ins. diam., bears N. 58 1/2° E., 71 lks. dist., marked 1/4 S32 BT, and
- A yellow pine, 22 ins. diam., bears S. 26 1/2° E., 57 lks. dist., marked 1/4 S5 BT.
- 51.20 Antelope wash, containing stream 2 lks. wide, course SE. 1150 ft. below sec. cor. Thence along broken S. slope, leaving timber, the edge of which bears SE. and NW.
- 73.50 Old cabin bears S., 150 lks. dist.
- 76.50 Low spur slopes SE. Desc. 80 ft., on NE. slope.
- 80.00 Set a granite stone, 18x10x6 ins., 12 ins. in the ground, for cor. of secs. 4, 5, 32 and 33, marked with four notches on E. and two notches on W. edge, from which
- A yellow pine, 36 ins. diam., bears S. 57° E., 199 lks. dist., marked T19N R15W S4 BT.
- No other bearing trees within limits. Raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Land, mountainous.  
Soil, rocky; 4th rate.  
Timber, yellow pine.  
Undergrowth, oak brush, mahogany and thorn brush.

- N. 89° 56' E., bet. secs. 4 and 33, over mountainous land, through dense undergrowth. Desc. 20 ft.
- .50 Ravine, course SE. Asc. 110 ft., on SW. slope.
- 13.40 Spur slopes S. Thence along S. slope.
- 18.30 Desc. on SE. slope.
- 40.00 Set a granite stone, 18x12x8 ins., 12 ins. in the ground, for 1/4 sec. cor., marked 1/4 on N. face, and raise a mound

Chains

of stone, 2 ft. base, 1½ ft. high, N. of cor.  
 Impracticable to set iron post at this point.

40.30 Draw, course SE. 550 ft. below spur.  
 Asc. 35 ft., on SW. slope.

50.70 Spur slopes S. Desc. 260 ft., on SE. slope.

73.70 Antelope Wash, containing stream 3 lks. wide, course N.70°E.  
 Enter scattering yellow pine timber, bearing NE. and SW.,  
 and asc. 30 ft., on NW. slope.

80.00 Set a granite stone, 22x8x8 ins., 16 ins. in the ground,  
 for cor. of secs. 3, 4, 33 and 34, marked with three  
 notches on each of E. and W. edges, from which  
 A yellow pine, 6 ins. diam., bears N.66¼°E., 43 lks. dist.,  
 marked T20N R15W S34 BT,  
 A yellow pine, 9 ins. diam., bears S.48°E., 73 lks. dist.,  
 marked T19N R15W S3 BT,  
 A yellow pine, 8 ins. diam., bears S.28°45'W., 46 lks.  
 dist., marked T19N R15W S4 BT, and  
 A yellow pine, 30 ins diam., bears N.47°45'W., 58 lks.  
 dist., marked T20N R15W S33 BT.  
 Impracticable to set iron post at this point.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 Timber, yellow pine.  
 Undergrowth, oak brush and manzanita.

N.89°56'E., bet. secs. 3 and 34,  
 over mountainous land, through dense undergrowth.  
 Asc. 75 ft., on NW. slope.

3.50 Spur slopes N. Desc. along broken N. slope.

6.50 Desc. E. slope.

13.20 Draw, 155 ft. below spur, course N. Asc. 100 ft., on  
 broken W. slope.

19.40 Thence along broken N. slope.

39.20 Spur slopes N. Desc. E. slope.

40.00 Set a granite stone, 14x12x5 ins., 10 ins. in the ground,  
 for ¼ sec. cor., marked ¼ on N. face, and raise a mound  
 of stone, 2 ft. base, 1½ ft. high, N. of cor.  
 No iron post available.

49.20 Draw, 140 ft. below spur, course N. Asc. 210 ft., on  
 broken W. slope.

60.70 Spur slopes N. Desc. 80 ft., on NE. slope.

65.80 Draw, course N. Asc. 215 ft., on W. slope.

76.70 Top of small peak on ridge bearing E. and SW., a spur of  
 which extends N. from this point.  
 Desc. along N. slope of ridge.

80.00 Set a granite stone, 20x12x5 ins., 12 ins. in the ground  
 and 4 ins. in a mound of stone, (impracticable to set  
 stone farther in the ground) for cor. of secs. 2, 3,  
 34 and 35, marked with two notches on E. and four notches  
 on W. edge, and raise a mound of stone, 2 ft. base, 1½  
 ft. high, W. of cor.  
 Impracticable to set iron post at this point.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, oak brush, manzanita and thorn brush.

N.89°56'E., bet. secs. 2 and 35,  
 over mountainous land, through dense undergrowth.  
 Asc. 160 ft., along NW. slope.

9.50 Head of spur sloping NW. Thence along N. slope.

14.60 Spur slopes N. 15 chs. to end. Continue along broken N.  
 slope.

20.80 Spur slopes NE. Desc. 500 ft., on E. slope.



Chains

36.00 Gulch, course NE. Asc. on N. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked  
                         S 35  
                              ¼ -----  
                                   S 2  
                                   1916  
 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.  
 49.75 Ridge, 230 ft. above gulch, bears NE. and S. Desc. 850 ft., on broken E. slope.  
 80.00 Set a granite stone, 16x12x7 ins., 10 ins. in the ground, for cor. of secs. 1, 2, 35 and 36, marked with one notch on E. and five notches on W. edge, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Impracticable to set iron post at this point.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, oak brush and mahogany.

N. 89° 56' E., bet. secs. 1 and 36, over mountainous land, through dense undergrowth. Desc. 290 ft., on E. slope.  
 36.00 Wagon road bears N. and S.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked  
                         S 36  
                              ¼ -----  
                                   S 1  
                                   1916  
 and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.  
 40.50 Ridge bears NW. and SE. Desc. 80 ft., along NE. slope.  
 59.05 Wash, course N. Asc. 225 ft., on W. slope.  
 65.00 Ridge bears N. and S. Desc. 180 ft., on broken E. slope.  
 75.00 Wash, course NE. Asc. along NW. slope.  
 80.00 The cor. of Tps. 19 and 20 N., Rs. 14 and 15 W.

Land, mountainous and rolling.  
 Soil, rocky; 3rd rate.  
 No timber.  
 Undergrowth, oak brush and mahogany.

Subdivision of T. 19 N., R. 15 W.

From the cor. of secs. 1, 2, 35 and 36, on S. bdy. of Tp., described in book D,  
 Thence N. 0° 01' W., bet. secs. 35 and 36, through scattering timber and dense undergrowth. Desc. 535 ft., over broken N. slope.  
 40.00 On spur sloping SE,  
 Set a stone, 24x8x5 ins., 10 ins. in the ground and 10 ins. in a mound of stone, (impracticable to set stone farther in the ground) for ¼ sec. cor., marked ¼ on W. face, and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Impracticable to set iron post at this point. Desc. 225 ft., on broken N. slope.  
 52.65 Blue Tanks Wash, containing stream 15 lks. wide, course SE. Asc. 560 ft., on broken N. slope.

Survey of West bdy. of Township 20 North, Range 15 West. 71.

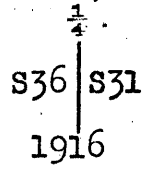
Chains.

Survey executed by Howard G. Mason, U.S. Transitman, using transit No. 8487, described with record of approval and field test, in Book "P."

The adjustments were frequently examined and maintained by comparison of the results of solar observations with true meridian, as determined by Polaris observations. The magnetic declination is 14°45'E.

DATE  
DIAGRAM  
1916

- 22.60 From the cor. of Ts. 19 and 20 N., Rs. 15 and 16 W., herein before described, North, bet. secs. 31 and 36. Over rough, mountainous land, through dense undergrowth. Descend 720 ft., on NE. slope.
- 39.00 Ravine, course NW. Ascend 490 ft., on S. slope.
- 40.00 Ridge, brs. NE. and SW. Descend on NW. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

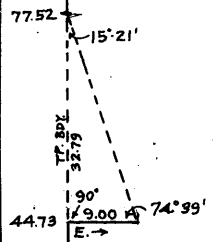


- 62.10 and raise a mound of stone 2 ft. base, 1 1/2 ft. high, W. of cor. Impracticable to set post in the ground. Gulch, 360 ft. below ridge, course NW. Ascend 300 ft., on SW. slope.
  - 80.00 Set a stone, 20x10x8 ins., in a mound of stone (impracticable to set stone in the ground) for cor. of secs. 25, 30, 31 and 36, marked with 1 notch on S. and 5 notches on N. edge; and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Impracticable to set iron post.
- Land, rough mountainous.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, oak, mahogany, manzanita and catclaw.

- 10.40 North, bet. secs. 25 and 30. Over mountainous land, through dense undergrowth. Ascend 230 ft., on SW. slope.
- 16.30 Spur, slopes W. Descend 260 ft. on NW. slope.
- 40.00 Ravine, course W. Ascend on SW. slope.
- 40.00 Point for  $\frac{1}{4}$  sec. cor. falls at point where it is impracticable to set post; therefore at
- 41.00 Set an iron post 3 ft. long, 1 in. in diam., in a mound of stone (impracticable to set post in the ground) for witness cor. to  $\frac{1}{4}$  sec. cor., with brass cap, marked



- 44.73 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Cliff, 660 ft. above ravine. Triangulate over rough land, over which it is impracticable to chain, as follows: Measure a base E. 9.00 chs. to a point, whence a flag on line brs. N. 15°21' W.; which gives for the distance,  $\tan 74^\circ 39' \times 9.00$  or 32.79 chs.; making the distance from the sec. cor. to flag, 44.73 + 32.79, or 77.52 chs., from which point I proceed, measuring with tape.



- 77.52 Triangulation point, on ridge, bearing NW. and SE. Descend 40 ft., on NE. slope.

May 27	6
May 27	7
May 26	18
May 26	19
May 25	30
May 22	31

7.2 West boundary of Township 20 North, Range 15 West.

Chains.

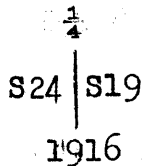
80.00 Set a stone 20x12x3 ins. in a mound of stone (impracticable to set stone in the ground) for cor. of secs. 19, 24, 25 and 30, marked with 2 notches on S. and 4 notches on N. edge; and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Impracticable to set iron post.  
 Land, rough, mountainous. Soil, rocky, 4th rate.  
 Timber, scattering pinon.  
 Undergrowth, oak, manzanita, mahogany and catclaw.

North, bet. secs. 19 and 24.  
 Over rough, mountainous land, through scattering timber, and dense undergrowth. Descend 180 ft., on broken NW. slope.

13.10 Gulch, course SW. Ascend 130 ft., on S. slope.

20.00 Ridge, brs. NW. and SE. Descend on NE. slope.

40.00 Set an iron post 3 ft. long, 1 in. in diam., in a mound of stone, for ¼ sec. cor., with brass cap, marked



and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Impracticable to set post in the ground.

74.20 Gulch, 975 ft. below ridge, course SW. Ascend 135 ft., on SW. slope.

80.00 Set a granite stone, 16x12x8 ins., 11 ins. in the ground, for cor. of secs. 13, 18, 19 and 24, marked with 3 notches on each of N. and S. edges; and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Impracticable to set iron post.

Land, rough, mountainous.

Soil, rocky, 4th rate.

Timber, pinon.

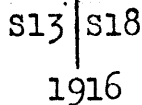
Undergrowth, manzanita, oak, catclaw, and mahogany.

North, bet. secs. 13 and 18.

Over mountainous land, through scattering timber and dense undergrowth. Ascend 260 ft., on SW. slope.

10.70 Ridge, brs. NW. and SE. Descend on NE. slope.

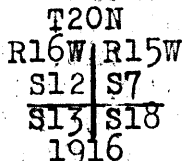
40.00 Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, for ¼ sec. cor., with brass cap, marked



and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Impracticable to set post in the ground.

80.00 970 ft. below ridge.

Set an iron post, 3 ft. long, 3 ins. diam., in a mound of stone, for cor. of secs. 7, 12, 13 and 18, with brass cap, marked



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

Land, rough, mountainous.

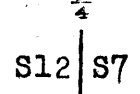
Soil, rocky, 4th rate.

Timber, pinon. Undergrowth, oak, manzanita and catclaw.

West boundary of Township 20 North, Range 15 West.

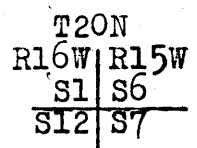
chains.

North, bet. secs. 7 and 12.  
Over rough, mountainous land, through dense undergrowth.  
Descend 60 ft., on NE. slope.  
5.00 Gulch, course NW. Ascend gradually on SW. slope.  
6.00 Road brs. NW. and SE.  
34.20 Spur, 276 ft. above gulch, sloping west. Descend on N. slope.  
40.00 Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, for  $\frac{1}{4}$  sec. cor., with brass cap, marked



1916

and raise a mound of stone 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Impracticable to set post in the ground.  
43.30 Gulch, 225 ft. below spur, course W. Ascend 310 ft., on S. slope.  
60.00 Spur, slopes W. Descend 190 ft., on NW. slope.  
73.70 Foot of slope. Ascend on SE. slope.  
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., in a mound of stone, for cor. of secs. 1, 6, 7 and 12, with brass cap, marked



1916

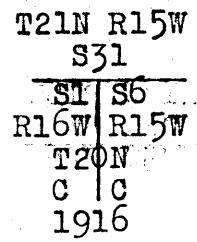
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Impracticable to set post in the ground.  
Land, rough, mountainous.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, oak, mahogany and manzanita.

North, bet. secs. 1 and 6.  
Over rolling hills, through dense undergrowth and scattering cedar timber.  
28.00 Road brs. NE. and SW.  
40.00 Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, for  $\frac{1}{4}$  sec. cor., with brass cap, marked



1916

and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Impracticable to set post in the ground.  
79.15 Intersect 5th Standard Par. N., 4.78 chs. W. of the standard  $\frac{1}{4}$  sec. cor. of S. bdy. of sec. 31, which is a 1 in. iron post, with brass cap, marked, set and witnessed as described by the Surveyor General.  
At point of intersection,  
Set an iron post, 3 ft. long, 3 ins. diam., in a mound of stone for closing cor. of Ts. 20 N., Rs. 15 and 16 W., with brass cap, marked



and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, S. of cor. Impracticable to set post in the ground.  
Land, rolling hills. Soil, rocky, 4th rate.  
Timber, cedar. Undergrowth, oak, manzanita and mahogany.

71 Survey of W. and N. bdrs. of Township 19 North, Range 16 West.

DATE  
DIAGRAM  
1916

Feb. 24	6
Feb. 24	7
Feb. 23	18
Feb. 23	19
Feb. 22	30
Feb. 22	31

Chains.

Survey executed by Howard G. Mason, U.S. Transitman, using transit No. 8298 on the survey of the west bdy. of T. 19 N., R. 16 W.

This instrument is described, with record of approval 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 as determined by observations on Polaris. In the survey of the north bdy. of T. 19 N., R. 16 W., transit No. 8487, identical in description with that above mentioned, was used. This transit was approved, subject to satisfactory field tests, by the assistant supervisor of surveys for Arizona and California, on May 1, 1916. A record of field test of this instrument appears in Book "P."

Magnetic declination on these bdrs, is 14° 45' E.

-----  
West boundary of Township 19 North, Range 16 West.  
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From the cor. of Ts. 18 and 19 N., Rs. 16 and 17 W., hereinbefore described,

North, bet. secs. 31 and 36.  
Over mountainous land, through scattering undergrowth. Ascend 510 ft., on SE. slope.

28.50  
40.00

Top of ascent. Thence over rolling hills. Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone on bed rock, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

S36 | S31  
1916

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

80.00

Set an iron post, 3 ft. long, 3 ins. diam., 8 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 25, 30, 31 and 36, with brass cap, marked

T19N  
R17W | R16W  
S25 | S30  
-----  
S36 | S31  
1916

and raise a mound of stone 2 ft. base, 1½ ft. high, W. of cor. Land, rough, mountainous. Soil, rocky, 4th rate. No timber. Undergrowth, cactus, catclaw, ocotillo.

-----  
North, bet. secs. 25 and 30.

Over roughly rolling hills, through scattering undergrowth. Ascend 315 ft., on rocky S. slope.

5.00  
16.50  
40.00

Rocky ridge, brs. E. and W. Descend rocky NW. slope. Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone on bedrock, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

S25 | S30  
1916

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

45.70  
68.25  
75.50  
80.00

Ravine, 570 ft. below ridge, course NE. Thence along E. slope. Same ravine, course NW. Ascend 115 ft., on SW. slope. Descend on NW. slope.

Set an iron post, 3 ft. long, 3 ins. in diam., 8 ins. in the ground, surrounded by a mound of stone, (impracticable to set post farther in the ground) for cor. of secs. 19, 24, 25 and 30, with brass cap, marked

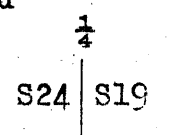
T19N  
R17W | R16W  
S24 | S19  
-----  
S30 | S25  
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Land, mountainous. Soil, rocky, 4th rate. No timber. Undergrowth, cactus, catclaw, ocotillo and crucifixion thorn.  
-----

Chains

North, bet. secs. 19 and 24.  
 Over mountainous land, through scattering undergrowth.  
 Descend 200 ft. on NW. slope through scattering undergrowth.  
 Gulch, course NW. Ascend on rolling broken SW. slope.  
 Descend NW. slope. Ascend on rolling broken SW. slope.  
 Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the  
 ground, surrounded by a mound of stone, (impracticable  
 to set post farther in the ground) for  $\frac{1}{4}$  sec. cor.,  
 with brass cap, marked

6.00  
26:00  
40.00

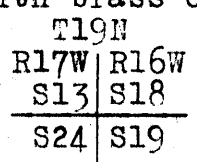


1916

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

41.00  
46.00  
64.00  
72.50  
80.00

Gulch, course SW. Asc. 290 ft.  
 Spur slopes SW. Desc.  
 Asc. 385 ft.  
 Ridge bears NW. and SE. desc. 110 ft., on NE. slope.  
 Set an iron post, 3 ft. long, 3 ins. diam., 8 ins. in the  
 ground, surrounded by a mound of stone, (impracticable  
 to set post farther in the ground) for cor. of secs.  
 13, 18, 19 and 24, with brass cap, marked



1916

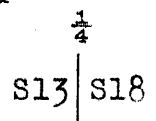
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, crucifixion thorn, cactus and ocotillo.

North, bet. secs. 13 and 18,  
 over mountainous land, through scattering undergrowth.  
 Desc. 700 ft., on steep NE. slope.

28.00  
40.00

Ft. of steep slope.  
 Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the  
 ground, surrounded by a mound of stone, (impracticable  
 to set post farther in the ground) for  $\frac{1}{4}$  sec. cor.,  
 with brass cap, marked

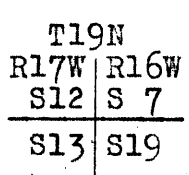


1916

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

50.50  
52.20  
80.00

Walnut Creek, containing running water, course SW.  
 Wagon road bears NE. and SW. Asc. 435 ft., on S. slope.  
 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the  
 ground, for cor. of secs. 7, 12, 13 and 18, with brass  
 cap, marked



1916

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

Land, mountainous. Soil, rocky; 4th rate. No timber.  
 Undergrowth, cactus, catclaw, ocotillo and  
 crucifixion thorn.

## Chains

- North, bet. secs. 7 and 12,  
over mountainous land, through scattering undergrowth.  
Asc. 85 ft., on S. slope.
- 1.50 Ridge bears NE. and SW. Desc. 150 ft., on NE. slope.  
14.50 Gulch, course NW. Asc. 240 ft., on SW. slope.  
26.70 Ridge bears NW. and SE. Desc. 75 ft., on NW. slope.  
32.50 Head of gulch, course W. Asc. S. slope.  
40.00 Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the  
ground, surrounded by a mound of stone, (impracticable  
to set post farther in the ground) for  $\frac{1}{4}$  sec. cor.,  
with brass cap, marked
- $\frac{1}{4}$   
S12 | S 7  
1916
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.
- 44.50 Ridge, 125 ft. above gulch, bears NE. and SW. Desc. 55  
ft., on NW. slope.  
53.35 Gulch, course SW. Asc. 140 ft., on S. slope.  
63.10 Spur slopes SW. Desc. 150 ft., on NW. slope.  
71.75 Gulch, course SW. Asc. 215 ft., on SW. slope.  
80.00 Set an iron post, 3 ft. long, 3 ins. diam., 6 ins. in the  
ground, surrounded by a mound of stone, (impracticable  
to set post farther in the ground) for cor. of secs.  
1, 6, 7 and 12, with brass cap, marked
- T19N  
R17W | R16W  
S1 | S6  
-----  
S12 | S 7  
1916
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.
- Land, mountainous.  
Soil, rocky; 3rd and 4th rate.  
No timber.  
Undergrowth, crucifixion thorn, cactus, catclaw and  
ocotillo.
- 
- North, bet. secs. 1 and 6,  
over mountainous land, through scattering undergrowth.  
Asc. 140 ft., on SW. slope.
- 1.10 Spur slopes SW. Desc. 170 ft., on NW. slope.  
15.50 Gulch, course SW. Asc. 110 ft., on SW. slope.  
25.50 Ridge bears NW. and SE. Desc. 120 ft., on NE. slope.  
40.00 Set an iron post, 3 ft. long, 1 in. diam., 6 ins. in the  
ground, surrounded by a mound of stone, (impracticable  
to set post farther in the ground) for  $\frac{1}{4}$  sec. cor., with  
brass cap, marked
- $\frac{1}{4}$   
S1 | S6  
1916
- and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
W. of cor.
- 67.00 Wash, course W. Asc. 40 ft., on S. slope.  
80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the  
ground, for cor. of Tps. 19 and 20 N., Rs. 16 and 17 W.,  
with brass cap, marked
- T20N  
R17W | R16W  
S36 | S31  
-----  
S1 | S6  
T19N  
1916

Chains

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

Land, mountainous and rolling hills.

Soil, rocky; 4th rate.

No timber.

Undergrowth, crucifixion thorn, catclaw, cactus and ocotillo.

DATE DIAGRAM-1916

May 15	May 15	May 15	May 15	May 16	May 16
6	5	4	3	2	1

N. Bdy., T. 19 N., R. 16 W.

From the cor. of Tps. 19 and 20 N., Rs. 15 and 16 W., hereinbefore described,

West, on a random line, on N. bdy. of Tp., setting temp. cors. at intervals of 40 chs. At 479.41 chs. fall 56 lks. S. of the cor. of Tps. 19 and 20 N., Rs. 16 and 17 W., hereinbefore described. The true return course is therefore S.89°56'E.

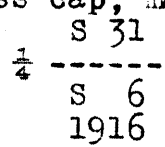
Thence S.89°56'E., on a true line, bet. secs. 6 and 31, over mountainous land, through scattering undergrowth, along S. slope.

12.20  
28.40  
39.41

Gulch, course SW. Asc. 475 ft., on NW. slope.

Small ridge bears NE. and SW. Desc. 225 ft., on SE. slope.

Set an iron post, 3 ft. long, 1 in. diam., in a mound of stone, (impracticable to set post in the ground) for ¼ sec. cor., with brass cap, marked

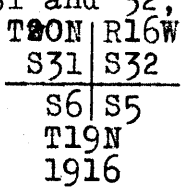


and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Asc. 535 ft.

78.35  
79.41

Ridge bears N. and S. Desc. on NE. slope.

Set an iron post, 3 ft. long, 3 ins. diam., in a mound of stone, (impracticable to set post in the ground) for cor. of secs. 5, 6, 31 and 32, with brass cap, marked



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

Land, rough mountainous.

Soil, rocky; 4th rate.

No timber.

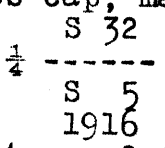
Undergrowth, crucifixion thorn, oak and catclaw.

S.89°56'E., bet. secs. 5 and 32, over mountainous land, through scattering undergrowth, along NE. and NW. slopes.

17.50  
40.00

Spur slopes NE. Desc. on SE. slope.

Set an iron post, 3 ft. long, 1 in. diam., in a mound of stone, (impracticable to set post in the ground) for ¼ sec. cor., with brass cap, marked



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



Chains

N. of cor.  
 47.60 Ft. of slope, 425 ft. below spur. Asc. 370 ft.  
 80.00 Set an iron post, 3 ft. long, 3 ins. diam., in a mound of  
 stone, (impracticable to set post in the ground) for  
 cor. of secs. 4, 5, 32 and 33, with brass cap, marked

T20N	R16W
S32	S33
<hr/>	
S5	S4
T19N	
1916	

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

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, oak, catclaw and cactus.

S. 89°56'E., bet. secs. 4 and 33,  
 over mountainous land, through dense undergrowth.  
 Desc. 140 ft.  
 10.10 Thence asc. 420 ft., on SW. slope.  
 27.00 Spur slopes S. Desc. on SE. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., in a mound of  
 stone, (impracticable to set post in the ground) for  
 ¼ sec. cor., with brass cap, marked

S	33
¼	-----
S	4
1916	

and raise a mound of stone, 2 ft. base, 1½ ft. high,  
 N. of cor.  
 44.40 Gulch, 385 ft. below spur, course SW. Asc. 410 ft., on  
 SW. slope.  
 64.90 Ridge bears NW. and SE. Desc. 275 ft., on NE. slope.  
 75.00 Asc. 150 ft.  
 80.00 Set an iron post, 3 ft. long, 3 ins. diam., in a mound of  
 stone, (impracticable to set post in the ground) for  
 cor. of secs. 3, 4, 33 and 34, with brass cap, marked

T20N	R16W
S33	S34
<hr/>	
S4	S3
T19N	
1916	

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

Land, mountainous.  
 Soil, rocky; 4th rate.  
 No timber.  
 Undergrowth, oak, ocotillo, catclaw and cactus.

S. 89°56'E., bet. secs. 3 and 34,  
 over mountainous land, through dense undergrowth.  
 Asc. 210 ft., on W. slope.  
 11.00 Desc. 225 ft.  
 24.70 Asc. 140 ft., over rolling S. slope.  
 33.40 Desc. 25 ft.  
 35.30 Gulch, course S. Asc. on SW. slope.  
 40.00 Set an iron post, 3 ft. long, 1 in. diam., in a mound of  
 stone, (impracticable to set post in the ground) for  
 ¼ sec. cor., with brass cap, marked

S	34
¼	-----
S	3
1916	

Chains.	and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor.
69.50	Ridge, 480 ft. above gulch, brs. NW. and SE. Descend 170 ft. on NE. slope.
78.15	Ascend 15 ft., on NW. slope.
80.00	Set an iron post 3 ft. long, 3 ins. diam., in a mound of stone (impracticable to set post in the ground) for cor. of secs. 2, 3, 34 and 35, with brass cap, marked T20N R19W S34 S35 S3 S2 T19 N 1916
	and raise a mound of stone 2 ft. base, 1½ ft. high, W. of cor. Land, mountainous. Soil, rocky, 4th rate. Timber, scattering pinon. Undergrowth, oak, mahogany, manzanita, and scrub pinon.
-----	
	S. 89°56'E., bet. secs. 2 and 35. Over mountainous land, through scattering timber and dense undergrowth. Ascend 100 ft., on NW. slope.
9.90	Descend on NE. slope.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, (impracticable to set post in the ground) for ¼ sec. cor., with brass cap, marked S 35 ¼ ----- S 2 1916
45.00	and raise a mound of stone, 2 ft. base, 1½ ft. high, N. of cor. Gulch, course NW. 285 ft. below 9.90 ch. point. Ascend 410 ft., on NW. slope.
66.00	Spur, slopes NW. Descend 100 ft., on NE. slope.
74.80	Gulch, course NW. Ascend 90 ft., on SW. slope.
80.00	Set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground, surrounded by a mound of stone, (impracticable to set post farther in the ground) for cor. of secs. 1, 2, 35 and 36, with brass cap, marked T20N R16W S35 S36 S2 S1 T19 N 1916
	and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Land, mountainous. Soil, rocky, 4th rate. Timber, pinon. Undergrowth, oak, mahogany and manzanita.
-----	
	S. 89°56'E., bet. secs. 1 and 36. Over mountainous land, through scattering timber and dense undergrowth. Ascend 500 ft., on SW. slope.
17.90	Ridge, brs. NW. and SE. Descend 280 ft., on NE. slope.
29.10	Ravine, course NW. Ascend on rolling NW. slope.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 6 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for ¼ sec. cor., with brass cap, marked S 36 ¼ ----- S 1 1916
73.30	and raise a mound of stone 2 ft. base, 1½ ft. high, N. of cor. Spur, 890 ft. above ravine, slopes NW. Desc. 65 ft. on NE. slope.
80.00	The cor. of Ts. 19 and 20 N., Rs. 15 and 16 W. Land, rough, mountainous. Soil, rocky, 4th rate. Timber, pinon and cedar. Undergrowth, oak, mahogany, manzanita and catclaw.
-----	

Feb. 25	Feb. 25	Feb. 25	Feb. 25	Feb. 25	Feb. 24
6	5	4	3	2	1

80. North boundary of Township 19 North, Range 17 West

Chains.

Survey executed jointly by Mans H. Coffin, Jr., and Howard G. Mason, U.S. Transitmen.

The instruments used 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 as determined by observations on Polaris.

The magnetic declination is 14°45' E.

From the cor. of Ts. 19 and 20 N., Rs. 16 and 17 W., hereinbefore described,

West, on a true line, bet. secs. 1 and 36.

Over mountainous land, rough, through scattering, undergrowth. Descend 125 ft., on S. slope.

12.00 Gulch, course NW. Ascend on rolling NE. slope.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, on bed rock, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

S 36

$\frac{1}{4}$  -----

S 1

1916

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

51.50 Ridge, 660 ft. above gulch, brs. SE. & NW. Descend 720 ft. on SW. slope, over cliffs.

77.00 Foot of slope; leave mountainous land, bearing NW. and SE.

80.00 Set an iron post, 3 ft. long, 3 ins. diam., 8 ins. in the ground surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 2, 3, 34 and 35, with brass cap, marked

T20N R17W

S35 S36

S2 S1

T19 N

1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Land, rough, mountainous for 77 chs., and rolling for balance.

Soil, rocky, 4th rate. No timber.

Undergrowth, cactus, and catclaw.

West, bet. secs. 2 and 35.

Over rolling hills, through scattering undergrowth. Descend 295 ft., on SW. slope.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground, surrounded by a mound of stone, (impracticable to set post farther in the ground) for  $\frac{1}{4}$  sec. cor., with brass cap, marked

S 35

$\frac{1}{4}$  -----

S 2

1916

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

80.00 Set an iron post 3 ft. long, 3 ins. diam., 8 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 2, 3, 34 and 35, with brass cap, marked

T20N R17W

S34 S35

S3 S2

T19N

1916

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

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

No timber.

Undergrowth, greasewood, crucifixion thorn, ocotillo and cactus.

North boundary of Township 19 North, Range 17 West. 81.

Chains	West, bet. secs. 3 and 34.
22.30	Over rolling land, through scattering undergrowth, descending on SW. slope, 175 ft., to Foot of slope, brs. NE. and SW. Thence over gently rolling land.
40.00	Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap, marked
	$\begin{array}{r} S\ 34 \\ \frac{1}{4} \text{-----} \\ S\ 3 \\ 1916 \end{array}$
	and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
80.00	Set an iron post, 3 ft. long, 3 ins. diam., 14 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 3, 4, 33 and 34, with brass cap, marked
	$\begin{array}{r} T20N\ R17W \\ S33\ S34 \\ \hline S4\ S3 \\ T19N \\ 1916 \end{array}$
	and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
	Land, rolling. Soil, rocky, 4th rate. No timber. Undergrowth, catclaw, cactus, ocotillo and greasewood.
-----	
	West, bet. secs. 4 and 33.
	Over rolling land, through scattering undergrowth.
40.00	Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap, marked
	$\begin{array}{r} S\ 33 \\ \frac{1}{4} \text{-----} \\ S\ 4 \\ 1916 \end{array}$
	and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
80.00	Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of secs. 4, 5, 32 and 33, with brass cap, marked
	$\begin{array}{r} T20N\ R17W \\ S32\ S33 \\ \hline S5\ S4 \\ T19N \\ 1916 \end{array}$
	and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, W. of cor.
	Land, rolling. Soil, rocky, 4th rate. No timber. Undergrowth, greasewood, ocotillo, cactus and catclaw.
-----	
	West, bet. secs. 5 and 32.
	Over rolling land, through scattering undergrowth.
37.50	Foot of slope, brs. NE. and SW. Thence along S. slope of butte.
40.00	Set an iron post 3 ft. long, 1 in. in diam., 18 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for $\frac{1}{4}$ sec. cor., with brass cap, marked
	$\begin{array}{r} S\ 32 \\ \frac{1}{4} \text{-----} \\ S\ 5 \\ 1916 \end{array}$
	and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$ ft. high, N. of cor.
59.75	Leave slope of butte, the foot of which bears NW. and SE.

82. North bdy. of Township 19 North, Range 17 West.

Chains.

80.00 Thence over rolling land.  
Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 5, 6, 31 and 32, with brass cap, marked

T20N R17W  
S31 S32  
-----  
S6 S5  
T19N  
1916

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

Land, rolling.  
Soil, rocky, 3rd rate.  
No timber.  
Undergrowth, cactus, catclaw, greasewood and ocotillo.

35.00 West, bet. secs. 6 and 31.  
Over rolling land, through scattering undergrowth.  
A.T. & S.F. Ry. track brs. N. 9°10'E., and S. 9°10'W.  
Drake station bears S., about 10 chs. dist.

38.20 National Old Trails Highway, brs. N. and S.

40.00 Set an iron post 3 ft. long, 1 in. in diam., 22 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground), for 1/4 sec. cor., with brass cap, marked

S 31  
1/4-----  
S 6  
1916

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

47.00 Telephone line bears N. to Kingman, and south to Yucca.  
140.14 Intersect line, bet. Rs. 17 and 18 W., 16.78 chs. S. of the cor. of Ts. 19 and 20 N., Rs. 17 and 18 W., which is a stone, properly marked, set and witnessed as described by the Surveyor General. I change this cor. to a cor. of two tps., by effacing the marks relating to the area east of range line.

At point of intersection,  
Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for closing cor., of Ts. 19 and 20 N., Rs. 17 W., with brass cap, marked

T20N  
T20N R17W  
S31  
S1 ----CC  
S6  
R18W T19N  
1916

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

Land, rolling.  
Soil, 3rd and 4th rate.  
No timber.  
Undergrowth, greasewood, ocotillo, catclaw, and cactus.

Chains.

Survey executed by Howard G. Mason, U.S. Transitman, using Transit No. 8298, a description of which, with record of approval and field tests appears in Book "H" of this group.  
Magnetic declination is 14° 45' E.

DATE  
DIAGRAM  
1916

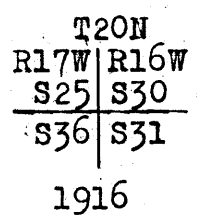
17.20  
33.40  
40.00

From the cor. of Ts. 19 and 20 N., Rs. 16 and 17 W., hereinbefore described,  
North, bet. secs. 31 and 36.  
Over mountainous land, through scattering undergrowth. Ascend 450 ft. on S. slope, over cliffs.  
Spur, slopes W. Descend 485 ft., on N. slope.  
Ravine, course W. Ascend on SW. slope, over cliffs.  
Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, on bed rock, for  $\frac{1}{4}$  sec. cor., with brass cap, marked



72.80  
80.00

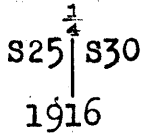
and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
Summit, 625 ft. above ravine. Descend 110 ft. on NW. slope.  
Set an iron post, 3 ft. long, 3 ins. in diam., in a mound of stone, on bed rock, for cor. of secs. 25, 30, 31 and 36, with brass cap, marked



and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
Land, rough, mountainous.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, crucifixion thorn, catclaw and cactus.

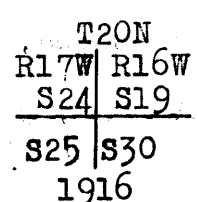
8.70  
40.00

North, bet. secs. 25 and 30.  
Over mountainous land, through scattering undergrowth. Descend on NW. slope.  
Spur, slopes NW. Descend on NE. slope.  
Set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for  $\frac{1}{4}$  sec. cor., with brass cap, marked



54.00  
80.00

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
Foot of slope, 800 ft. below sec. cor. Wash, course NW.  
Set an iron post 3 ft. long, 3 ins. diam., 12 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 19, 24, 25 and 30, with brass cap, marked



March 16	6
March 16	7
March 16	18
March 11	19
March 8	30
March 8	31

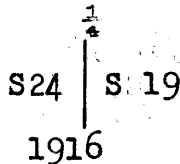
Chains

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

Land, rough, mountainous.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, crucifixion thorn and cactus.

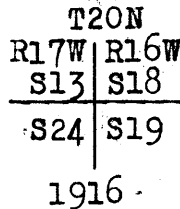
North, bet. secs. 19 and 24.  
Over rolling land, through scattering undergrowth.

- 8.00 Wash, 2 chs. wide, course SW.
- 15.00 Foot of slope, brs. NE. and SW. Ascend over mountainous land, over cliffs on SE. slope.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., in a mound of stone, on bed rock, for ¼ sec. cor., with brass cap, marked,



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

- 50.25 Spur, 800 ft. above 15 ch. point, slopes SE. Descend 335 ft. on NE. slope.
- 62.10 Ravine, course SE. Ascend 520 ft., on S. slope.
- 78.00 Spur, slopes SE. Descend 40 ft. on NE. slope.
- 80.00 Set an iron post 3 ft. long, 3 ins. diam., 10 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 13, 18, 19 and 24, with brass cap, marked

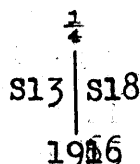


and raise a mound of stone 2 ft. base, 1½ ft. high, W. of cor.

Land, rough, mountainous in N. 65 chs., and rolling in S. part.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, crucifixion thorn and cactus.

North, bet. secs. 13 and 18.  
Over rolling NE. slope, through scattering undergrowth.

- 19.20 Spur, slopes NE.
- 35.00 Spur, slopes NE.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for ¼ sec. cor., with brass cap, marked

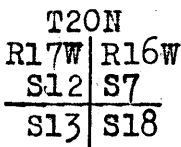


and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

- 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 6 ins. in the

Chains.

ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 7, 12, 13 and 18, with brass cap, marked



1916

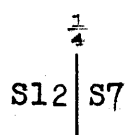
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Land, rolling hills.  
Soil, 4th rate.  
No timber.  
Undergrowth, crucifixion thorn and catclaw.

North, bet. secs. 7 and 12.  
Over rolling hills, through scattering undergrowth.  
Descend 150 ft., on NE. slope.

11.80  
24.75  
40.00

Gulch, course NW. Ascend 30 ft., on gradual S. slope.  
Ridge, brs. NW. and SE. Descend gradually on NE slope.  
Set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for 1/4 sec. cor., with brass cap, marked

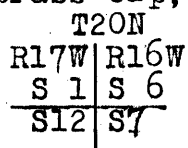


1916

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

42.55  
80.00

Wash, 190 ft. below ridge, 30 lks. wide, course W.  
Continued over rolling hills.  
Set an iron post 3 ft. long, 3 ins. diam., 10 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 1, 6, 7 and 12, with brass cap, marked



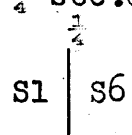
1916

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

Land, rolling hills.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, greasewood, crucifixion thorn and cactus.

40.00

North, bet. secs. 1 and 6.  
Over rolling hills, through scattering undergrowth.  
Set an iron post 3 ft. long, 1 in. in diam., 24 ins. in the ground, for 1/4 sec. cor., with brass cap, marked



1916



Chains.

50.00  
77.66

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Impracticable to set post farther in ground. Wash, 30 lks. wide, course SW.

Intersect 5th. Standard Parallel North, 277 lks. <sup>58°55'</sup>W. of the standard ¼ sec. cor. on S bdy. of sec. 31, which is a lin. iron post with brass cap, marked, set and witnessed as described by the Surveyor General.

At point of intersection,  
Set an iron post, 3 ft. long, 3 ins. diam., 10 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for closing cor. of Ts. 20 N., Rs. 16 and 17 W., with brass cap, marked

T21N R16W  
S31  
-----  
S1 | S6  
R17W | R16W  
T20N  
C C  
1916

and raise a mound of stone, 2 ft. base, 1½ ft. high, S. of cor.  
Land, rolling hills.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, crucifixion thorn, greasewood and cactus.

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Independent Resurvey of E. bdy. of Township 17 N., R. 13 W. 87

chains.

DATE  
DIAGRAM.  
1915

Resurvey executed by Philip L. Inch, U. S. Transitman, under assignment instructions for Group No. 46, dated Jan. 28, 1915. The instrument used, a Young and Sons' transit No. 8389, provided with Smith solar attachment, which is kept in adjustment by repeated tests on meridians obtained from direct solar and Polaris observations.

From old standard cor. of Ts. 17 N., Rs. 12 & 13 W., on 4th. Standard Parallel North, (reestablished in 1911) a 3 ins. iron post, with brass cap, marked and witnessed as described by the Surveyor General,,

North, on retracement on the E. bdy. of the township.

I am unable to find any of the old cors. on this line, and as there are no subdivisions depending upon it, I set temp.  $\frac{1}{4}$  and sec. cors. at intervals of 40.00 chs., and at

.477.82 Intersect reestablished cor. of Ts. 17 and 18 N., Rs. 12 and 13 W., which is a 3 in. iron post, marked and witnessed as described by the Surveyor General.

True course of this township bdy. is therefore, North.

1 Feb. 19

12 Feb. 19

13 Feb. 19

24 Feb. 18

25 Feb. 18

36 Feb. 18

From standard cor. of Ts. 17 N., Rs. 12 and 13 W., North, on a true line, bet. secs. 31 and 36. Ascend over rolling, mountainous land.

7.50 Top of low spur, slopes SW., 14 ft. above sec. cor.; desc.

18.75 Enter dry wash, course W., 90 ft. below top of spur.

29.75 Leave dry wash; ascend.

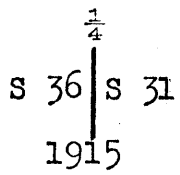
88. Resurvey of the E. bdy of Township 17 North Range 13 West.

Chains

33.50 Top of spur, slopes W., 95 ft. above wash; descend.

36.50 Enter flat sandy wash, course W., 75 ft. below top of spur.

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



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

45.50 Leave flat wash; ascend.

49.00 Top of spur, slopes W., 64 ft. above wash; descend.

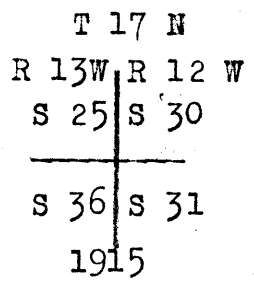
55.00 Enter flat wash, course SW., 25 ft. below top of spur.

63.75 Leave flat wash; ascend.

66.90 Top of low spur, slopes SW., 35 ft. above wash; descend.

71.25 Enter flat wash, course W., 34 ft. below top of spur.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 25, 30, 31 and 36, with brass cap, marked.



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

Land, rolling.

Soil, sandy and gravelly; 2nd rate.

Undergrowth, cholla, ocotillo, Spanish dagger, greasewood, palo verde and white sage.

North, on a true line, bet. secs. 25 and 30.

Over rolling land, through dense undergrowth.

5.50 Leave flat wash; ascend.

9.25 Top of low spur, slopes W., 74 ft. above wash; descend.

Resurvey of the E. bdy. of T. 17 N., R. 13 W.

Chains

- 14.50 Enter flat wash, course SW., 30 ft. below top of spur.
  - 25.25 Leave flat wash, asc.
  - 28.00 Top of mesa, slopes W., bears E. and W., 58 ft. above wash.
  - 30.20 Wire fence, bears N. 80° E. and S. 80° W.
  - 39.60 Dry wash, course SW.
  - 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in ground for reestab. <sup>1</sup>/<sub>4</sub> sec. cor., with a brass cap, marked  

$$\begin{array}{c} 1/4 \text{ S } 25 \quad | \quad \text{S } 30 \\ \hline 1915 \end{array}$$

 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.
  - 44.25 Dry wash, course SW.
  - 57.00 Dry wash, course SW., desc.
  - 60.00 Top of 23 ft. ascent, desc.
  - 65.00 Dry wash, course S. 70° W., 45 ft. descent, asc.
  - 69.30 Top of knoll, 70 ft. above wash, desc.
  - 77.00 Dry wash, course SW., 110 ft. below top of knoll.
  - 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in ground for reestab. cor. of secs. 19, 24, 25 and 30, with a brass cap, marked  

$$\begin{array}{c} \text{T } 17 \text{ N} \\ \text{R } 13 \text{ W} \quad \text{R } 12 \text{ W} \\ \text{S } 24 \quad | \quad \text{S } 19 \\ \hline \text{S } 25 \quad | \quad \text{S } 30 \\ \hline 1915 \end{array}$$

 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.
- Land, rolling.
- Soil, sand and gravel, 2nd. rate.
- Undergrowth, ocotillo, cholla, palo verde, greasewood, Spanish dagger and white sage.

North on a true line bet. secs. 19 and 24.

Over slightly rolling land.

- 11.25 Dry wash, 3.50 chs. wide, course SW.

## Chains

37.00 Dry wash, course W.

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

$$\begin{array}{c} 1/4 \text{ S } 24 \quad | \quad \text{S } 19 \\ \hline \end{array}$$

1915

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

50.03 Wire fence, bears NE. and SW.

56.00 Dry wash, course SW.

68.00 Dry wash, course SW.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in ground for reestab. cor. of secs. 13, 18, 19 and 24, with a brass cap, marked

$$\begin{array}{ccc} & \text{T } 17 \text{ N} & \\ \text{R } 13 \text{ W} & & \text{R } 12 \text{ W} \\ \text{S } 13 & | & \text{S } 18 \\ \hline \text{S } 24 & | & \text{S } 19 \\ & 1915 & \end{array}$$

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

Land, slightly rolling.

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

Undergrowth, ocotillo, cholla, Spanish dagger, cat claw, greasewood and sage brush.

North on a true line bet. secs. 13 and 18.

Over slightly rolling land, through dense undergrowth.

3.50 Dry wash, course W.

8.20 Dry wash, course SW.

11.50 Dry wash, course SW., asc.

22.25 Top of spur, slopes W., 86 ft. above wash, desc. slightly.

25.00 Dry wash, course W., asc.

30.50 Top of spur, slopes W., 52 ft. above wash, desc. slightly.

38.90 Dry wash, course SW.

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

$$\begin{array}{c} 1/4 \text{ S } 13 \quad | \quad \text{S } 18 \\ \hline \end{array}$$

1915

Resurvey of the E. bdy. of T. 17 N., R. 13 W.

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

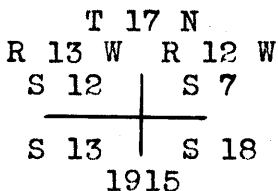
50.75 Dry wash, course SW., asc.

60.75 Top of spur, slopes SW., 130 ft. above wash, desc.

66.30 Foot of 63 ft. descent, asc.

69.00 Top of 35 ft. ascent, spur, slopes NW., desc.

80.00 165 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 12 ins. in the ground to solid rock, in a mound of stone for reestab. cor. of secs. 7, 12, 13 & 18, with a brass cap, marked



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

Land, rolling.

Soil, stony, 3rd. rate.

Undergrowth, palo verde, greasewood, cholla, Spanish dagger and white sage.

North on a true line bet. secs. 7 and 12.

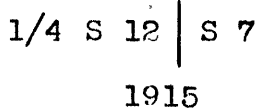
Desc. over rolling mountainous land, through dense undergrowth.

16.30 Dry wash, course W., 244 ft. below sec. cor., asc.

26.20 Top of spur, slopes W., 135 ft. above wash, desc.

34.00 Dry wash, course W., 80 ft. below top of spur.

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



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

47.75 Dry wash, course W.

59.70 Dry wash, course SW.

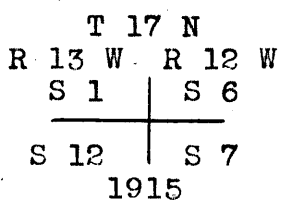
64.70 Dry wash, course SW., asc.

72.50 Top of spur, slopes SW., 100 ft. above wash, desc.

Resurvey of the E. bdy. of T. 17 N., R. 13 W.

Chains  
80.00

63 ft. below top of spur, set an iron post, 3 ft. long,  
3 ins. in diam., 24 ins. in the ground for reestab. cor. of  
secs 1, 6, 7 & 12, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, palo verde, greasewood, cat claw, ocotillo,  
cholla and white sage.

North on a true line bet. secs. 1 and 6.

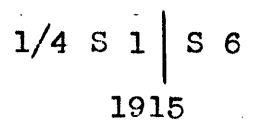
Over rolling mountainous land, through dense undergrowth.

0.25 Dry wash, course SW., asc.

25.00 Top of ridge, bears E. and W., 100 ft. above wash, desc.

36.60 Dry wash, course W., 15 ft. below top of ridge.

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



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

49.50 Dry wash, course NW.

54.60 Dry wash, course W.

69.80 Dry wash, course W.

77.82 Reestablished cor. of T. 17 and 18 N., R. 12 and 13 W., cor.

3 in. iron post, marked and witnessed as described by the  
Surveyor General.

Land, rolling mountainous.

Soil, stony and gravelly, 2nd. rate.

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

Feb. 19, 1915.

Retracement of part of, and  
Dependent Resurvey of part of the North bdy. of T.17 M.,R.13 W. 93

Chains.

DATE DIAGRAM, 1915.

Mar.5	Mar.5	Feb.28	Feb.28	Feb.28	Feb.28
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Retracement and Resurvey executed by Philip L.Inch,U.S. Transitman,under Assignment Instructions for Group 46, dated Jan.28, 1915. The instrument used,Young and Sons' transit,No.8389, provided with Smith solar attachment, which is kept in adjustment by repeated tests on meridians obtained from direct solar and Polaris observations.

This township boundary was previously resurveyed under instructions for Group No.10, in February, 1911.

RETRACEMENT.

From reestablished cor.of Ts.17 and 18 N., Rs.12 and 13 W., hereinbefore described,

N.89°58'W.,on true line,bet.secs.1 and 36,(E.1/2)

Over rolling land. Ascend along broken S.slope.

15.00 Top of spur,50 ft. above Tp.cor.,slopes S.85°W. Descend over N.and NW\*slope of spur.

40.22 Intersect reestablished 1/4 sec.cor., which is a 1 in.iron post,with brass cap,marked and witnessed, as described by the surveyor general. This cor.is 120 ft.below top of spur.

Thence,

N.89°58'W.,on true line,bet. secs.1 and 36 (W.1/2)

Over rolling,broken,W.slope. Descend.

40.12 Intersect reestablished cor.of secs.1,2,35 and 36,which is a 3 in.iron post,with brass cap, marked and witnessed as described by the surveyor general. This cor.is 230 ft. below 1/4 sec.cor.

Land,rolling.

Soil,rocky,3rd rate.

Undergrowth,palo verde,cholla,ocatillo,greasewood and white sage.

No timber.



Chains.

RESURVEY.

The courses and distances in the following notes of resurvey refer to the secs. north of the line, in reference to which sections the cor.markings and accessories are changed.

From reestablished cor.of secs. 1,2,35 and 36,

S.89°50'W., on a true line, on S.bdy.of sec.35.

Descend over rolling land, through dense undergrowth

21.40 Enter level bottom land, brs.N.and S., 100 ft. below sec.cor.

38.41 Intersect witness cor. to reestablished  $\frac{1}{4}$  sec.cor. to secs. 2 and 35, a 1 in.iron post, with brass cap, marked and witnessed as described by the surveyor general. This witness cor.now refers to the  $\frac{1}{4}$  sec.cor. of sec.35 only, being 1.90 chs.N.89°50'E. from cor.point.

40.31 True point for  $\frac{1}{4}$  sec.cor., subject to overflow from the big Sandy river. Impracticable to set cor.at this point. Thence S.89°52'W., on true line, on W. $\frac{1}{2}$  of S.bdy.of sec.35, continuing measurement.

47.00 Left bank of Big Sandy river, course S., channel dry.

50.60 Right bank of Big Sandy river.

75.95 Road to Kingman, brs.N.20°E. and S.20° W.; ascend.

80.62 Intersect reestablished cor.of secs.2,3,34 and 35, a 3 in. iron post with brass cap, marked and witnessed, as described by surveyor general.

Make this a reestablished cor.of secs.34 and 35, T.18 N., R. 13 W., by obliterating markings in S.half of cap, and moving mound of stone from W.to N.of cor.

Land, rolling and level. Soil, sandy loam & stony, 2nd & 3rd rate. Undergrowth, arrowweed, mesquite, catclaw, greasewood and white sage.

Timber, a few scattering cottonwoods.

S.89°47'W., on a true line on S.bdy.of sec.34.

Over slightly rolling land.

7.00 Dry wash, course SE.

36.50 Dry wash, course N.70°E.

40.27 Intersect reestablished  $\frac{1}{4}$  sec.cor. of secs.3 and 34, a 1 in.

Dependent resurvey of part of N. bdy. of Township 17 N. R. 13 W. 95

Chains.

iron post, with brass cap, marked and witnessed as described by the surveyor general. Now refers to sec. 34 only. Continue line and measurement.

75.00 Dry wash, course SE.

80.28 Intersect reestablished cor. of secs. 3, 4, 33 and 34, a 3 in. iron post, with brass cap, marked and witnessed as described by the surveyor general. Make this a reestablished cor. of secs. 33 and 34, T. 18 N., R. 13 E. by obliterating markings in S. half of cap, filling in the pits SE. and SW. of cor., enlarging the pits NE. and NW. of cor. to 24x24x12 ins., and moving the mound of earth from W. to N. of cor.

Land, slightly rolling. Soil, gravelly, 2nd rate.

Undergrowth, greasewood, catclaw, mesquite, white sage and rabbit brush.

S. 89° 56' W., on a true line, on S. bdy. of sec. 33.

Over slightly rolling land.

40.06 Intersect reestablished 1/4 sec. cor. of secs. 4 and 33, a 1 in. iron post, with brass cap, marked and witnessed as described by the surveyor general. Now refers to sec. 33 only. Continue line and measurement.

60.00 Begin to ascend.

70.00 Top of 70 ft. ascent; descend slightly.

80.00 Intersect reestablished cor. of secs. 4, 5, 32 and 33, a 3 in. iron post with brass cap, marked and witnessed as described by the surveyor general. Make this a reestablished cor. of secs. 32 and 33, T. 18 N., R. 13 W. by obliterating markings in S. half of cap, and moving the mound of stone from W. to N. of cor.

Land, level and slightly rolling.

Soil, sandy and gravelly, 3rd rate.

Undergrowth, palo verde, greasewood, ocotillo, cholla, white sage and rabbit brush.

N. 89° 56' W., on a true line, on S. bdy. of sec. 32.

Over slightly rolling land.

96. ~~RD~~ependent Resurvey of part of N. bdy. of Township 17 N. R. 13 W.

Chains.

- 5.70 Dry wash, course NE.; ascend.  
 24.90 Top of spur, slopes NE., 85 ft. above wash; descend slightly.  
 32.55 Dry wash, course NE.  
 39.80 Dry wash, course NE $\frac{1}{4}$ ; ascend.  
 39.96 Intersect reestablished  $\frac{1}{4}$  sec. cor. of secs. 5 and 32, a 1 in. iron post, with brass cap, marked and witnessed as described by the surveyor general. Now refers to sec. 32 only.

Continue line and measurement.

- 59.95 Top of spur, slopes NE., 250 ft. above wash; descend.  
 76.85 Descend E. slope.  
 80.30 Intersect reestablished cor. of secs. 5, 6, 31 and 32, a 3 in. iron post with brass cap, marked and witnessed as described by surveyor general. Make this a reestablished cor. of secs. 31 and 32, T. 18 N., R. 13 W. by obliterating markings in S. half of cap, and moving mound of stone from W. to N. of cor.

Land, rolling. Soil, stony, 3rd rate.

Undergrowth, greasewood and cacti.

S. 89° 49' W., on a true line, on S. bdy. of sec. 31.

Ascend slightly, over rolling land.

- 0.20 Top of ridge, brs. NE. and SW.; descend.  
 29.80 Dry wash, course NE., 87 ft. below top of ridge; ascend.  
 35.00 Top of 52 ft. ascent.  
 40.00 Intersect reestablished  $\frac{1}{4}$  sec. cor. of secs. 6 and 31, a 1 in. iron post with brass cap, marked and witnessed as described by the surveyor general. Now refers to sec. 31 only.

Continue line and measurement.

- 74.25 Draw, course NE.  
 79.57 Intersect reestablished cor. of Ts. 17 and 18 N., Rs. 13 and 14 W., a 3 ins. iron post, with brass cap, marked and witnessed, as described by the surveyor general.

Land, rolling and level. Soil, stony and gravelly, 3rd rate.

Undergrowth, greasewood, sage brush and cacti.

March 5, 1915.

Independent Resurvey of West bdy of T. 17 N. R. 13 W. 97

Chains.

Resurveyed by Fred N. Wardwell, U. S. Surveyor,  
as follows:

DATE  
DIAGRAM.  
1915

From reestablished standard cor. of Ts. 17 N.,  
Rs. 13 and 14 W., on 4th Standard Parallel  
North, described in Book "A,"

March 5 6

North, on a random line on the W. bdy. of T. 17  
N., R. 13 W.

March 5 7

As there are no subdivisions depending upon  
the old line, and as I am unable to find  
any of the old corners, I set temp.  $\frac{1}{4}$  and  
sec. cors. at intervals of 40.00 chs., and at

March 5 18

477.09 Fall 84 lks. E. of the reestablished cor. of  
Tps. 17 and 18 N., Rs. 13 and 14 W., which  
is a 3 inch iron post, marked and witnessed  
as described by the surveyor general.

March 5 19

The true course of this line is therefore N. 0°  
6' W.

March 4 30

-----  
From reestablished standard cor. of Ts. 17 N.,  
Rs. 13 and 14 W., on 4th. Standard Parallel  
North, described in Book "A,"

March 4 31

N. 0° 6' W., on a true line, bet. secs. 31 and  
36.

Descend over rolling mountainous land, through dense  
undergrowth.

18.60 Dry wash, 20 lks. wide, course N. 75° E., 20 ft. below  
standard sec. cor.; ascend.

31.80 Top of spur, slopes NE.; 222 ft. above wash; descend.

40.00 207 ft. below top of spur, set an iron post, 3 ft. long,  
1 in. in diam., 24 ins. in the ground for reestablished  
 $\frac{1}{4}$  sec. cor., with brass cap, marked

$\frac{1}{4}$   
S 36 | S 31  
1915

98/ Resurvey of the W. bdy. of Township 17 North, Range 13 W.

Chains.

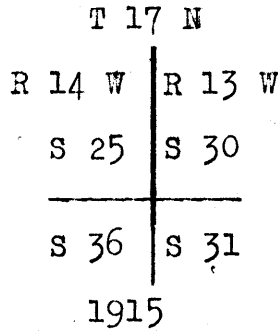
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor. Continue to descend.

59.80 Deluge wash, 2 chs. wide, course E.; enter dense catclaw.

60.50 Road in wash, brs. E. and W., 215 ft. below  $\frac{1}{4}$  sec. cor.

75.30 Leave catclaw undergrowth, brs. N.  $85^\circ$  E. and S.  $85^\circ$  W.; ascend.

80.00 135 ft. above wash, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. secs. 25, 30, 31 and 36, with brass cap, marked



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

Land, mountainous.

Soil, stony, 4th rate.

Undergrowth, palo, catclaw, and greasewood.

N.  $0^\circ 6'$  W., on a true line, bet. secs. 25 and 30.

Ascend over mountainous land.

8.20 Top of spur, slopes S.  $20^\circ$  W., 176 ft. above sec. cor.

Descend slightly.

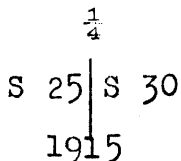
13.50 Begin to ascend.

14.90 Top of spur, slopes SW., 80 ft. above 1st spur; descend.

20.00 Foot of 40 ft. descent; ascend.

33.00 Top of slight ascent, spur, slopes SW.; descend.

40.00 118 ft. below top of spur, set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone for reestablished  $\frac{1}{4}$  sec. cor., with brass cap, marked



Resurvey of the W. bdy. of T. 17 N., R. 13 W.

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

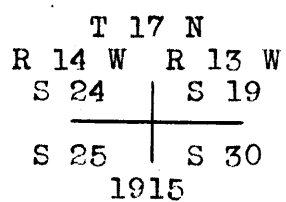
50.00 Head of wash, course S. 30° W., asc. more abruptly.

61.50 Top of ridge, bears N. 30° W. and SE., 355 ft. above ¼ sec. cor., desc.

67.20 Head of ravine, course SE., 83 ft. below top of ridge, asc.

74.00 Top of ridge, bears N. 60° W. and S. 60° E., 110 ft. above ravine, desc.

80.00 70 ft. below top of ridge, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 19, 24, 25 and 30, with brass cap, marked



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

Land, rough mountainous.  
 Soil, stony, 3rd. rate.  
 Undergrowth, greasewood and cacti.

N. 0° 6' W. on a true line bet. secs. 19 and 24.  
 Over rough mountainous land, desc. slightly.

1.30 Ravine, course SE., 8 ft. below sec. cor., asc.

6.60 Top of spur, slopes S. 75° E., 107 ft. above ravine, desc.

15.70 Wash, 13 lks. wide, course SE., 60 ft. below top of spur, asc.

23.50 Top of spur, slopes S. 60° E., 150 ft. above wash, desc.

26.00 Wash, 10 lks. wide, 74 ft. below top of spur, asc.

33.90 Top of spur, slopes S. 50° E., 114 ft. above wash, desc.

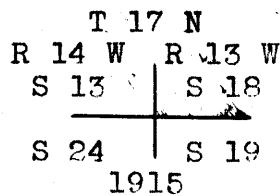
40.00 In small gulch, course SE., 34 ft. below top of spur.  
 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished ¼ sec. cor., with brass cap, marked

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      1/4 S 24 | S 19
          1915
  
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and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Chains  
 43.40 Draw, 14 lks. wide, course E., 36 ft. below 1/4 sec. cor.,  
 asc.  
 52.80 Top of spur, slopes S. 80° E., 76 ft. above draw, desc.  
 57.60 Wash, 20 lks. wide, course S. 70° E., 37 ft. below top  
 of spur, asc.  
 71.70 Top of spur, slopes S. 65° E., 120 ft. above wash, desc.  
 75.60 Wash, course S. 55° E., 100 ft. below top of spur, asc.  
 80.00 75 ft. above wash, set an iron post, 3 ft. long, 3 ins.  
 in diam., 24 ins. in the ground for reestablished cor.  
 of secs. 13, 18, 19 and 24, with brass cap, marked



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

Land, rough mountainous.

Soil, stony, 4th. rate.

Undergrowth, scattering palo verde and sage brush.

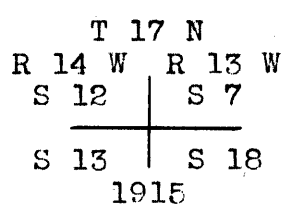
N. 0° 6' W. on a true line bet. secs. 13 and 18.

Asc. over rough mountainous land.

4.00 Top of spur, slopes S. 80° E., 37 ft. above sec. cor., desc.  
 13.20 Wash, 10 lks. wide, course S. 70° E., 82 ft. below top of  
 spur, asc.  
 19.00 Top of spur, slopes E., 90 ft. above wash, desc.  
 25.80 Wash, 11 lks. wide, course S. 80° E., 105 ft. below spur,  
 asc.  
 34.40 Top of spur, slopes S. 75° E., 25 ft. above wash, desc.  
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in  
 the ground for reestablished 1/4 sec. cor., with brass cap,  
 marked  
 1/4 S 13 | S 18  
 1915  
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
 W. of cor.  
 43.30 Wash, 60 lks. wide, course E., 143 ft. below top of spur,  
 asc.

Resurvey of the W. bdy. of T. 17 N., R. 13 W.

Chains  
 56.90 Top of spur, slopes E., 152 ft. above wash, desc.  
 60.80 Wash, 15 lks. wide, course S. 70° E., 90 ft. below top of spur, asc.  
 65.50 Top of spur, slopes E., 108 ft. above wash, desc.  
 70.80 Wash, 70 lks wide, course S. 85° E., 123 ft. below top of spur, asc.  
 78.10 Top of spur, slopes S. 70° E., 111 ft. above wash, desc.  
 80.00 27 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished. cor. of secs. 7, 12, 13 and 18, with brass cap, marked



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

Land, rough mountainous.

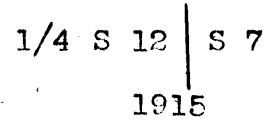
Soil, stony, 4th. rate.

Undergrowth, scattering palo verde and white sage.

N. 0° 6' W. on a true line bet. secs. 7 and 12.

Desc. over rough mountainous land.

4.90 Wash, course S. 75° E., 30 lks. wide, 88 ft. below sec. cor., asc.  
 8.70 Top of spur, slopes S. 75° E., 73 ft. above wash, desc.  
 19.60 Wash, 1 ch. wide, course S. 80° E., 160 ft. below top of spur, asc.  
 28.40 Top of spur, slopes S. 85° E., 22 ft. above wash, desc.  
 32.50 Wash, 25 lks. wide, course S. 85° E., 34 ft. below top of spur, asc.  
 37.80 Top of spur, slopes N. 75° E., 170 ft. above wash, desc.  
 40.00 30 ft. below top of spur, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished, 1/4 sec. cor., with brass cap, marked





Resurvey of the W. bdy. of T. 17 N., R. 13 W.

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

44.60 Wash, 20 lks. wide, course N. 75° E., 129 ft. below ¼ sec. cor., asc.

59.20 Top of spur, slopes S. 80° E., 182 ft. above wash, desc.

74.30 Enter wash, course E., 337 ft. below top of spur.

79.30 Leave wash, asc.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 1, 6, 7 and 12, with brass cap, marked

T 17 N			
R 14 W		R 13 W	
S 6		S 1	
S 12		S 7	
1915			

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

Land, rough mountainous.

Soil, stony, 4th. rate.

Undergrowth, scattering palo verde and white sage.

---

N. 0° 6' W. on a true line bet. secs. 1 and 6.

Asc. E. slope, over rough mountainous land.

15.50 Top of spur, slopes S. 80° E., 279 ft. above sec. cor.

20.40 Desc.

26.00 Wash, 20 lks. wide, course E., 143 ft. below top of spur., asc.

36.60 Top of spur, slopes N. 75° E., 169 ft. above wash, desc.

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

1/4 S 1		S 6
1915		

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

52.90 Wash, 35 lks. wide, course E., 253 ft. below top of spur, asc.

62.10 Top of ridge, bears E. and W., 198 ft. above wash, desc.

73.80 Ravine, course N. 60° E., 150 ft. below top of ridge, asc.

Resurvey of the W. bdy. of T. 17 N., R. 13 W.

Chains

77.09

Reestablished cor. of T. 17 and 18 N., R. 13 and 14 W., 63

ft. above wash, a 3 in. iron post.

Land, rough mountainous.

Soil, stony, 4th. rate.

Undergrowth, palo verde and white sage.

March 5, 1915.

BOUNDARIES OF T. 17 N., R. 13 W.  
Latitudes, departures and closing errors.

Line designated	Bearing	Dist- ance.	Latitudes		Departures	
			N.	S.	E.	W.
West boundary	N, 0° 6' W.	477.09	477.09			0.84
North	"	"	"	"	"	"
"	"	"	"	"	"	"
"	N. 89° 49' E	79.57	0.25		79.57	
"	"	40.34				
"	S. 89° 56' E	80.30		0.09	80.30	
"	"	"	"	"	"	"
"	N. 89° 56' E	80.00	0.09		80.00	
"	"	"	"	"	"	"
"	N. 89° 47' E	80.28	0.30		80.28	
"	"	"	"	"	"	"
"	N. 89° 52' E	40.31	0.09		40.31	
"	"	"	"	"	"	"
"	N. 89° 50' E	40.31	0.12		40.31	
"	"	"	"	"	"	"
"	S. 89° 58' E	80.34		0.05	80.34	
East	"	"	"	"	"	"
South boundary	South	477.82		477.82		
(4th. Sta. Par. N.)	"	"	"	"	"	"
"	N. 89° 39' W	40.12	0.24			40.12
"	"	"	"	"	"	"
"	S. 89° 44' W	80.18		0.37		80.18
"	"	"	"	"	"	"
"	S. 89° 55' W	40.11		0.06		40.11
"	"	"	"	"	"	"
"	West	320.00				320.00
Convergency	-----	-----				0.50
Totals	-----	-----	478.18	478.39	481.61	481.25
Error in lat	-----	-----		478.18		
Error in dep	-----	-----		0.21	481.25	
						0.36



Independent Resurvey of West bdy. of Township 17 N., R. 14 W. 105

Chains.

Resurvey executed by Fred N. Wardwell, U. S. Surveyor under Assignment Instructions for Group 46, dated Jan. 28, 1915. The instrument used is a Young and Sons' transit with solar attachment, No. 8481. The instrument was tested on a meridian determined by Polaris observation on Feb. 18, 1915, and found to be in good adjustment.

DATE  
DIAGRAM  
1915

There are no subdivisions depending upon the old survey of this line; therefore, I destroy all old cors., and establish a new line, as follows:

From reestablished standard cor. of Ts. 17 N., Rs. 14 and 15 W., (4th Standard Parallel North) described in Book "A,"

North, on a true line, bet. secs. 31 and 36. Descend over rough mountainous land.

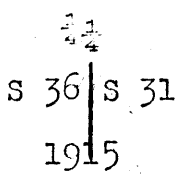
15.40 Draw, course N. 60°E., 340 ft. below standard sec.cor.; ascend.

19.67 Telephone line, Cedar and Yucca, brs. NW. and SE.

21.00 Top of spur, slopes E., about 8 chs., 35 ft. above draw; descend.

31.60 Draw, course N. 15°E., 220 ft. below top of spur; ascend.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 14 ins. in the ground to solid rock, in a mound of stone for reestablished sec.cor., with brass cap, marked



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

43.87 Top of spur, slopes N. 15°E., top of slight ascent; desc.

May 21	6
May 20	7
May 20	18
March 23	19
March 23	30
March 22	31

106 Resurvey of W. bdy. of Township 17 North, Range 14 West.

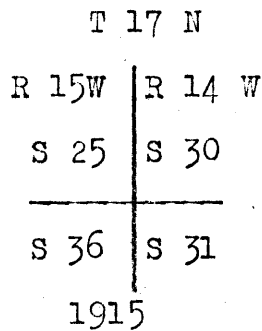
Chains.

53.40 Spring branch, 3 lks.wide, course N.30° W., 146 ft. below top of spur; continue to descend.

76.60 Deluge wash with creek, 8 lks.wide, course E., 209 ft. below spring branch.

77.70 Galvanized iron cabin, brs. W., 2.50 chs.dist.; ascend.

80.00 35 ft. above wash, set an iron post, 3 ft.long, 3 ins. in diam., 20 ins. in the ground, to solid rock, in a mound of stone, for reestablished cor.of secs. 25, 30, 31 and 36, with brass cap, marked



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

Land, rough and mountainous.

Soil, gravelly and stony, 3rd rate.

Undergrowth, scrub oak and laurel.

-----  
North, on a true line, bet. secs. 25 and 30.

Ascend over mountainous land, through scattering undergrowth.

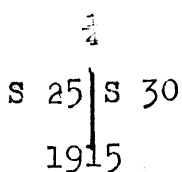
3.85 Top of spur, slopes SE., 65 ft. above sec.cor.; descend.

11.95 Draw, course SE.

16.55 Dry wash, 8 lks.wide, course E.

19.80 Enter dense undergrowth, brs.E. and W.

40.00 310 ftl above wash, set an iron post, 3 ft.long, 1 in. in diam., 10 ins. in the ground to solid rock, in a mound of stone for reestablished ¼ sec.cor., with brass cap, marked



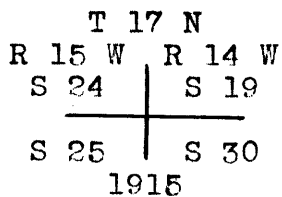
Resurvey of the W. bdy. of T. 17 N., R. 14 W.

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

56.37 Top of rocky spur, slopes SE., 465 ft. above 1/4 sec. cor., desc.

67.89 Gulch, course E., 283 ft. below top of spur, asc.

80.00 316 ft. above gulch, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for reestab. cor. of secs. 19, 24, 25 and 30, with a brass cap, marked



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

Land, rough and mountainous.

Soil, gravelly and stony, 3rd. rate.

Undergrowth, scrub oak, palo verde, laurel and Spanish dagger.

North on a true line bet. secs. 19 and 24.

Asc. over mountainous land, through dense undergrowth.

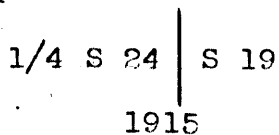
3.80 Top of spur, slopes NE., 53 ft. above sec. cor., desc.

20.54 Dry wash, 10 lks. wide, course S. 80° E., 438 ft. below top of spur, asc.

26.52 Top of rocky spur, slopes E., 215 ft. above wash, desc.

31.80 Gulch, 20 lks. wide, course S. 60° E., 75 ft. below top of spur, asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for reestab. 1/4 sec. cor., with a brass cap, marked



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

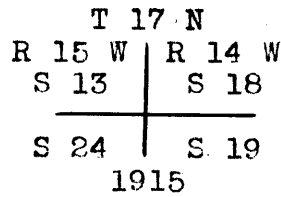
46.75 Top of spur, slopes SE., continue ascent.

61.05 Top of ridge, bears NE. and SW., 415 ft. above gulch, desc.

Resurvey of the W. bdy. of T. 17 N., R. 14 W.

Chains

75.62 Gulch, course NE., 8 lks. wide., continue to desc.  
 80.00 360 ft. below top of ridge, set an iron post, 3 ft. long,  
 3 ins. in diam., on surface rock, in a mound of stone,  
 reestab.  
 for cor. of secs. 13, 18, 19 and 24, with a brass cap,  
 marked



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

Land, rough and mountainous.

Soil, gravelly and stony, 3rd. rate.

Undergrowth, scrub oak, palo verde and laurel.

North on a true line bet. secs. 13 and 18.

Asc. over rough mountainous land, through dense under-  
 growth.

2.00 Top of spur, slopes E., 21 ft. above sec. cor., desc.

7.13 Draw, course E. at foot of slight descent, asc.

11.87 Top of slight ascent, spur, slopes NE. about 20 chs.

11.92 Gallowsframe bears N. 16° 39' W.

Bunk house, bears N. 17° 38' W.

Cook house, bears N. 11° 20' W.

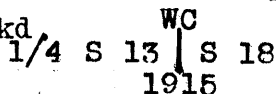
Dam, bears N. 10° 5' E.

19.76 Draw, course N. 20° E.

31.00 Trail, bears E. and W.

38.43 Road, bears E. and W.

39.43 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in  
 the ground for witness cor. to reestablished ¼ sec. cor.,  
 with brass cap, mkd.



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

U.S.L.M. No. 2563 bears N. 46° 57' W., 25.63 chs. dist.

From U.S.L.M., 2563, Cor. No. 1, Siames No. 1, bears S. 24° E.,  
 2.10 chs. dist.

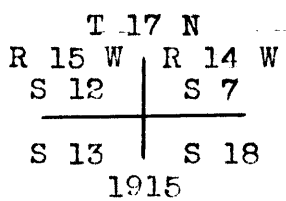
From U.S.L.M., 2563, Cor. No. 4, Siames No. 1, bears N. 78° 10'  
 E., 9.23 chs. dist.

39.90 Carpenter shop on line.

Resurvey of the W. bdy. of T. 17 N., R. 14 W.

Chains

- 40.00 Point for reestablished  $\frac{1}{4}$  sec. cor. Falls under building.
- 40.73 Engine house, bears E. 44 lks. dist.  
Assay office, bears W. 81 lks.
- 41.09 Gallows frame over main shaft, bears E. 120 lks. dist.
- 41.75 Blacksmith shop, bears E. 30 lks. dist.
- 41.86 Bunk house, bears S. 73° 25' W.  
Cook house, bears S. 59° 14' W.  
Gallows frame, bears N. 39° 40' W.
- 44.17 Mill and power house, bears E. 3 chs. dist.  
The above improvements constitute a place called Copperville.
- 44.62 Road, bears E. and W.
- 45.24 Crow canyon, course E.
- 46.43 Creek, 4 lks. wide, course E. Dam, bears E., asc.
- 68.70 Top of spur, slopes S. 80° E., 173 ft. above creek, desc.
- 74.18 Draw, course SE, 70 ft. below top of spur, asc.
- 80.00 113 ft. above draw, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for reestablishment of sec. cor. of secs. 7, 12, 13 and 18, with a brass cap, marked



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

Land, rough and mountainous.  
Soil, stony and gravelly, 3rd. rate.  
Undergrowth, scrub oak and laurel.

North on a true line bet. secs. 7 and 12.  
Asc. over rough mountainous land, through dense undergrowth.

- 31.86 Top of spur, slopes SE. about 40 chs., 514 ft. above sec. cor., desc.
- 40.00 110 ft. below top of spur, set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone,



Resurvey of the W. bdy. of T. 17 N., R. 14 W.

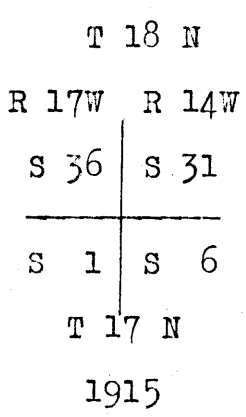
Chains	<p>for reestablished <math>\frac{1}{4}</math> sec. cor., with brass cap, marked</p> $\begin{array}{c} 1/4 \text{ S } 12 \quad   \quad \text{S } 7 \\ \hline 1915 \end{array}$ <p>and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, W. of cor.</p>
63.91	Draw, course SE., 158 ft. below top of spur, asc.
70.90	Top of ridge, bears E. and N. $60^\circ$ W., 343 ft. above draw, desc.
80.00	<p>55 ft. below top of ridge, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, reestab. for cor. of secs. 1, 6, 7 and 12, with a brass cap, marked</p> $\begin{array}{ccc} & \text{T } 17 \text{ N} & \\ \text{R } 15 \text{ W} & & \text{R } 14 \text{ W} \\ \text{S } 1 &   & \text{S } 6 \\ \hline \text{S } 12 &   & \text{S } 7 \\ & 1915 & \end{array}$ <p>and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, W. of cor.</p> <p>Land, rough mountainous.</p> <p>Soil, rocky, 3rd. rate.</p> <p>Undergrowth, scrub oak, laurel and cat claw.</p>
-----	
	<p>North on a true line bet. secs. 1 and 6.</p> <p>Desc. over rough mountainous land, through dense undergrowth.</p>
5.78	Draw, course E., 23 ft. below sec. cor., asc.
19.44	Top of spur, slopes E., 219 ft. above draw, desc.
21.32	Draw, course S. $70^\circ$ E. at foot of slight descent, asc.
40.00	<p>327 ft. above draw, set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for reestablished <math>\frac{1}{4}</math> sec. cor., with brass cap, marked</p> $\begin{array}{c} 1/4 \text{ S } 1 \quad   \quad \text{S } 6 \\ \hline 1915 \end{array}$ <p>and raise a mound of stone, 2 ft. base, <math>1\frac{1}{2}</math> ft. high, W. of cor., continue to asc.</p>
51.86	Top of ridge, bears N. $80^\circ$ E., and S. $80^\circ$ W., 115 ft. above $1/4$ sec. cor., desc.

Resurvey of the West bdy. of Township 17 North, Range 14 W. 111

Chains.

66.23 Draw, course NE., 416 ft. below top of ridge; ascend.

80.00 114 ft. above draw, set an iron post 3 ft. long, 3 ins. in diam., 12 ins. in the ground to solid rock, in a mound of stone, for reestablished cor. of Ts. 17 and 18 N., Rs. 14 and 15 W., with brass cap, marked



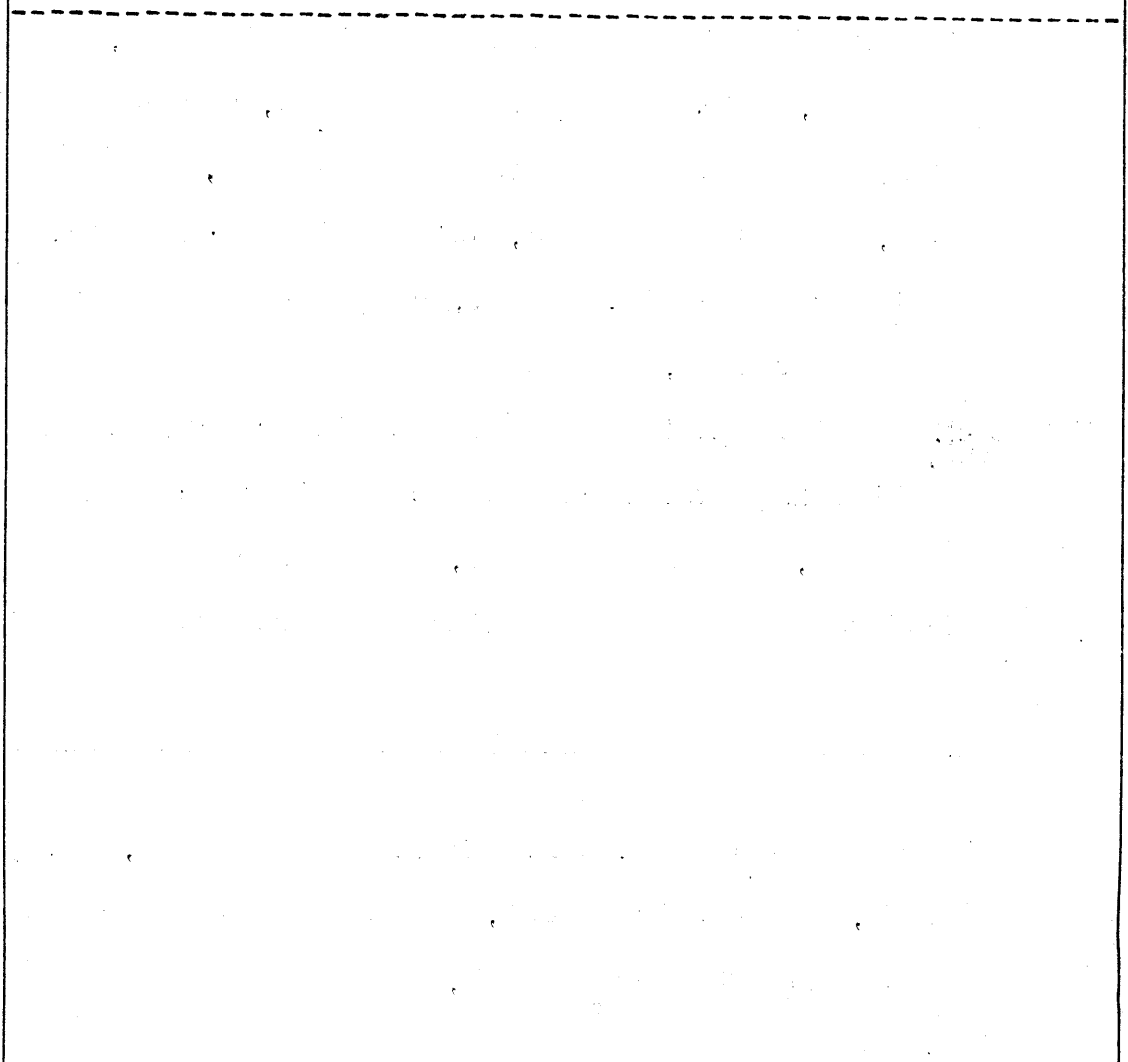
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, S. of cor.

Land, rough, mountainous.

Soil, stony, 3rd rate.

Undergrowth, scrub oak, laurel, catclaw and scattering small pine.

May 21, 1915.



## Independent

112. Resurvey of North bdy. of Township 17 North, Range 14 West  
Chains.DATE DIAGRAM.

1915.

June 6	June 6	June 5	June 5	June 5	June 5
6	5	4	3	2	1

Resurvey executed by Fred N. Wardwell, U. S. Surveyor, under Assignment Instructions for Group No.46, dated Jan.28, 1915. The instrument used is Young and Sons' transit No.8514, provided with Smith solar attachment, which is kept in good adjustment by repeated and frequent tests on meridians determined by Polaris and direct solar observations.

There are no subdivisions depending upon the old survey of this line; therefore, I destroy all old cors., and establish a new line, as follows:

From reestablished cor. of Tps. 17 and 18 N., Rs.13 and 14 W., which is a 3 in. iron post, marked and witnessed as described by the surveyor general,

West, on a tangent line, setting temp. $\frac{1}{4}$  and sec.cors. at intervals of 40.00 chs., corrected N. from tangent to the parallel, and at

478.50 N. 25 lks.from tangent parallel intersects N. and S. range line 224 lks.S. of the reestablished cor.of Ts.17 and 18 N., Rs. 14 and 15 W., hereinbefore described.

The true course of this line is therefore N. 89° 44' W.

From reestablished cor. of Ts. 17 and 18 N., Rs.13 and 14 W., a 3 in. iron post, marked and witnessed as described by the surveyor general,

Independent Resurvey of the N. bdy. of Township 17 North, Range 14 W.

Chains.

N. 89° 44' W., on a true line, bet. secs. 1 and 36.

Over rolling, mountainous land.

3.00 Top of spur, slopes NE.; descend.

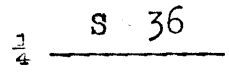
21.88 Center of dry wash, 2 chs. wide, course N. 80° E., 85 ft.

below top of spur; ascend.

40.00 Set an iron post 3 ft. long, 1 in. in diam., on surface

rock, in a mound of stone for reestablished  $\frac{1}{4}$  sec. cor.,

with brass cap, marked,



S 1

1915

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

51.60 Saddle in top of ridge, bears N. and S., 85 ft, above

wash; descend.

53.85 Dry wash, course N., east bank, 114 ft. below top of ridge.

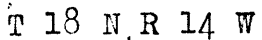
56.47 West bank of wash.

63.78 Wash, 60 lks. wide, course N. 85° E.

80.00 Set an iron post 3 ft. long, 3 ins. in diam., on surface

rock, in a mound of stone for reestablished cor. of

secs. 1, 2, 35 and 36, with brass cap, marked



S 2 | S 1

T 17 N

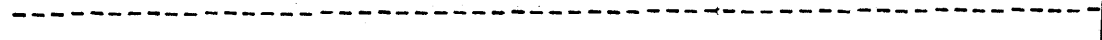
1915

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

Land, rolling, mountainous.

Soil, stony, 3rd rate.

Undergrowth, laurel and chaparrel.



114. Resurvey of North bdy. of Township 17 North, Range 14 W.

Chains.

N.89° 44'W., on a true line, bet. secs. 2 and 35.

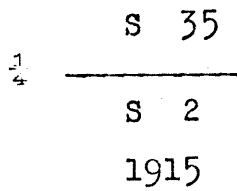
Descend over rolling, mountainous land.

4.95 Left bank of wash, course S.85° E., 46 ft. below sec. cor.

14.95 Right bank of wash; ascend.

35.00 Top of 178 ft. ascent.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for reestablished  $\frac{1}{4}$  sec.cor., with brass cap, marked



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

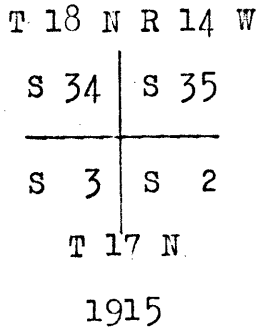
52.70 Descend.

57.67 Foot of 34 ft. descent, wash, course N. 85° E.

68.83 Wash, 60 lks.wide, course N. 60°E.; ascend.

76.90 Top of spur, slopes N. about 5 chs. dist., 132 ft. above wash; descend.

80.00 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 reestablished cor. of secs. 2, 3, 34 and 35, with brass cap, marked



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

Land, rolling, mountainous.

Soil, stony, 3rd rate.

Undergrowth, scattering scrub oak.

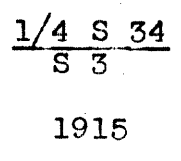
Resurvey of the N. bdy. of T. 17 N., R. 14 W.

Chains N. 89° 44' W. on a true line bet. secs. 3 and 34.  
 Over rolling mountainous land.

26.62 Right bank of wash, course N. 85° E.

32.92 Left bank of wash.

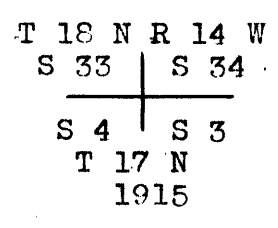
40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for reestablished,  $\frac{1}{4}$  sec. cor. with brass cap, marked



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

59.34 Top of ridge, bears N. 70° E. and S. 70° W., 168 ft. above wash, desc.

80.00 70 ft. below top of ridge, set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, reestab. for cor. of secs. 3, 4, 33 and 34, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

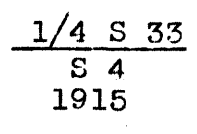
Undergrowth, laurel.

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N. 89° 44' W. on a true line bet. secs. 4 and 33.  
 Desc. over rolling land.

13.83 Dry wash, course N. 60° W., 48 ft. above sec. cor.  
 Asc. SNE. slope.

40.00 195 ft. above wash, set an iron post, 3 ft. long, 1 in. in diam., 12 ins. in the ground to solid rock, in a mound of stone, reestab. for  $\frac{1}{4}$  sec. cor., with a brass cap, marked

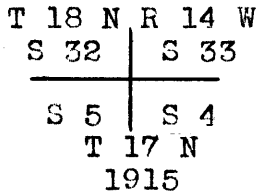


166

Resurvey of the N. bdy. of T. 17 N., R. 14 W.

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

80.00 365 ft. above 1/4 sec. cor., set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, reestab. for cor. of secs. 4, 5, 32 and 33, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, oak brush and laurel.

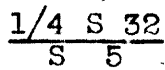
N. 89° 44' W. on a true line bet. secs. 5 and 32.

Asc. over rolling mountainous land.

20.83 Top of spur, slopes N., 182 ft. above sec. cor., desc.

27.56 Draw, course N., 20 ft. below top of spur, asc.

40.00 110 ft. above draw, set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for reestab. 1/4 sec. cor., with a brass cap, marked



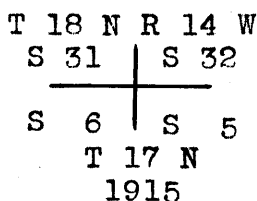
1915

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

51.48 Top of spur, slopes N., 130 ft. above 1/4 sec. cor., desc.

68.53 Bend in draw, course N. 60° E. from W., 125 ft. below top of spur. Follow up draw.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for cor. of secs. 5, 6, 31 and 32, with a brass cap, marked



Resurvey of the N. bdy. of T. 17 N., R. 14 W.

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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, oak brush and laurel.

---

N. 89° 44' W. on a true line bet. secs. 6 and 31.

Ascend up draw, through dense undergrowth.

3.40 Leave draw; ascend.

29.20 Top of ridge, bears N. 20° E. and S. 20° W., 465 ft. above sec. cor., desc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on surface rock, in a mound of stone, for reestab. ¼ sec. cor. with brass cap, marked

$$\frac{1/4 \text{ S } 31}{\text{S } 6}$$
 1915

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

44.40 Head of draw, course NE., 210 ft. below top of ridge, asc.

62.37 Top of spur, slopes NE., 222 ft. above draw, desc.

72.11 Draw, course NE., 29 ft. below top of spur.

78.50 Reestablished cor. of T. 17 and 18 N., R. 14 and 15 W., hereinbefore described.

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, oak brush and laurel.

Boundaries of T. 17 N., R. 14 W.  
 Latitudes, departures and closing errors.

Line designated	Bearing	Dist.	Latitudes		Departures	
			N.	S.	E.	W.
South boundary (4th. Sta. Par. N.)	West	480.00				480.00
West "	North	480.00	480.00			
North "	S. 89° 44' E	478.50		2.24	478.50	
East "	S. 0° 6' E	477.09		477.09	0.84	
Convergency					0.50	
Totals			480.00	479.33	479.84	480.00
			479.33			
Error in lat.			0.67			479.84
Error in dep.						0.16

June 6, 1915.

Surveyor.



Dependent Resurvey of E. bdy. of Township 17 North, Range 18 W. 119

Chains.

DATE DIAGRAM, 1915.

		1	April 19
	Resurvey executed by Fred N. Wardwell, U. S. Surveyor, under special instructions for group 46, with a Young & Sons' light mountain transit, No 8481, with a solar attachment.		April 19
	April 19, 1915: At the Std. cor. of T. 17 N., R. 18 W. (SE. cor.) originally std. cor. of Ts. 17 N., Rs. 17 and 18 W., but changed as described in Book "A;" at 8h. 0m. a.m., l.m.t., set off 10° 58' N. on the decl. arc; and 34° 48½' N. on the lat. arc, and determine a meridian with the solar. Thence	12	April 19
	N. 0° 8' E. on a true line on E. bdy. of sec. 36. Over level land, in sandy wash.	13	April 19
7.00	Leave wash, course west.	24	April 19
10.00	Enter dry wash, course S. 70° W.	25	April 19
23.60	Leave wash.	36	April 19
39.95	Intersect original ¼ sec. cor. of secs. 31 and 36, a basalt stone, 10x10x12 ins. above ground, marked and witnessed as described by the surveyor general. Reestablish as ¼ sec. cor. to sec. 36 only, as follows: Set an iron post on S side of stone, 3 ft. long, 1 in. in diam., 24 ins. in the ground for ¼ sec. cor., with brass cap, marked ¼ S36 1915		
	Continue line and measurement.		
43.00	Enter dry wash, course S. 80° W.		
55.00	Leave wash.		
75.90	Enter dry wash, course S. 70° W.		
79.97	Intersect original cor. of secs. 25, 30, 31 and 36, a granite stone 8x12x10 ins., marked and witnessed as described by surveyor general. Reestablish as cor. of secs. 25 and 36 only, as follows: Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins.		

## 120. Resurvey of the East bdy. of Township 17 North, Range 18 W.

Chains.

in the ground, alongside of stone, for cor. of secs. 25 and 36, with a brass cap, marked

T 17 N
R 18 W
S 25
-----
S 36
1915

Land, level and slightly rolling.

Soil, sandy and gravelly, 2nd rate.

Undergrowth, cacti, yucca palm, catclaw and greasewood.

N. 0° 6' E., on a true line, on E bdy. of sec. 25.

Over slightly rolling land.

5.90 Leave dry wash, course W.

39.97 Intersect original  $\frac{1}{4}$  sec. cor. of secs. 25 and 30, a granite stone, 8x10x10 ins. above ground, marked and witnessed as described by surveyor general. Reestablish as  $\frac{1}{4}$  sec. cor. to sec. 25 only as follows:

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

$\frac{1}{4}$ S 25
1915

N. 0° 7' E. on N.  $\frac{1}{2}$  of E. bdy. of sec. 25, continuing measurement.

68.00 Dry wash, 30 lks. wide, course W.

80.00 Intersect original cor. of secs. 19, 24, 25 and 30, a basalt stone 14x10x10 ins. above ground, marked and witnessed as described by surveyor general. Reestablish as cor. of secs. 24 and 25 only, as follows:

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, alongside of stone, for cor. of secs. 24 and 25, with brass cap, marked

T 17 N
R 18 W
S 24
-----
S 25
1915

Land, slightly rolling.

Soil, sandy and gravelly, 2nd rate.

Reurvey of East bdy. of Township 17 North, Range 18 West. 121.

Chains.

Undergrowth, cacti, and greasewood.

N.0° 5'E., on a true line, on E bdy. of sec. 24.

Over rolling land.

16.40 Road bet. Yucca and Needles, brs. N. 40° W. and S. 40° E.

25.00 Mackensie wash, 3 chs. wide, course W.

39.96 Intersect original 1/4 sec. cor. of secs. 19 and 24, a basalt stone 8x8x6 ins. above ground, marked and witnessed as described by surveyor general. Reestablish as 1/4 sec. cor. to sec. 24 only, as follows:

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

1/4 S 24  
1915

Continue line and measurement.

50.00 Dry wash, 2 chs. wide, course W.

55.90 Old road brs. E. and W.

80.00 Intersect original cor. of secs. 13, 18, 19 and 24, a basalt stone 6x8x9 ins. above ground, marked and witnessed as described by surveyor general. Reestablish as cor. to secs. 13 and 24 only, as follows:

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, alongside of stone, for cor. of secs. 13 and 24, with a brass cap, marked

T 17 N  
R 18 W  
S 13  
-----  
S 24  
1915

Land, rolling.

Soil, gravelly and stony, 2nd rate.

Undergrowth, greasewood, yucca palm and rabbit brush.

N.0° 4' E., on a true line, on E bdy. of sec. 13.

Over rolling land.

15.00 Dry wash, 2 chs. wide, course W.

## 122. Resurvey of the E. bdy. of Township 17 North, Range 18 West.

Chains.

40.00 Intersect original  $\frac{1}{4}$  sec. cor. of secs. 13 and 18, a granite stone, 12x10x8 ins. above ground, marked and witnessed as described by surveyor general. Reestablish as  $\frac{1}{4}$  sec. cor. to sec. 13 only, as follows:

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

$\frac{1}{4}$ S 13	
1915	

N.  $0^{\circ} 2' E.$ , on a true line, on N.  $\frac{1}{2}$  of E. bdy. of sec. 13, continuing measurement.

76.30 Telephone line bet. Yucca and Signal, brs. NW. and SE.

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

80.00 Intersect original cor. of secs. 7, 12, 13 and 18, a quartz stone 12x12x12 ins. above ground, marked and witnessed as described by surveyor general. Reestablish as cor. of secs. 12 and 13 only, as follows:

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, alongside of stone, for cor. of secs. 12 and 13, with a brass cap, marked

T 17 N	
R 18 W	
S 12	
S 13	
1915	

Land, rolling.

Soil, sandy and stony, 2nd rate.

Undergrowth, cacti, yucca palm and greasewood.

N.  $0^{\circ} 4' E.$ , on a true line on E. bdy. of sec. 12.

Over slightly rolling land.

26.70 Telephone line, bet. Yucca and Cedar, brs. N.  $80^{\circ} W.$ , and S.  $80^{\circ} E.$

39.96 Intersect original  $\frac{1}{4}$  sec. cor. of secs. 7 and 12, a basalt stone, 10x8x8 ins. above ground, marked and witnessed as described by surveyor general. Reestablish as  $\frac{1}{4}$  sec. cor. to sec. 12 only, as follows:

Resurvey of East bdy. of Township 17 North, Range 18 West, 123

Chains.

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

$\frac{1}{4}$  S 12 |  
1915 |

N. 0° 6' E., on a true line, on N.  $\frac{1}{2}$  of E. bdy. of sec. 12, continuing measurement.

80.00 Intersect original cor. of secs. 1, 6, 7 and 12, a basalt stone 10x8x8 ins. above ground, marked and witnessed as described by surveyor general. Reestablish as cor. to secs. 1 and 12 only, as follows:

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, alongside of stone, for cor. of secs. 1 and 12, with a brass cap, marked

T 17 N  
R 18 W  
S 1
S 12 |  
1915 |

Land, slightly rolling.

Soil, sandy and stony, 2nd rate.

Undergrowth, cacti, greasewood and yucca palm.

N. 0° 9' E., on a true line, on E. bdy. of sec. 1.

Over level land.

32.00 Enter dry wash, course W.

39.00 Leave wash.

39.90 Intersect original  $\frac{1}{4}$  sec. cor. of secs. 1 and 6, a basalt stone, 8x8x10 ins. above ground, marked and witnessed as described by the surveyor general. Reestablish as  $\frac{1}{4}$  sec. cor. to sec. 1 only, as follows:

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

$\frac{1}{4}$  S 1 |  
1915 |

N. 0° 6' E., on a true line on N.  $\frac{1}{2}$  of E. bdy. of sec. 1, continuing measurement.

174

BOOK 3115

124. Resurvey of East bdy. of Township 17 North, Range 18 West.

Chains.

51.00 Dry wash, course W.

80.10 Intersect original cor. of Ts. 17 and 18 N., Rs. 17 and 18 W., a basalt stone 14x14x16 ins. above ground, marked and witnessed as described by surveyor general. Change markings on stone, obliterate markings on SE. bearing tree and move mound of stone from S. to W. of cor., thus making this a cor. to Ts. 17 and 18 N., R. 18 W. only.

Land, level.

Soil, stony and sandy, 2nd rate.

Undergrowth, cacti, greasewood, yucca palm and rabbit brush.

April 19, 1915.



Independent Resurvey of the W. bdy. of T. 18 N., R. 14 W.

Chains

DATE DIAGRAM, 1915.

Resurvey executed by Mans H. Coffin, Jr., U. S.

Transitman, ... with Young & Sons light mountain transits Nos. 8540. ... The instrument is provided with Smith solar attachment which, was tested and put into good adjustment on a Polaris meridian established in sec. 26, T. 18 N., R. 14 W., as described in Book "H. ... November 22, 1915.

At reestablished cor. of Tps. 17 and 18 N., Rs. 14 and 15 W., hereinbefore described, at 9h. Om. a. m., l.m.t., set off 19° 58 1/2' S. on the decl. arc, and 34° 54' N. on the lat. arc, and determine a meridian with the solar.

As there are no subdivisions depending upon the old surveyed W. bdy., I disregard same, destroying all old cors. found, and establish an independent resurvey, as follows:

North bet. secs. 31 and 36.

Asc. over rolling mountainous land.

- 10.00 Top of spur, slopes NE., 115 ft. above twp. cor., desc.
- 11.00 Draw, course NE., 28 ft. below top of spur, asc.
- 15.00 Top of spur, slopes NE., 46 ft. above draw, desc.
- 30.00 Draw, course NE., 175 ft. below top of spur, asc.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished 1/4 sec. cor., with brass cap, marked,
 

1/4 S 36	S 31
1915	

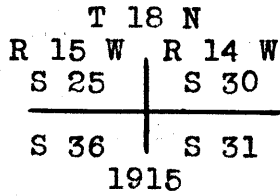
 and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.
- 50.00 Top of spur, slopes NE., 290 ft. above draw, desc.
- 65.00 Draw, course NE., 236 ft. below top of spur, asc.
- 73.00 Top of spur, slopes NE., 198 ft. above draw, desc.
- 80.00 63 ft. below top of spur, set an iron post, 3 ft. long,

6
7
18
19
30
31

Resurvey of the W. bdy. of T. 18 N., R. 14 W.

Chains

3 ins. in diam., 24 ins. in the ground for reestab. cor. of secs. 25, 30, 31 and 36, with a brass cap, marked



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, cat claw, palo christe, scrub oak and cacti.

At above described cor., at apparent noon, I set off 20° 1' S. on the decl. arc, and observe the sun on the meridian for lat. The resulting latitude is 34° 55' N.

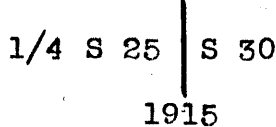
North bet. secs. 25 and 30.

Desc. over rolling mountainous land.

15.00 Draw, course NE., 338 ft. below sec. cor., asc.

25.00 Top of spur, slopes NE., 136 ft. above draw, desc.

40.00 254 ft. below top of spur, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for <sup>reestab.</sup> 1/4 sec. cor., with a brass cap, marked



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

Nov. 24, 1915, At this 1/4 sec. cor.,

at 8h. Om., a.m., l.m.t., I set off 20° 22' S. on the decl. arc, and 34° 55' N. on the lat. arc, and determine a meridian with the solar, and continue

Continue line and measurement.

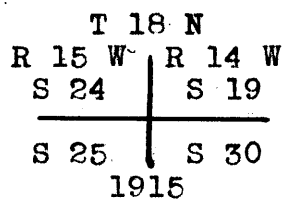
Asc. over rolling mountainous land.

80.00 398 ft. above 1/4 sec. cor., set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for cor. of secs. 19, 24, 25 and 30, with a brass cap, marked



Resurvey of the W. bdy. of T. 18 N., R. 14 W.

Chains



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, scrub oak, cat claw and cacti.

North bet. secs. 19 and 24.

Desc. over rolling mountainous land.

15.00 Ravine, course NW., 166 ft. below sec. cor., asc.

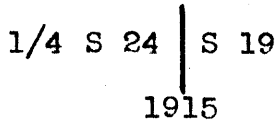
17.50 Top of spur, 54 ft. above ravine, slopes NW., desc.

20.00 Ravine, course NE., 80 ft. below top of spur, asc.

24.00 Top of rocky spur, slopes NE., 37 ft. above ravine, desc. slightly.

28.00 Canyon 100 ft. deep with branch of Cane Springs wash in bottom, 8 lks. wide, course E., asc.

40.00 290 ft. above bottom of canyon, set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for 1/4 sec. cor., with a brass cap, marked

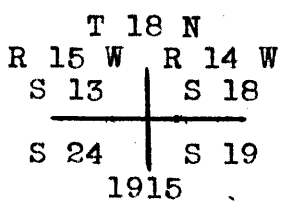


and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

53.00 Top of ridge, bears NE. and SW., 290 ft. above 1/4 sec. cor., desc.

79.00 Canyon, course SE., 50 ft. deep, 414 ft. below top of ridge, asc.

80.00 72 ft. above canyon, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestab. cor. of secs. 13, 18, 19 and 24, with a brass cap, marked,



Resurvey of the W. bdy. of T. 18 N., R. 14 W.

Chains

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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, mountain mahogany, cat claw and cacti.

At the cor. At above described corner, at apparent noon, I set off 20° 26' S. on the decl. arc, and observe the sun on the meridian for lat. The resulting latitude is 34° 56 1/2' N.

Nov. 24, 1915.

Nov. 26, 1915; At reestablished cor. of secs. 13, 18, 19 and 24, at 9h. Om. a.m., l.m.t. set off 20° 48' N. on the decl. arc, and 34° 56' N. on the lat. arc, and determine a meridian with the solar. Thence North bet. secs. 13 and 18.

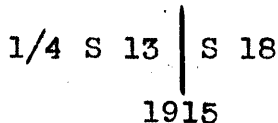
Asc. over rolling mountainous land.

13.90 Top of spur, slopes E., 225 ft. above sec. cor., desc.

28.20 Ravine, course E., 272 ft. below top of spur, asc.

35.40 Top of spur, slopes E., 80 ft. above ravine, desc.

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

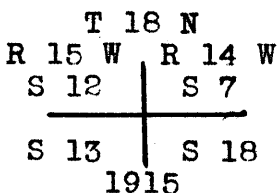


and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

43.00 Head of ravine, course E., 46 ft. below top of spur, asc.

69.20 Top of spur, slopes NE., 315 ft. above ravine, desc.

80.00 233 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 7, 12, 13 and 18, with brass cap, marked



Resurvey of the W. bdy. of T. 18 N., R. 14 W.

Chains

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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

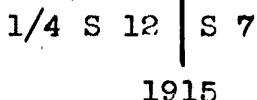
Undergrowth, scrub oak, mountain mahogany, palo christe  
and caoti.

Nov. 27, 1915; At reestablished the cor. of secs. 7, 12,  
13 and 18, and at 9h. 0m., a.m., l.m.t., set off 20°  
59 1/2' S. on the decl. arc, and 34° 57 1/2' N. on the lat.  
arc, and determine a meridian with the solar. Thence  
North bet. secs. 7 and 12.

Desc. over rolling mountainous land.

29.50 Ravine, course E., 483 ft. below sec. cor., asc.

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

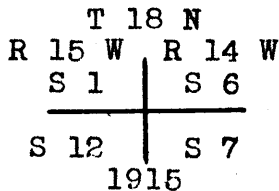


and raise a mound of stone, 2 ft. base, 1 1/2 ft. high,  
W. of cor.

53.50 Top of spur, slopes E., 600 ft. above ravine, desc.

76.80 Ravine, course E., 47 ft. below top of spur, asc.

80.00 23 ft. above ravine, set an iron post, 3 ft. long, 3 ins.  
in diam., 24 ins. in the ground for reestablished cor.  
of secs. 1, 6, 7 and 12, with brass cap, marked



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

Land, rolling and rough mountainous.

Soil, stony, 3rd. rate.

Undergrowth, mountain mahogany, palo christe, cat claw  
and cactus.

At above described corner, at apparent noon,

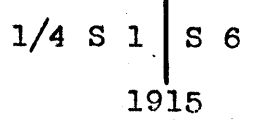
Chains

I set off 21° 1' S. on the decl. arc, and observe the sun on the meridian for lat. The resulting latitude is 34° 58' N.

North bet. secs. 1 and 6.

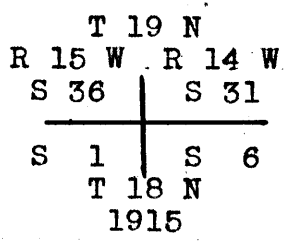
Asc. over rolling mountainous land.

- 9.10 Top of spur, slopes E., 250 ft. above sec. cor., desc.
- 14.80 Ravine, course E., 133 ft. below top of spur, asc.
- 27.50 Top of spur, slopes E., 96 ft. above ravine, desc.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground for reestablished  $\frac{1}{2}$  sec. cor., with brass cap, marked



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

- 42.40 Ravine, course E., 284 ft. below top of spur, asc.
- 60.20 Top of spur, slopes E., 160 ft. above ravine.
- 80.00 Set an iron post, 3 ft. long, 3 ins. in diam., on surface rock, in a mound of stone, for reestablished cor. of Ts. 18 and 19 N., Rs. 14 and 15 W., with brass cap, marked,



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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, mountain mahogany, palo christe, scrub oak, cat claw and cactus.

Nov. 27, 1915.

DATE DIAGRAM, 1915.

Nov. 27	Nov. 29	Nov. 29	Nov. 29	Nov. 29	Nov. 29.
6	5	4	3	2	1

Chains Nov. 27, 1915; At reestablished cor. of Tps. 18 and 19 N., Rs. 14 and 15 W., hereinbefore described, at 2h.30m. p.m., l.m.t., set off 21°02' S. on decl. arc, and 34° 59' N. on the lat. arc and determine a meridian with the solar,

Thence

East on a random line on the N. bdy. of the township bet. secs. 6 and 31.

38.00 Set temp. 1/4 sec. cor.

78.00 Set temp. cor. for secs. 5, 6, 31 and 32.

Nov. 27, 1915.

Nov. 29, 1915; At the temp. cor. of secs. 5, 6, 31 and 32, at 9h. 0m., a. M., l.m.t., set off 21° 21' S. on the decl. arc, and 34° 59' N. on the lat. arc, and determine a meridian with the solar,

Thence,

East on a random solar line on the N. bdy. of the twp, setting temp. cors. at intervals of 40 chs., and at

399.30 Intersect the range line 168 lks. N. of reestablished cor. of Tps. 18 & 19, N. Rs. 13 & 14 W.,, which is a 3 inch iron post, marked and witnessed as described by the surveyor general.

The falling of 168 lks. N. in the six miles of line gives a return true course of N. 89° 48' W.,

N. 89° 48' W. on a true line bet. secs. 1 and 36.

Over rolling mountainous land.

19.50 Top of low spur, slopes NE., desc.

25.40 Ravine, course NE., 55 ft. below top of spur, asc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 16 ins. in the ground to bed rock, in a mound of stone, for reestab-

Chains

lished  $\frac{1}{4}$  sec. cor., with brass cap, marked

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

1915

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

55.50 Top of spur, slopes N., 140 ft. above ravine, desc.

62.00 Ravine, course N., 183 ft. below top of spur, asc.

66.80 Top of spur, slopes N., 107 ft. above ravine, desc.

72.70 Ravine, course N., 87 ft. below top of spur, asc.

80.00 163 ft. above ravine, set an iron post, 3 ft, long, 3  
ins. in diam., 10 ins. in the ground to bed rock, in a  
mound of stone, for reestablished cor. of secs. 1, 2, 35,  
and 36, with brass cap, marked

T 19 N R 14 W  
S 35 S 36  
S 2 S 1  
T 18 N  
1915

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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, palo christe, mountain mahogany, cat claw  
and cacti.

N. 89° 48' W. on a true line bet. secs. 2 and 35.

Desc. over rolling mountainous land.

15.10 Ravine, course NE., 160 ft. below sec. cor., asc.

24.60 Top of spur, slopes NE., 144 ft. above ravine, desc.

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

$\frac{1}{4}$  S 35  
S 2

1915

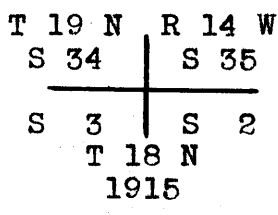
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
N. of cor., thence over gently rolling land.

80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in

Resurvey of the N. bdy. of T. 18 N., R. 14 W.

Chains

the ground for reestablished cor. of secs. 2, 3, 34 and 35, with brass cap, marked



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

Land, rolling mountainous and gently rolling.

Soil, stony, 3rd. rate.

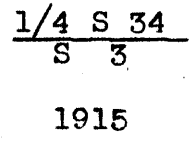
Undergrowth, palo christe, mountain mahogany, scrub oak and cat claw.

N. 89° 48' W. on a true line bet. secs. 3 and 34.

Over slightly rolling land.

40.00

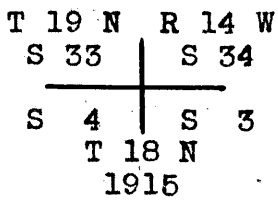
Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground for reestablished, 1/4 sec. cor., with brass cap, marked



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

80.00

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 3, 4, 33 and 34, with brass cap, marked



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

Land, slightly rolling.

Soil, stony, 3rd. rate.

Undergrowth, palo christe, cat claw, mountain mahogany and cacti.

N. 89° 48' W. on a true line bet. secs. 4 and 33.

Asc. over rolling mountainous land.

Chains

13.10 Top of spur, slopes SE., 35 ft. above sec. cor., desc.

40.00 130 ft. below top of spur, set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground to bed rock, in a mound of stone, for reestablished,  $\frac{1}{4}$  sec. cor., with brass cap, marked

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

1915

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

55.40 Top of spur, slopes S., desc.

80.00 246 ft. below top of spur, set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground for reestablished cor. of secs. 4, 5, 32 and 33, with brass cap, marked

T 19 N R 14 W  
S 32 | S 33  
-----  
S 5 | S 4  
T 18 N  
1915

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

Land, rolling mountainous.

Soil, stony, 3rd. rate.

Undergrowth, palo christe, cat claw, mountain mahogany, scrub oak and cacti.

N. 89° 48' W. on a true line bet. secs. 5 and 32.

Desc. over rolling mountainous land.

0.50 Ravine, course S., 35 ft. below sec. cor., asc.

9.10 Top of spur, slopes S., 127 ft. above ravine, desc.

40.00 Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground to bed rock, in a mound of stone, for reestablished  $\frac{1}{4}$  sec. cor., with brass cap, marked

$\frac{1}{4}$  S 32  
S 5

1915

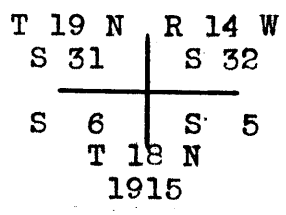
and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor.



Resurvey of the N. bdy. of T. 18 N., R. 14 W.

Chains

- 50.80 Draw, N. branch of Camel Springs wash, course SE., 390 ft. below top of spur, asc.
- 63.40 Top of spur, slopes N., 320 ft. above draw, desc.
- 70.10 Ravine, course N., 63 ft. below top of spur, asc.
- 80.00 250 ft. above ravine, set an iron post, 3 ft. long, 3 ins. in diam., 10 ins. in the ground to bed rock, in a mound of stone, for reestablished cor. of secs. 5, 6, 31 and 32, with brass cap, marked



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

Land, rolling mountainous.

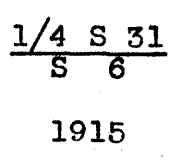
Soil, stony, 3rd. rate.

Undergrowth, mountain mahogany, palo christe, cat claw and cacti.

N. 89° 48' W. on a true line bet. secs. 6 and 31.

Asc. over rolling mountainous land.

- 0.30 Top of spur, slopes NE., 10 ft. above sec. cor., desc.
- 9.50 Ravine, course N., 100 ft. below top of spur, asc.
- 25.30 Top of spur, slopes N., 387 ft. above ravine, desc. slightly.
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 10 ins. in the ground to bed rock, in a mound of stone, for reestablished 1/4 sec. cor., with brass cap, marked



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

48.10 Top of spur, slopes NE., desc.

77.30 Reestablished cor. of T. 18 and 19 N., R. 14 and 15 W., hereinbefore described.  
Land, rolling mountainous.

Resurvey of the N. bdy. of T. 18 N., R. 14 W.

Chains Soil, stony, 3rd. rate.  
 Undergrowth, mountain mahogany, scrub oak, palo christe,  
 cat claw and cacti.  
 Nov. 29, 1915.

Boundaries of T. 18 N., R. 14 W.  
 Latitudes, departures and closing errors.

Line designated	Bearing	Dist- ance	Latitudes		Departures	
			N.	S.	E.	W.
South boundary	N.89° 44' W	478.50	2.24			478.50
West boundary	North	480.00	480.00			
North boundary	S.89° 48' E	477.30		1.68	477.30	
East boundary	South	480.00		480.00		
Convergency					0.51	
Totals			482.24	481.68	477.81	478.50
Error in lat.			481.68			
			0.56			
Error in dep.					477.81	
					0.69	

Nov. 29, 1915.

N. E. Surveyor.

Chains

Resurvey executed by Mans H. Coffin, Jr., U.S. Transitman,  
using transit No. 8570, heretofore described

The course and distance are as follows, 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 as determined by observations on Polaris.

DATE  
DIAGRAM  
1916

The magnetic declination is 14°45'E.

Jan. 20 6

Resurvey of West Boundary, T. 19 N., R. 14 W.

Jan. 11 7

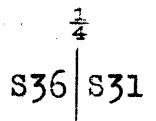
From the reestablished cor. of Tps. 18 and 19 N., Rs. 14 and 15 W., hereinbefore described,

Jan. 11 18

Thence, as per instructions,  
North, bet. secs. 31 and 36, Desc. 170 ft.  
over mountainous land, through dense undergrowth.  
Canyon, course SE. Asc. 230 ft., on SE. slope.  
Spur slopes NW. Desc. 95 ft., on NW. slope.  
Gulch, course NW. Asc. 55 ft., on SW. slope.  
Set an iron post, 3 ft. long, 1 in. diam., 8 ins. in the ground, surrounded by a mound of stone, (impracticable to set post farther in the ground) for  $\frac{1}{4}$  sec. cor., with brass cap, marked

Jan. 11 19

5.00  
16.50  
33.50  
40.00



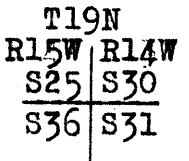
Jan. 10 30

1916  
and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor.  
Desc. 400 ft.

Jan. 10 31

59.00  
80.00

Canyon, course SE. Asc. 350 ft., on SW. slope.  
Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of secs. 25, 30, 31 and 36, with brass cap, marked



1916  
and raise a mound of stone, 2 ft. base, 1 $\frac{1}{2}$  ft. high, W. of cor.

Land, mountainous.  
Soil, rocky; 3rd and 4th rate.  
No timber.  
Undergrowth, oak, crucifixion thorn, mahogany and catclaw.

24.50  
34.00  
40.00

North, bet. secs. 25 and 30,  
over mountainous land, through dense undergrowth.  
Asc. 285 ft., on SE. slope.  
Spur slopes NE. Desc. 200 ft., on NE. slope.  
Gulch, course NE. Asc. SE. slope.  
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

Chains

$\frac{1}{4}$   
 S25 | S30

1916  
 and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
 W. of cor.  
 68.50 Spur, 320 ft. above gulch, course NE. Desc. 195 ft., on  
 NE. slope.

80.00 Set an iron post, 3 ft. long, 3 ins. diam., in a mound of  
 stone, (impracticable to set post in the ground) for  
 cor. of secs. 19, 24, 25 and 30, with brass cap, marked

T19N  

R15W	R14W
S24	S19
S25	S30

1916

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

Land, mountainous.  
 Soil, rocky; 3rd and 4th rate.  
 No timber.  
 Undergrowth, oak and mahogany.

40.00 North, bet. secs. 19 and 24,  
 over roughly rolling and broken hills, through dense  
 undergrowth.  
 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the  
 ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

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

80.00 1916  
 and raise a mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high,  
 W. of cor.  
 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the  
 ground, for cor. of secs. 13, 18, 19 and 24, with brass  
 cap, marked

T19N  

R15W	R14W
S13	S18
S24	S19

1916

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

Land, mountainous, and roughly rolling hills.  
 Soil, rocky; 3rd and 4th rate.  
 No timber.  
 Undergrowth, oak, mahogany, crucifixion thorn and cactus.

40.00 North, bet. secs. 13 and 18,  
 over broken mountainous land, through dense undergrowth.  
 Set an iron post, 3 ft. long, 1 in. diam., in a mound of  
 stone, (impracticable to set post in the ground) for  
 $\frac{1}{4}$  sec. cor., with brass cap, marked

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

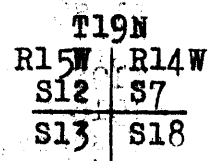
1916

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

Resurvey of W. Bdy. T. 19 N. R. 14 W.

Chains

80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of secs. 7, 12, 13 and 18, with brass cap, marked



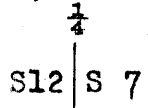
1916  
and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Land, mountainous.  
Soil, rocky; 3rd and 4th rate.  
No timber.  
Undergrowth, oak, mahogany and cactus.

North, bet. secs. 7 and 12,  
over mountainous land, through dense undergrowth.  
Asc. 50 ft. on SE. slope.

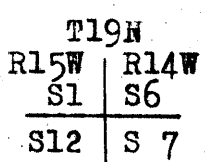
5.00 Desc. 100 ft.  
10.00 Gulch, course SE. Asc. gradually on S. slope, 130 ft.

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



1916  
and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

80.00 Set an iron post, 3 ft. long, 3 ins. diam., in a mound of stone, for cor. of secs. 1, 6, 7 and 12, with brass cap, marked

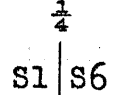


1916  
and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor. Impracticable to set post in the ground.

Land, mountainous.  
Soil, rocky; 3rd and 4th rate.  
No timber.  
Undergrowth, oak, mahogany and crucifixion thorn.

North, bet. secs. 1 and 6,  
over mountainous land, through dense undergrowth.  
Asc. on SW. slope, 260 ft.

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



1916  
and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.

Hence along broken slopes, across spurs and gulches running easterly.

80.00 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground, for cor. of Tps. 19 and 20 N., Rs. 14 and 15 W., with brass cap, marked

Chains

T20N	
R15W	R14W
S36	S31
S1	S6

T19N  
1916

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

Land, mountainous.  
Soil, rocky; 3rd and 4th rate.  
No timber.  
Undergrowth, oak, mahogany and cactus.

DATE DIAGRAM-1916

Jan. 20	Jan. 20	Jan. 21	Jan. 21	Jan. 21	Jan. 21
6	5	4	3	2	1
Resurvey of N. Bdy., T. 19 N., R. 14 W.					

From the cor. of Tps. 19 and 20 N., Rs. 13 and 14 W., which is an iron post, 3 ins. diam., with brass cap, properly marked, set and witnessed as described by the surveyor general;

West, on a random line, on N. bdy. of Tp., setting temp. cors. at intervals of 40 chs. At 476.67 chs. fall 54 lks. S. of the reestablished cor. of Tps. 19 and 20 N., Rs. 14 and 15 W., hereinbefore described.  
The true return course is therefore S.89°56'E.

Thence S.89°56'E., bet. secs. 6 and 31, over mountainous land, through dense undergrowth. Desc. 100 ft., on E. slope.

5.00 Draw, course S. Asc. 90 ft., on W. slope.  
20.50 Spur slopes SE. Desc. 140 ft., on SE. slope.  
36.67 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked

S 31
¼ -----
S 6
1916

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

51.30 Draw, course SE.  
76.67 Set an iron post, 3 ft. long, 3 ins. diam., 12 ins. in the ground, surrounded by a mound of stone, (impracticable to set post farther in the ground,) for cor. of secs. 5, 6, 31 and 32, with brass cap, marked

T20N	R14W
S31	S32
S6	S5
T19N	
1916	

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

Land, mountainous.  
Soil, 3rd and 4th rate; rocky.  
No timber.  
Undergrowth, oak, mahogany and crucifixion thorn.

S.89°56'E., bet. secs. 5 and 32, over mountainous land, through dense undergrowth.  
Desc. 430 ft., on NE. slope.  
39.25 Gulch, course SE. Asc. SW. slope.

Resurvey of N. bdy. of Township 19 North, Range 14 West.

Chains  
40.00

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

S 32  
 $\frac{1}{4}$ -----  
S 5  
1916

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

Thence over broken land.

70.00

Descend 100 ft.

75:25

Gulch, course SE. Ascend SW. slope, 75 ft.

80.00

Set an iron post, 3 ft. long, 2 ins. diam., 8 ins. in the ground, surrounded by a mound of stone (impracticable to set post farther in the ground) for cor. of secs. 4, 5, 32 and 33, with brass cap, marked

T 20N R14W  
S32 | S33  
S 5 | S 4  
T 19 N  
1916

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

Land, mountainous.

Soil, rocky, 3rd and 4th rate.

No timber.

Undergrowth, oak, mahogany and crucifixion thorn.

S. 89° 56' E., bet. secs. 4 and 33.

Over mountainous land, through dense undergrowth.

Ascend 160 ft. on SW. slope.

20:00

Spur, slopes SE. Descend 200 ft. on NE. slope.

29.50

Gulch, course SE. Ascend SW. slope.

40.00

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

S 33  
 $\frac{1}{4}$ -----  
S 4  
1916

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

50.00

Spur 170 ft. above gulch, slopes SE. Descend 225 ft. on E. slope.

70:00

Draw, course S. Ascend 60 ft. on W. slope.

80.00

Set an iron post, 3 ft. long, 2 ins. diam., in a mound of stone (impracticable to set post in the ground) for cor. of secs. 3, 4, 33 and 34, with brass cap, marked

T20 N R14W  
S33 | S34  
S4 | S3  
T19 N  
1916

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

Land, mountainous.

Soil, rocky, 3rd and 4th rate.

No timber.

Undergrowth, mahogany, oak and cactus.

S. 89° 56' E., bet. secs. 3 and 34.

Over mountainous land, through dense undergrowth.

Ascend 45 ft. on W. slope.

4:00

Spur, slopes SE. Descend 180 ft., on SE. slope.

18:00

Gulch, course SE. Ascend 120 ft. on SW. slope.

31:50

Spur slopes NE. Descend broken NE. slope.

40.00

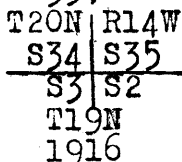
Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked,

S 34  
 $\frac{1}{4}$ -----  
S 3  
1916

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

142 Resurvey of North bdy. of Township 19 North, Range 14 W.

Chains.  
 64:75 Draw, 235 ft. below spur, course SE. Ascend 65 ft. on SW. slope.  
 70:00 Spur slopes SE. Descend 40 ft. on SE. slope.  
 80:00 Set an iron post, 3 ft. long, 2 ins. in diam., in a mound of stone (impracticable to set post in the ground) for cor. of secs. 2, 3, 34 and 35, with brass cap, marked

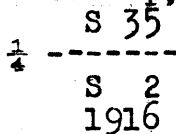


and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

Land, mountainous.  
Soil, rocky, 3rd and 4th rate.  
No timber.  
Undergrowth, oak, mahogany and crucifixion thorn.

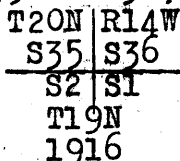
S 89° 56' E., bet. secs. 2 and 35.  
Over broken, mountainous land, through dense undergrowth.  
Ascend 40 ft. along SW. and S. slope.

12:00 Summit.  
 30:00 Descend 185 ft. to  
 40:00 Set an iron post 3 ft. long, 1 in. in diam., in a mound of stone (impracticable to set post in the ground) for 1/4 sec. cor., with brass cap, marked



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

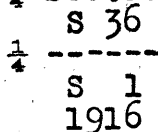
80:00 Thence over broken land.  
 Set an iron post 3 ft. long, 3 ins. diam., in a mound of stone (impracticable to set post in the ground) for cor. of secs. 1, 2, 35 and 36, with brass cap, marked,



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

Land, mountainous.  
Soil, rocky, 2nd and 3rd rate.  
No timber. Undergrowth, oak, mahogany and crucifixion thorn.

S 89° 56' E., bet. secs. 1 and 36.  
 Over mountainous land, through dense undergrowth, along broken, northerly slope, on S-side of Weaver Wash.  
 40:00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., with brass cap, marked



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

40:25 Cross Weaver Wash, course SE., and thence over low rolling spurs and draws, running southeasterly.

80:00 The cor. of Ts. 19 and 20 N., Rs. 13 and 14 W.  
Land, mountainous.

Soil, rocky, 3rd and 4th rate.  
No timber.  
Undergrowth, oak, mahogany, crucifixion thorn and cactus.



Resurvey of the West boundary of, and Retracement of part of the East bdy. of Township 20 North, Range 14 West.

Chains.

Resurvey and Retracement executed by Howard G. Mason, U.S. Transitman, using transit No. 8298.  
 This instrument is 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 as determined by observations on Polaris.  
 The magnetic declination is 14°45'E.

DATE DIAGRAM 1916.

Resurvey of West bdy. of Township 20 North, Range 14 West.

1.50  
5.00  
30.45  
36.25  
40.00

From the reestablished cor. of Ts. 19 and 20 N., Rs. 14 and 15 W., hereinbefore described, North, bet. secs. 31 and 36.  
 Over roughly rolling hills, through dense undergrowth.  
 Gulch, course SE. Ascend 50 ft. on S. slope.  
 Ridge, brs. E. and W. Descend 200 ft., on rolling NE. slope.  
 Gulch, course E. Ascend 120 ft.  
 Spur slopes SE. Thence along broken rolling slopes.  
 Set an iron post, 3 ft. long, 1 in. in diam., 24 ins. in the ground, for  $\frac{1}{4}$  sec. cor., with brass cap, marked

S36 S 31

1916

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

80.00

Set an iron post 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 25, 30, 31 and 36, with brass cap, marked

T20N  
 R15W | R14W  
 S25 | S30  
 S36 | S31  
 1916

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

Land, roughly rolling hills.

Soil, rocky, 4th rate.

No timber.

Undergrowth, oak, mahogany, and catclaw.

33.70  
35.00  
40.00

North, bet. secs. 25 and 30.  
 Over rolling hills, through dense undergrowth.  
 Wheeler Wash, course SE. Ascend on rolling SW. slope.  
 Hat's goat ranch, brs. W., about 8 chs. dist.  
 Set an iron post 3 ft. long, 1 in. in diam., 10 ins. in the ground, surrounded by a mound of stone, (impracticable to set post farther in the ground) for  $\frac{1}{4}$  sec. cor., with brass cap, marked

S25 S30

1916

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

80.00

Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 19, 24, 25, & 30, with brass cap, marked

T20N  
 R15W | R14W  
 S24 | S19  
 S25 | S30  
 1916

Feb. 2	6
Feb. 2	7
Feb. 2	18
Feb. 2	19
Feb. 1	30
Feb. 1	31

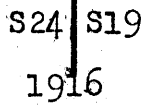
144 Resurvey of West bdy. of Township 20 North, Range 14 West.

Chains.

and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.  
Land, rolling hills.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, oak, mahogany, manzanita and crucifixion thorn.

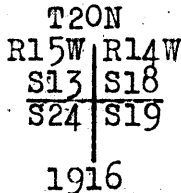
North, bet. secs. 19 and 24.  
Over roughly rolling hills, through dense undergrowth, along west slope.

15.00 Gulch, course SW. Road in gulch, bears NE. to Kingman, and SW. to Hat's goat ranch.  
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., with brass cap, marked



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

66.40 Spur, slopes NE. Descend 125 ft. on N slope.  
70.90 Gulch, course E. Ascend S. slope, 55 ft.  
75.55 Spur, slopes E. Descend on N. slope, 40 ft.  
78.00 Gulch, course NE. Ascend on SE. slope.  
80.00 Set an iron post, 3 ft. long, 3 ins. in diam., 24 ins. in the ground, for cor. of secs. 13, 18, 19 and 24, with brass cap, marked

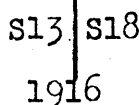


and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor.

From co. a tunnel on mining prospect brs. SE., 3 chs. dist., and another tunnel brs. SW., 2 1/2 chs. dist.  
Land, roughly rolling and broken.  
Soil, rocky, 4th rate.  
No timber.  
Undergrowth, oak, mahogany, manzanita, crucifixion thorn and catclaw.

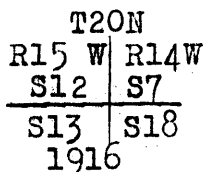
North, bet. secs. 13 and 18.  
Over roughly rolling and broken land, through dense undergrowth. Ascend 65 ft., on SE. slope.

5.00 Spur, slopes NE. Descend 210 ft., on NW. slope.  
14.85 Wash, course NE. Thence over rolling and broken slopes.  
40.00 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for 1/4 sec. cor., with brass cap, marked,



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

80.00 Set an iron post 3 ft. long, 3 ins. in diam., 22 ins. in the ground, (impracticable to set post farther in the ground) for cor. of secs. 7, 12, 13 and 18, with brass cap, marked



Resurvey of West bdy. of Township 20 North, Range 14 West. 145

Chains

and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
 Land, roughly rolling and broken hills.  
 Soil, rocky, 4th rate.  
 No timber.  
 Undergrowth, oak, mahogany, catclaw and crucifixion thorn.

7.50 North, bet. secs. 7 and 12.  
 24.00 Over rolling hills, through dense undergrowth.  
 35.00 Wash, course E.  
 40.00 Road brs. NE. and SW.  
 Wash, course NE.  
 Set an iron post 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked

S12 | S7  
 1916

53.00 and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
 62.50 Wash, course NE. Enter scattering cedar timber.  
 80.00 Road brs. NW. to Kingman, and SE. to Wheeler Wash.  
 Set an iron post, 3 ft. long, 3 ins. diam., 24 ins. in the ground for cor. of secs. 1, 6, 7 & 12, with brass cap, marked

T20N  
 R15W | R14W  
 S1 | S6  
 S12 | S7  
 1916

from which,  
 A cedar, 8 ins. diam., brs. N. 70½° E., 240 lks. dist., marked T20 N R 14 W S 6 B T.  
 A cedar, 10 ins. diam., brs. S 47° E., 156 lks. dist., marked T 20 N R 14 W S 7 B T.  
 A cedar, 10 ins. diam., brs. S. 30° W., 36 lks. dist., marked T 20 N R 15W S 12 B T.

No other trees within limits. Raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
 Land, rolling hills.  
 Soil, rocky, 3rd rate.  
 Timber, cedar.  
 Undergrowth, oak, mahogany, crucifixion thorn, manzanita and catclaw.

12.00 North, bet. secs. 1 and 6.  
 21.40 Over rolling hills, having a general slope to the nNE., through scattering timber and undergrowth.  
 40.00 Road brs. NE. and SW.  
 Same road brs. NW. and SE.  
 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., with brass cap, marked

S 1 | S 6  
 1916

58.40 and raise a mound of stone, 2 ft. base, 1½ ft. high, W. of cor.  
 61.35 Road brs. NW. to Kingman and SE. to Big Sandy Wash.  
 78.34 Telephone line between Kingman and Sandy brs. E. and W. Intersect 5th. Standard Par. N., 31.23 chs. E. of the Standard cor. of Ts. 21 N., Rs. 14 and 15 W., and 8.77 chs. W. of the standard ¼ sec. cor. on S. bdy. of sec. 31, which are respectively 3 and 1 in. iron posts, with brass caps, marked, set 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 closing cor. of Ts. 20 N., Rs. 14 and 15 W., with brass cap, marked

Resurvey of West bdy. of Township 20 North, Range 14 West

Chains,

T21N R14W  
S31  
S 1 | S 6  
R15W | R14W  
T20N  
CC  
1916

and raise a mound of stone 2 ft. base, 1 1/2 ft. high, S. of cor.  
Land, rolling hills.  
Soil, sandy and rocky, 3rd rate.  
Timber, cedar.  
Undergrowth, oak, mahogany and crucifixion thorn.

Retracement of portion of E. bdy. of Township 20 N., R. 14 W.

From the cor. of secs. 1, 6, 7 and 12, which is a 3 in. dia.  
iron post with brass cap, properly marked, set and wit-  
nessed as described by the Surveyor General,  
North, bet. secs. 1 and 6 (south half).  
Intersect the 1/4 sec. cor., of secs. 21 and 16,  
which is an iron post, 3 in. diam., with brass cap,  
properly marked, set and witnessed as described by the  
Surveyor General.

Distance exceeding allowable limits of error, this corner  
~~now refers to sec. 6 of T. 20 N., R. 13 W. only.~~

From above described 1/4 sec. cor.,  
North, bet. secs. 1 and 6 (north half).

Intersect the closing cor. of Ts. 20 N., Rs. 13 and 14 W., which  
is an iron post, 3 ins. in diam., with a brass cap, prop-  
erly marked, set and witnessed, as described by the  
surveyor general.

DATE  
DIAGRAM  
1916

40.37

Feb. 4

38.88

198

FINAL OATH OF UNITED STATES SURVEYOR.

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 the \_\_\_\_\_ W. & N. bdrs. of Ts. 17, 18, & 19 N., Rs. 15 and 16 W.; N. bdrs. of Ts. 17, 18, and 19 N., R. 17 W.; and the W. bdrs. of Ts. 20 N., Rs. 15 and 16 W., of the RESURVEY of the E., W. & part of N. bdy. of T. 17 N., R. 13 W., W. & N. bdrs. of Ts. 17, 18, and 19 N., R. 14 W., the E. bdy. of T. 17 N., R. 18 W., and the W. bdy. of T. 20 N., R. 14 W., and of the RETRACEMENT of parts of \_\_\_\_\_ N. bdy. of T. 17 N., R. 13 W. and E. bdy. of T. 20 N., R. 14 W., of the Gila and Salt River Base and Meridian, in the State of Arizona, executed by Fred N. Wardwell, & Albert Smith, Jr., U.S. Surveyors, & Philip L. Inch, Howard G. Mason, Mans H. Coffin, Jr., \_\_\_\_\_ and \_\_\_\_\_ Wm. N. Nash, U.S. Transitmen, under his special instructions dated January 7, 1915, for Group 46, Arizona, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys, resurveys and retracements they describe, are hereby approved.

*Frank D. Frost*

U. S. Surveyor General of Arizona,

~~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.~~