Original 3990

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(April 1933)

BOOK 3990

Book D.

FIELD NOTES

OF THE SURVEY OF THE

8th Standard Parallel North, along the South boundary of T.33 N. through Range 15 West; and of the 9th. Standard Parallel North, along the South boundary of T.37 N., through Ranges 15 and 16 West,

3990

Of the Gila and Salt River *Meridian,*

In the State of Arizona

EXECUTED BY

Benjamin J. Kinsey, William E. Hiester and Walter H. Good,

U.S. Surveyors,

3990

Under special instructions dated June 30, *19* 31, *which provided for the surveys included under Group No.* 169, *bearing the approval of the Commissioner of the General Land Office under date of* Sept. 21, 1931 *and assignment instructions dated* July 27, 1932, January 14, 1933 and March 7, 1933.

Survey commenced November 15, *19* 32.

Survey completed March 22, *19* 33.

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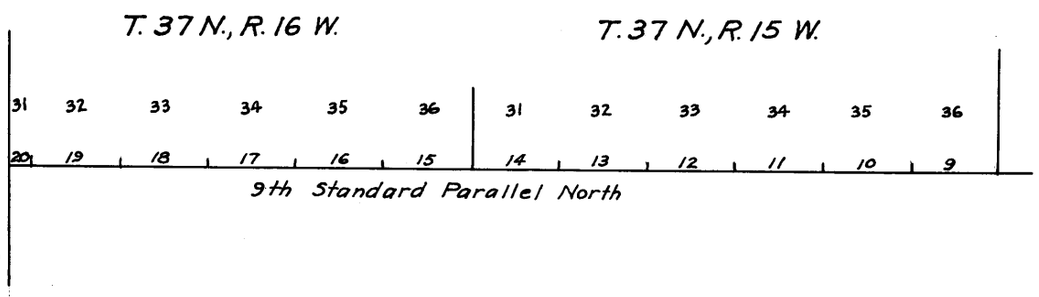
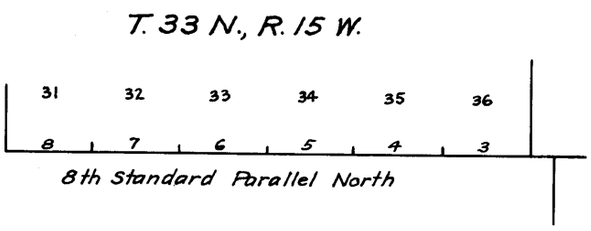




Chains.

The survey of the 8th standard parallel N. on S. bdy. of T. 33 N., R. 15 W., was executed by Benjamin J. Kinsey, U.S. Surveyor, with a light mountain transit made by Buff and Buff, Serial No. 16740, constructed in accordance with the standard specifications of the General Land Office. The horizontal circle has a diameter of 4½ ins. with two double opposite verniers reading to single minutes; the vertical circle has a diameter of 4 ins., with one double vernier reading to single minutes. The instrument is equipped with the improved Smith solar attachment; radius of latitude arc 2½ ins. and of the declination arc 3½ ins. each with verniers reading to single minutes. The instrument was in good condition, and having been placed in satisfactory adjustment prior to beginning the survey, and tested and found free from appreciable error, was approved by the district cadastral engineer July 27, 1932. I examine all the instrumental adjustments before making the field tests hereinafter recorded.

The directions of all lines were determined by the solar transit method, The measurements were made with a Lallie steel tape 5 chs. in length, graduated every link for the first 100 lks. and the balance at intervals of 10 lks. The tape was tested by comparison with a Lufkin standard and found correct. The measurements were made on the slope and the vertical angle of each interval was ascertained by clinometer in good adjustment; the horizontal equivalents are entered in the field record.

The data furnished with the special instructions gives the geographic position for the SW. cor. of T. 33 N., R. 15 W., as follows: latitude 36°12'28" N., and longitude 113°57'49" W.

Nov. 15, 1932: at the standard cor. of Tps. 33 N., Rs. 14 and 15 W., at 3h 58m 42s a.m. l.m.t., or 4h 34m 07s a.m., by my watch which reads correct 105th meridian time as determined by radio, I observe Polaris at western elongation, making two sights each with the telescope in direct and reversed positions, and place a tack at the mean point on a peg driven firmly in the ground 10 chs. N. of station.

Nov. 16: I lay off the azimuth of Polaris 1°18'17" and make a meridian mark on the second peg to the east of the mean point in the line determined by the observation.

In order to verify the latitude of this station and the reading of my watch, I make a meridian observation of the sun, first setting on the lower limb and noting the transit of the west limb, then, after reversal of the instrument, setting on the upper limb and noting the transit of the east limb as follows:

Mean observed altitude	34°58'42"
Reduced latitude	36°12'14"
Mean watch time of observation	12h20m05s
Watch fast of l.m.t	35m25s

The survey of the 9th standard parallel N. on the S. bdy. of T. 37 N., R. 15 W., and a portion of the standard through R.16 W., was executed by William E. Hiester U.S. Surveyor, with a light mountain transit made by Buff and Buff, Serial No. 19423, constructed in accordance with the standard specifications of the General Land Office. The horizontal circle has a diameter of 4½ ins. with two double opposite verniers reading to single minutes; the vertical circle has a diameter of 4 ins., with one double vernier reading to single minutes. The instrument is equipped with the improved Smith solar attachment; radius of latitude arc; 2½ ins. and of the

Chains.

declination arc 3½ ins. each with verniers reading to single minutes. The instrument was in good condition, and having been placed in satisfactory adjustment prior to beginning the survey, and tested and found free from appreciable error, was approved by the district cadastral engineer Jan 14, 1933. I examine all the instrumental adjustments before making the field tests hereinafter recorded.

The directions of all lines were determined by the solar transit method. The measurements were made with a Lallie steel tape 5 chs. in length, graduated every link for the first 100 lks. and the balance at intervals of 10 lks. The tape was tested by comparison with a Lufkin standard and found correct. The measurements were made on the slope and the vertical angle of each interval was ascertained by clinometer in good adjustment; the horizontal equivalents are entered in the field record.

The data furnished with the special instructions gives the geographic position for the SE. cor. of T. 36 N., R. 16 W., as follows: latitude 36°28'07" N. and longitude 113°57'49" W.

Jan. 17, 1933: near the ¼ sec. cor. of secs. 27 and 34, T.36 N., R. 16 W., at 5h 19m 29s p.m. l.m.t., or 5h 55m 31s by my watch which reads correct 105th meridian time as determined by radio, I make an hour angle observation of Polaris east of the meridian, making four readings two each with the telescope in direct and reversed positions, marking the mean point in the line thus determined, on a peg driven firmly in the ground 10 chs. N. of station.

True bearing to point on peg----------N.00°10'29"E.

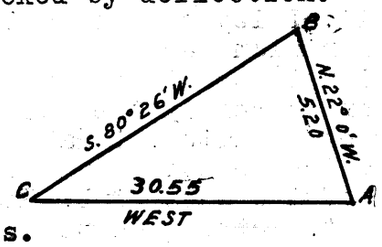
Jan.18: on the meridian above described, in order to verify the latitude of this station and the reading of my watch, I make a meridian observation of the sun, first setting on the lower limb and noting the transit of the west limb, then, after reversal of the instrument setting on the upper limb and noting the transit of the east limb as follows:

Mean observed altitude----------	33°01'00"
Reduced latitude----------	36°29'39"
Mean watch time of observation----------	12h46m37s
Watch fast of l.m.t----------	36m02s

The survey of a portion of the 9th standard parallel N. on the S. bdy. of T. 37 N., R. 16 W., was executed by Walter H. Good, U.S. Surveyor, with a light mountain transit made by Buff and Buff, Serial No. 14189 constructed in accordance with the standard specifications of the General Land Office. The horizontal circle has a diameter of 4½ ins. with two double opposite verniers reading to single minutes; the vertical circle has a diameter of 4 ins., with one double vernier reading to single minutes. The instrument is equipped with the improved Smith solar attachment; radius of latitude arc; 2½ ins. and of the declination arc; 3½ ins. each with verniers reading to single minutes. The instrument was in good condition, and having been placed in satisfactory adjustment prior to beginning the survey, and tested and found free from appreciable error, was approved by the district cadastral engineer March 10, 1933. I examine all the instrumental adjustments before making the field tests hereinafter recorded.

Chains	
	The direction of all lines were determined by the solar transit method. The measurements were made with a Lallie steel tape 5 chs. in length, graduated every link for the first 100 lks. and the balance at intervals of 10 lks. The tape was tested by comparison with a Lufkin standard and found correct. The measurements were made on the slope and the vertical angle of each interval was ascertained by clinometer in good adjustment; the horizontal equivalents are entered in the field record. The data furnished with the special instructions gives the SE. cor. of T. 36 N., R. 16 W., as follows; latitude 36°28'07" N., and longitude 113°57'49" W. March 10, 1933: in camp near the ¼ sec. cor. of secs. 3 and 34, Tps. 35 and 36 N., R. 16 W., at 8h 20m 54s p.m. l.m.t., or 8h 56m 56s p.m. by my watch which reads correct 105th meridian time as determined by Western Union Clock time, I observe Polaris at western elongation, making two sights each with the telescope in direct and reversed positions, and place a tack at the mean point on a peg driven firmly in the ground 10 chs. N. of station. March 11: I lay off the azimuth of Polaris 1°18'22" and make a meridian mark on a second peg to the east of the mean point in the line determined by the observation. In order to verify the latitude of this station and the reading of my watch, I make a meridian observation of the sun, first setting on the lower limb and noting the transit of the west limb, then, after reversal of the instrument, setting on the upper limb and noting the transit of the east limb as follows: Mean observed altitude---------- 49°53'29" Reduced latitude---------- 36°28'30" Mean watch time of observation---------- 12h49m45s Watch fast of l.m.t---------- 36m02s Every 30 min. from 8 to 10.30 a.m., and from 1.30 to 4.30 p.m. We make proper settings on the arcs of the solar attachments and ascertain that the resulting orientation of the instrument when compared with a meridian established by Polaris observations, has a m maximum error of less than 1'30". We repeat the tests of the arcs daily by noon observations and verify the meridional indications at frequent intervals throughout the survey.
	Beginning at the standard cor. of Tps. 33 N., Rs. 14 and 15 W., which is an iron post, 3 ins. diam., firmly set in a mound of stone, 5 ft. base, 3 ft. high, mkd. and witnessed as described in the official record.
	West along the S. bdy. of sec. 36.
	Over mountainous land, through dense desert growth.
	Descend 450 ft. over broken NW. slope.
13.29	Wash, 20 lks. wide, course SE.; asc. 90 ft. over broken SE. slope.
17.00	Spur, slopes SW.; desc. 103 ft. over broken S. slope.
26.19	Wash, near head, course S.; asc. 207 ft. over broken SE. slope.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bedrock, with a limestone, 8x8x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd.

Chains	
	S C ¼ S 36 1932
	Ascend 193 ft. over broken SE. slope of ledges.
52.00	Spur, slopes S.; desc. 90nft. over SW. slope.
55.78	Wash, course S.; asc. 164 ft. over SE. slope.
62.49	Spur, slopes S.; desc. 91 ft. over SW. slope.
66.88	Top of precipitous bluffs, bears NW. and SE.
	In order to determine the di tance across bluffs, I use the above station as point A and set a flag C on opposite side of bluffs, the base AB bears N.22°00'W., 5.20 chs. dist., from flag B flag C bears S.80°26'W., all bearings checked by direct reading of the solar, and all angles checked by deflection.



	Dist. by direct meas.	66.88 chs.
	Dist. by triangulation	30.55
		97.43
	Dist. by return meas.	17.43
		80.00
80.00	True point falls on bluff, an unsafe place for corner.	
	Land, mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth, black sage, cactus and cat-claw.	

	From true point for standard cor. of secs. 35 and 36.
	West along the S. bdy. of sec. 35.
	Over mountainous land, through scattered desert growth.
3.82	Set an iron post, 3 ft. long, 2 ins. diam., 8 ins. in the ground to bedrock, with a limestone, 10x10x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for witness standard cor. of secs. 35 and 36 with brass cap mkd.
	S C T33N R15W S 35 S 36 WC 1932
	Descend 55 ft. over SW. slope.
6.54	Wash near head, course SW.; asc. 10 ft.
7.47	Spur, slopes S.; desc. 68 ft. over gradual SW. slope.
32.21	Wash, 5 lks. wide, course SW.; continue over rolling land.

Chains.	
40.00	Set an iron post, 3 ft. long, 1 in. diam., 10 ins. in the ground to bedrock, with a limestone, 8x8x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 35 1932
	Descend 20 ft. over SW. slope.
43.80	Wash, 20 lks. wide, course SW.; asc. 23 ft. over SE. slope.
46.00	Spur, slopes S.; continue over level land.
74.64	Road, bears NW. and SE.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 24 ins. in the ground on spur sloping W. for standard cor. of secs. 34 and 35, with brass cap mkd. S C T33N | R15W S 34 | S 35 1932
	raise a mound of stone, 3 ft. base, 2 ft. high N. of cor.
	Land, rolling and mountainous. Soil, sandy and rocky; 4th rates. Timber, none; undergrowth cactus, black sage and cat - claw.
	West along the S. bdy. of sec. 34.
	Over nearly level land, through scattered desert growth.
.50	Leave spur, slopes SW.
1.50	Wash, 10 lks. wide, course W.; continue along same.
5.00	Leave wash, course SW.
6.50	Top of low spur, slopes S.; continue along same.
6.70	Road, bears N. and S.
18.70	Wash, 10 lks. wide, course NW.
19.00	Low spur, slopes NW.; continue along same.
24.00	Leave spur.
26.00	Wash, 5 lks. wide, course NW.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 14 ins. in the ground to bedrock, with a limestone, 10x5x5 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 34 1932

Chains.	
42.00	Same wash, course SW.
48.00	Low spur, slopes SW.
52.80	Enter Snapp wash, course SW.
54.00	Leave wash, course SW.; asc. 212 ft. over broken SE. slope.
60.73	Road, bears NE. and SW.
76.14	Spur, slopes S.; desc. 80 ft. over W. slope.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 10 ins. in the ground to bedrock, with a limestone, 10x10x10 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of secs. 33 and 34, with brass cap mkd. S C T33N R15W S 33 | S 34 1932
	Land, rolling and mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth, cactus, catclaw and black-sage.
	West along the S. bdy. of sec. 33.
	Over mountainous land, through scattered desert growth.
	Descend 40 ft. over W. slope.
2.58	Wash near head, course SW.; asc. 40 ft. over E. slope.
4.50	Spur, slopes S.; desc. 100 ft. over NW. slope.
10.50	Wash, 10 lks. wide, course SW.; asc. 20 ft. over SE. slope.
11.95	Spur, slopes S.; desc. 28 ft. over SW. slope.
13.17	Junction of washes, from N. and NW.; asc. 95 ft. over NE. slope.
22.00	Spur, slopes S.; desc. 159 ft. over NW. slope.
30.82	Wash, 15 lks. wide, course S.; asc. 106 ft. over E. slope.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bedrock, with a limestone, 8x8x10 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 33 1932
	Ascend 69 ft. over SE. slope.
42.80	Spur, slopes S.; continue along top of same.

8TH STAN. PAR. N., S. BDY. T. 33 N., R. 15 W.

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Chains.	
45.80	Leave spur, slopes SW.; desc, 45 ft. over NW. slope.
49.45	Wash, 5 lks. wide, course SW.; asc. 11 ft. over SE. slop slope.
50.00	Low spur, slopes S.; desc. 14 ft. over SW. slope.
52.86	Wash, 5 lks. wide, course SE.; asc. 9 ft. over E. slope.
56.00	Top of wide spur, slopes S.; continue along top of same.
62.00	Leave spur, slopes SW.; desc. 225 ft. over W. slope.
74.30	Wash, 5 lks. wide, course SW.; asc. 11 ft. over SE. slope.
76.00	Spur, slopes S.; desc. 24 ft.
79.52	Wash, 5 lks. wide, course S.; asc. 4 ft.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 14 ins. in the ground to bedrock, with a limestone, 12x10x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of secs. 32 and 33, with brass cap mkd. S C T33N R15W S 32 S 33 1932 Land, mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth, catcalw, cactus and black sage.

West along the S. bdy. of sec. 32.

Over mountainous land, through scattered desert growth.

Ascend 39 ft. over E. slope.

1.50	Spur, slopes SW.; desc. 49 ft. over NW. slope.
5.50	Wash near head, course S.; asc. 3 ft.
7.00	Low spur, slopes S.; desc. 65 ft. over SW. slope.
17.40	Wash, 10 lks. wide, course NW.; asc. 32 ft. over NE. slope.
22.50	Spur, slopes N.; desc. 81 ft. over W. slope.
28.64	Wash, 50 lks. wide, course S.; asc. 53 ft. over NE. slope.
29.50	Spur, slopes SE.; desc. into wash.
32.60	Wash, course SW. from NW.; asc. 23 ft. over SE. slope.
35.00	Spur, slopes S.; desc. 19 ft. over W. slope.
35.20	Road, bears N. and S.
36.10	Wash, 10 lks. wide, course S.; asc. 19 ft. over SE. slope.

8TH STAN.PAR. N., S. BDY. T. 33 N., R. 15 W.

Chains.	
40.00	Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the ground to bedrock, with a limestone, 10x10x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 32 1932
	Ascend 34 ft. over SE. slope.
43.30	Spur, slopes SE.; desc. 34 ft. over W. slope.
45.00	Wash, 20 lks. wide, course W.; continue along same.
49.30	Leave wash, course SW.; asc. 57 ft. over SE. slope.
59.90	Road, bears N. and S.
63.30	Spur, slopes S.; desc. along S. slope.
65.00	Wash, 5 lks. wide, course SW.; asc. 12 ft. over SE. slope.
70.00	Spur, slopes S.; desc. 17 ft. over W. slope.
71.78	Wash near head, course S.; asc. 17 ft. over E. slope.
74.50	Spur, slopes S.; desc. 21 ft. over SW. slope.
76.15	Wash, 5 lks. wide, course S.; asc. 21 ft. over SE. slope.
79.50	Spur, slopes SE.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 14 ins. in the ground to bedrock, with a sandstone, 10x8x6 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of secs. 31 and 32, with brass cap mkd. S C T33N R15W S 31 S 32 1932
	Land, mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth, catclaw, cactus and black sage.

	West along the S. bdy. of sec. 31
	Over rolling land, through scattered desert growth.
.10	Wash, 10 lks. wide, course SE.; asc. 46 ft. over NE. slope.
5.20	Spur, slopes SE.; desc. 26 ft. over SW. slope.
7.42	Wash, 5 lks. wide, course S.; asc. 26 ft. over E. slope.
10.50	Spur, slopes SE.; desc. 28 ft. over SW. slope.
13.73	Wash, 5 lks. wide, course S.; asc. 60 ft. over NE. slope.
17.50	Spur, slopes SE.; desc. 21 ft. over SW. slope.

Chains.	
20.57	Wash near head, course S.; asc. 78 ft. over SE. slope.
27.00	Spur, slopes SE.; desc. 48 ft. over SW. slope.
30.25	Wash near head, course NW.; asc. 8 ft.
33.00	Low spur, slopes N.; desc. 34 ft. over NW. slope.
39.00	Same wash, course W.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bedrock, with a sandstone, 12x10x10 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 31 1932
46.80	Junction of wash from NE.; asc. 40 ft. along wash.
47.00	Leave wash, course SW., asc. gradually.
52.00	Spur, slopes S.; desc. 34 ft. over SW. slope.
57.80	Wash, 10 lks. wide, course SE.; asc. 97 ft. over SE. slope.
65.00	Spur, slopes SE.; desc. 29 ft. over SW. slope.
79.50	Wash, 10 lks. wide, course SE.
80.00	Set and iron post, 3 ft. long, 3 ins. diam., 20 ins. in the ground to bedrock, with a sandstone, 10x10x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of Tps. 33 N., Rs.15 and 16 W., with brass cap mkd. S C T33N R16W | R15W S 36 | S 31 1932
	Land, rolling. Soil, rocky; 4th rate. Timber, none; undergrowth, cactus, black sage and cat-claw.

9TH STAN. PAR. N., S. BDY. T. 37 N., R. 15 W.

	Beginning at the standard cor. of Tps. 37 N., Rs.14 and 15 W., which is an iron post, 3 ins. diam., 4 ins. above the top of a mound of stone, firmly set, mkd. and witnessed as described in the official record.
	West along the S. bdy. of sec. 36.
	Over mountainous land, through scattered desert growth.
.80	Wash, 20 lks. wide, course SW.; asc. 113 ft. over E. slope.

Chains.	
10.00	Spur, slopes SE.; desc. 52 ft. over SW. slope.
13.04	Head of wash, course SE.; asc. 108 ft. over SE. slope.
23.30	Top of ascent; continue over nearly level land.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is 2 lks.; position of middle point- By 1st set, 40.01 chs. By 2nd set, 39.99 chs.; the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. diam., 14 ins. in the ground to bedrock, with a lava stone, 8x8x10 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 36 1933
48.00	Descend 13 ft. over NW. slope.
57.19	Wash, 10 lks. wide, course SW.; asc. 13 ft. over SE. slope.
78.00	Low spur, slopes SW.
79.55	Top of rimrocks, bears N. and S.; desc. 19 ft. over SW. slope.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen. is nothing.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 14 ins. in the ground to bedrock, with a lava stone, 10x10x10 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of secs. 35 and 36, with brass cap mkd. S C T37N R15W S 35 S 36 1933
	Land, mountainous and level. Soil, rocky; 4th rate. Timber, none; undergrowth, catclaw, greasewood, joshua and black sage.
	West along the S. bdy. of sec. 35.
	Over mountainous land, through scattered desert growth.
	Descend 292 ft. over SW. slope.
12.23	Wash, near head, course SW.; asc. 46 ft. over SE. slope.
15.00	Spur, slopes SW.; desc. 72 ft. over SW. slope.
23.29	Wash, 20 lks. wide, course SW.; asc. 32 ft. over SE. slope.
30.00	Spur, slopes S.; desc. 36 ft. over W. slope.
35.95	Wash, 20 lks. wide, course S.; asc. 8 ft. over E. slope.

Chains.	
	Diff. bet. meas. of 40.00 chs.by two sets of chainmen, is 4 lks.; position of middle point- By 1st set, 40.02 chs. By 2nd set 39.98 chs.; the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. diam., 22 ins. in the ground to bedrock, with a lava stone, 6x6x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 35 1933
41.00	Spur, slopes S.; continue along W. slope.
48.46	Wash, 30 lks. wide, course SE.; asc. 334 ft. over E. slope.
51.50	Spur, slopes SE.; desc. along E. slope.
56.50	Wash, 20 lks. wide, course SE.; continue ascending over NE. slope.
72.00	Spur, slopes NW.; desc. 139 ft. along same.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is nothing.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 6 ins. in the ground to bedrock, with a lava stone, 10x8x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of secs. 34 and 35, with brass cap mkd. S C T37N R15W S 34 S 35 1933
	Land, mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth, joshua, catclaw, cactus and black sage.

	West along the S. bdy. of sec. 34.
	Over mountainous land, through scattered desert growth.
	Descend 209 ft. over NW. slope.
21.30	Wash, 10 lks. wide, course SW.; asc. 212 ft. over SE. slope.
25.00	Spur, slopes SW.; continue ascending.
27.00	Wash, 5 lks. wide, course SW.; continue ascending over SE. slope.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is 4 lks.; position of middle point- By 1st set, 40.02 chs. By 2nd set 39.98 chs.; the mean of which is

9TH Stan. Par. N., S. BDY. T. 37 N., R. 15 W.

Chains.	
40.00	Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground to bedrock, with a lava stone, 10x8x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 34 1933
	Ascend 74 ft. over SE. slope.
48.00	Spur, slopes SW.
52.00	Descend 483 ft. over steep NW. slope.
76.92	Wash, 20 lks. wide, course W.; continue in wash.
79.00	Leave wash, course NW.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is 10 lks.; position of middle point- By 1st set, 40.05 chs. By 2nd set 39.95 chs.; the mean of which is
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 20 ins. in the ground to bedrock, with a washed bowlder, 10x10x6 ins. mkd. X, deposited at the base, and in a mound of stone, to top, for standard cor. of secs. 33 and 34, with brass cap mkd. S C T37N R15W S 33 S 34 1933
	Land, mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth joshua, cactus, catclaw and greasewood.
	West along the S. bdy. of sec. 33.
	Over mountainous land, through scattered desert growth.
2.60	Wash, 20 lks. wide, course SW.; asc. 17 ft. over SE. slope.
17.50	Spur, slopes SW.; desc. 67 ft. over NW. slope.
25.42	Wash, 20 lks. wide, course SW.; asc. 69 ft. over SE. slope.
38.50	Spur, slopes S.; desc. 13 ft. over SW. slope.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is nothing.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 22 ins. in the ground to bedrock, and in a mound of stone to top for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 33 1933

Chains.	
	raise a mound of stone, 3 ft. base, 2 ft. high N. of cor.
	Descend 109 ft. over SW. slope.
56.87	Cottonwood wash, 150 lks. wide, course S.10°E.; asc. 365 ft. over NE. slope.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is 4 lks.; position of middle point- By 1st set, 80.02 chs. By 2nd set, 79.98 chs.; the mean of which is
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 4 ins. in the ground to bedrock, with a lava stone, 6x10x12 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of secs. 32 and 33, with brass cap mkd. S C T37N | R15W S 32 | S 33 1933
	Land, mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth joshua, cactus and catclaw.
	West along the S. bdy. of sec. 32.
	Over mountainous land, through scattered desert growth.
	Ascend 258 ft. over NE. slope.
8.15	Top of rimrocks, bears N. and S.; desc. gradually over broken bench land.
10.00	Descend 31 ft. over NW. slope.
16.40	Wash, 5 lks. wide, course SW.; asc. 106 ft. over SE. slope.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is 8 lks.; position of middle point- By 1st set, 40.04 chs. By 2nd set. 39.96 chs.; the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. diam., 16 ins. in the ground to bedrock, with a lava stone, 6x4x4 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 32 1933
	Thence along top of spur,
44.00	Leave spur, slopes E.; desc. 81 ft. over W. slope.
52.20	Wash, 10 lks. wide, course S.; asc. 11 ft. over NE. slope.
65.00	Spur, slopes S.; desc. 32 ft. over SW. slope.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen. is 8 lks.; position of middle point- By 1st set, 80.04 chs. By 2nd set 79.96.; the mean of which is

9TH STAN. PAR. N., S. BDY. T. 37 N., R. 15 W.

Chains.	
80.00	Set an iron post, 3 ft. long, 2 ins. diam., on solid rock, with a lava stone, 10x10x6 ins. mkd. X, deposited alongside, and in a mound of stone to top, for standard cor. of secs. 31 and 32, with brass cap mkd. S C T37N | R15W S 31 | S 32 1933 Land, mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth, joshua, catclaw, cactus and greasewood.
	West along the S. bdy. of sec. 31. Over rolling mountainous land, through scattered desert growth. Descend 46 ft. over SW. slope.
3.84	Wash, 10 lks. wide, course SE.; asc. 89 ft. over NE. slope.
12.00	Spur, slopes SE.; desc. 84 ft. over SW. slope.
28.37	Wash, 5 lks. wide, course SE.; asc. 103 ft. over NE. slope.
39.00	Spur, slopes SE.; desc. 17 ft. over SW. slope.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is 2 lks.; position of middle point- By 1st set, 40.01 chs. By 2nd set 39.99 chs.; the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. diam., 15 ins. in the ground to bedrock, with a lava stone, 6x6x3 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 31 1933
	Descend 69 ft. over SW. slope.
45.00	Wash, 5 lks. wide, course SE.; continue along same.
51.90	Leave wash, from NW.; asc. 120 ft. over NE. slope.
64.50	Spur, slopes SE.; desc. 56 ft. over SW. slope.
72.20	Wash, 5 lks. wide, course SE.; asc. 70 ft. over NE. slope.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is 2 lks.; position of middle point- By 1st set, 80.01 chs. By 2nd set 79.99 chs.; the mean of which is

Chains.	
80.00	Set an iron post, 3 ft. long, 2 3/4 ins. diam., 6 ins. in the ground to bedrock, with a lava stone, 10x16x16 ins. mkd. X, deposited alongside, and in a mound of stone to top, for standard cor. of Tps. 37 N., Rs. 15 and 16 W., with brass cap mkd. S C T37N R16W | R15W S 36 | S 31 1933 Land, mountainous. Soil, gravelly; 3 rd rate. Timber, none; undergrowth, catclaw, joshua, cactus and greasewood.

9TH STAN. PAR. N., S. BDY. T. 37 N., R. 16 W.

	From the standard cor. of Tps. 37 N., Rs. 15 and 16 W.
	West along the S. bdy. of sec. 36.
	Over mountainous land, through scattered timber and desert growth.
	Descend 16 ft. over SW. slope.
3.40	Head of wash, course S.; asc. 48 ft. over SE. slope.
10.00	Spur, slopes SE.; desc. 55 ft. over SW. slope.
16.90	Head of wash, course S.; asc. 27 ft. over SE. slope.
20.00	Short spur, slopes S.; desc. 39 ft. over SW. slope.
26.80	Wash, 5 lks. wide, course SE.; asc. 32 ft. over NE. slope.
36.00	Long spur, slopes S.; desc. 8 ft. over SW. slope.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is 2 lks.; position of middle point- By 1st set, 40.01 chs. By 2nd set 39.99 chs.; the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. diam., 2 ins. in the ground to bedrock, with a volcanic stone, 6x8x10 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard 1/4 sec. cor., with brass cap mkd. S C 1/4 S 36 1933
	Descend 85 ft. over SW. slope.
44.80	Head of wash, course S.; asc. 32 ft. over SE. slope.
46.40	Spur, slopes S.; desc. 130 ft. over W. slope.
55.90	Wash, 15 lks. wide, course SE.; asc. 104 ft. over NE. slope.

9TH STAN. PAR. N., S. BDY. T. 37 N., R. 16 W.

Chains.	
64.50	Spur, slopes SE.; desc. 74 ft. over SW. slope.
71.93	Wash, 10 lks. wide, course SE.; asc. 107 ft. over NE. slope.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is 2 lks.; position of middle point- By 1st set, 80.01 chs. By 2nd set, 79.99 chs.; the mean of which is
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 20 ins. in the ground to bedrock, with a limestone, 4x7x7 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of secs. 35 and 36, with brass cap mkd. S C T37N R16W S 35 S 36 1933
	Land, mountainous. Soil sandy and gravelly; 3 rate. Timber, joshua; undergrowth, catclaw, cactus and black sage.
	West along the S. bdy. of sec. 35.
	Over mountainous land, through scattered desert growth.
	Ascend 20 ft. over NE. slope.
3.00	Long spur, slopes S. desc. 7 ft. over W. slope.
9.00	Wash, 10 lks. wide, course S.; asc. 85 ft. over SE. slope.
9.50	Low spur, slopes S.; desc. 28 ft. over SW. slope.
10.25	Wash, 5 lks. wide, course S.
16.50	Low spur, slopes SE.; desc. along S. slope.
20.39	Head of wash, course SE.; asc. 94 ft. over NE. slope.
28.00	Spur, slopes SE.; desc. 70 ft. over SW. slope.
34.74	Wash, 10 lks. wide, course SE.; asc. 6 ft. over NE. slope.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is 2 lks.; position of middle point- By 1st set, 40.01 chs. By 2nd set, 39.99 chs.; the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bedrock, with a limestone, 6x7x9 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 35 1933
	Ascend 41 ft. over NE. slope.

Chains.	
45.00	Spur, slopes SE.; desc. 179 ft. over broken S. slope.
49.00	Head of wash, course SE.
52.00	Low spur, course S.
63.63	Wash, 15 lks. wide, course SW.; asc. 202 ft. over SE. slope.
72.00	Spur, slopes SE.; continue along S. slope.
77.05	Head of wash, course SE.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is 4 lks.; position of middle point- By 1st, set, 80.02 chs. By 2nd set 79.98 chs.; the mean of which is
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground to bedrock, with a sandstone, 12x6x4 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard cor. of secs. 34 and 35, with brass cap mkd. S C T37N R16W S 34 S 35 1933 Land, mountainous. Soil, sandy and gravelly; 3rd rate. Timber, none; undergrowth, joshua, cactus and black sage.
	West along the S. bdy. of sec. 34.
	Over mountainous land, through scattered desert growth.
	Ascend 34 ft. over NE. slope.
1.20	Spur, slopes S.; desc. 431 ft. over broken W. slope.
31.26	Cedar wash, 150 lks. wide, course S.10°E.; asc. 57 ft. over NE. slope.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is 10 lks.; position of middle point- By 1st, set, 40.05 chs. By 2nd set 39.95 chs.; the mean of which is
40.00	Set an iron post, 3 ft. long, 1 in. diam., 20 ins. in the ground to bedrock, with a limestone, 6x6x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 34 1933
	Continue over rolling valley land.
42.00	Top of ascent; descend SW. slope.
50.00	Road, bears NE. and SW.
54.78	Wash, 3 lks. wide, course S.

9TH STAN. PAR. N., S. BDY. T. 37 N., R. 16 W.

Chains.	
79.85	Draw, 5 lks. wide, course S.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is nothing.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for standard cor. of secs. 33 and 34, with brass cap mkd. S C T37N | R16W S 33 | S 34 1933 raise a mound of stone, 3½ ft. base, 2½ ft. high, N. of cor.
	Land, mountainous and rolling. Soil, sandy and gravelly; 3rd rate. Timber, none; undergrowth, black sage, cactus and joshua.
	West along the S. bdy. of sec. 33.
	Over rolling valley land, through scattered desert growth.
	Ascend 20 ft. over gradual E. slope.
2.50	Top of ascent; desc. 16 ft.
18.77	Wash, 5 lks. wide, course SE.; asc. 52 ft. over gradual E. slope.
39.50	Top of ascent.
	Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is nothing.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 14 ins. in the ground to bedrock, with a sandstone, 10x8x6 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 33 1933 raise a mound of stone, 3 ft. base, 2 ft. high N. of cor.
58.00	Wash, 50 lks. wide, course SE.; leave valley bears N. and S.; asce. 263 ft. over NE. slope.
69.00	Top of sandstone ledge, 100 ft. high, bears SE. and NW.
70.00	Spur, slopes N.; desc. 89 ft. over NW. slope.
	Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is nothing.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground for standard cor. of secs. 32 and 33, with brass cap mkd.

Chains.	
	S C T37N | R16W S 32 | S 33 1933 from which A pinyon, 10 ins. diam., bears N.18°E., 19 lks.dist., mkd. T37N R16W S33 SC BT A cedar, 18 ins. diam., bears N. 52° W., 14 lks. dist., mkd. T37N R16W S32 SC BT Land, rolling and mountainous. Soil, sandy and rocky: 3rd and 4th rates. Timber, scattered pinyon and cedar. Undergrowth, black sage and catclaw.
	West along the S. bdy. of sec. 32. Over mountainous land, through scattered timber and undergrowth. Descend 10 ft. over NW. slope.
.61	Wash, 5 lks. wide. course NE.; asc. 126 ft. over broken SE. slope.
32.00	Spur, slopes NE.; desc. 21 ft. over NW. slope.
	Diff. bet. mes. of 40.00 chs. by/ two sets of chainmen, is nothing.
40.00	Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for standard ¼ sec. cor. with brass cap mkd. S C ¼ S 32 1933 from which A pinyon, 10 ins. diam., bears N.78°E., 23 lks. dist. mkd. ¼ S32 SC BT A cedar, 10 ins. diam., bears N. 51° W., 53 lks. dist., mkd. ¼ S32 SC BT Ascend 101 ft. over broken SE. slope.
42.25	Wash, 10 lks. wide, course NE.
48.00	Top of small spur, slopes S.; desc. 24 ft. over SW. slope.
48.54	Wash, 5 lks. wide, course SE.; asc. 159 ft. over broken NE. slope.
63.00	Spur, slopes N.; desc. 14 ft. over NW. slope.
64.15	Same wash, course NE.; continue along bottom of same.
65.00	Leave wash, from NW.; asc. 315 ft. over broken NE. slope.

Chains.	
	Diff. bet. meas. of 80.00 chs.by two sets of chainman, is nothing.
80.00	Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for standard cor. of secs. 31 and 32,with brass cap mkd. S C T37N | R16W S 31 | S 32 1933 raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor. Land, mountainous. Soil, rocky; 4th rate. Timber, scattered pinyon and cedar. Undergrowth, black sage and cactus.
	West along the S. bdy. of sec. 31. Over mountainous land, through scattered desert growth. Ascend 59 ft. over NE. slope.
3.80	Intersect the Ariz. and Nev. State. Bdy. Set an iron post, 3 ft. long, 3 ins. diam., 18 ins. in the ground to bedrock, with a sandstone,16x12x12 ins. mkd. X, deposited alongside, and in a mound of stone, for closing standard cor. of frac. T.37 N., R.16 W., and frac. T. 36 N., R. 16 W, with brass cap mkd. SC T37N R16W NEV | S 31 C S 6 C T36N 1933 From this point the 331 Mi. Cor. on the Ariz. and Nev. State Bdy.described in the field notes of the resurvey of said bdy. resurveyed under this group, bears N.0°21'E. 20.04 chs. dist. Land, mountainous. Soil, rocky; 4th rate. Timber, none; undergrowth black sage.

FINAL TESTS OF SOLAR ATTACHMENTS.

Nov.20 1932: on the meridian hereinbefore described, determined by Benjamin J. Kinsey. U.S.Surveyor with instrument No. 16740, at 8h 30m a.m. app.t., I set off 36°12'14" N., on the lat. arc; 19°42½'S., on the decl. arc;and orient the instrument with the solar; the line of sight agrees with the true meridian established by Polaris observation.

At 3h 30m p.m. app. t., I set off 36°12'14" N., on the lat. arc; 19°46½'S. on the decl. arc; and repeat the test of the solar; the line of sight agrees with the true meridian established by Polaris observation.

Chains.

Jan. 29, 1933; with instrument No. 19423. on the meridian hereinbefore described, determined by Polaris observation by William E. Hiester, U.S. Surveyor, at 8h 30 m a.m., app. t., I set off 36°29½' N., on the lat. arc; 17° 53'S., on the decl. arc, and orient the instrument with the solar; the line of sight agrees with the true meridian established by Polaris observation.
At 3h 30m p.m., app. t., I set off 36°29½' N., on the lat. arc. 17°47½'S., on the decl. arc, and repeat the test of the solar; the line of sight agrees with the true meridian established by Polaris observation.

March 24, 1933: with instrument No. 14189 on the meridian hereinbefore described, determined by Polaris observation by Walter H. Good, U.S.Surveyor, at 8h 30m a.m., app. t., I set off 36°28½'N., on the lat. arc; 1°27½' N., on the decl. arc and orient the instrument with the solar; the line of sight agrees with the true meridian established by Polaris observation.
At 3h 30 m p.m, app. t., I set off 36°28½' N., on the lat. arc.; 1°34' N., on the decl. arc. and repeat the test of the solar; the line of sight agrees with the true meridian established by Polaris observation.

GENERAL DESCRIPTION.

The land along the 8th standard parallel north, T.33 N. R. 15 W., is broken and mountainous land. The soil is sandy and rocky 3rd and 4th rates. The undergrowth consists of desert growth , joshua, black sage. cactus and greasewood.

The land, along the 9th standard parallel north, T.37 N., Rs. 15 and 16 W., is broken and mountainous. The soil, is sandy and rocky; 3rd and 4th rates. scattered pinyon and cedar timber is found along the W. portion of this line. The undergrowth is desert growth, cactus, catclaw, greasewood, black sage and joshua. The land is used for stock grazing.

4—680
(August, 1926)

BOOK 3990

FIELD ASSISTANTS.

NAMES.	CAPACITY.
Elliott Pearson	1st. Chainman
Richard Andrus	2nd. Chainman
A.L. Lovelady	Flagman
Wayne Yates	Moundman
Lamar Sorenson	Axeman

6—2764

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BOOK 3990

CERTIFICATE OF UNITED STATES SURVEYOR

We, Benjamin J. Kinsey, ~~William E. Hiester~~ and Walter H. Good, U. S. Surveyors, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer for Arizona bearing date of the 30th day of June, 1931, 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 of portions of~~ the 8th. Standard Parallel North, along the South boundary of T. 33 N., through Range 15 West, and of the 9th. Standard Parallel North, along the South boundary of T. 37 N., through Ranges 15 and 16 West,

of the Gila and Salt River Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by ~~me~~ us, and under ~~my~~ our direction; and that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the District Cadastral Engineer for Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Benjamin J. Kinsey
U. S. Surveyor.
Prescott, Ariz. Sept. 15, 1933.

William E. Hiester
U. S. Surveyor.
Glendale, California, August 26, 1933.

Walter H. Good
U. S. Surveyor
Boise, Idaho
Sept. 9, 1933

APPROVAL

OFFICE OF U. S. SUPERVISOR OF SURVEYS,

Denver, Colorado, April 28, 1934.

The foregoing field notes of the survey of the 8th. Standard Parallel North, along the South boundary of T. 33 N., through Range 15 West, and of the 9th. Standard Parallel North, along the South boundary of T. 37 N., through Ranges 15 and 16 West, of the Gila and Salt River Meridian, in the State of Arizona,

executed by Benjamin J. Kinsey, William E. Hiester and Walter H. Good, U. S. Surveyors, under ~~his~~ special instructions dated June 30, 1931 ~~xxx~~, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

U. S. Supervisor of Surveys.

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

~~U. S. Supervisor of Surveys.~~

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