

FIELD NOTES

OF THE SURVEY OF THE

GILA AND SALT RIVER BASE LINE THRU

RANGE 19 EAST (S. bdy. of T. 1 N., R. 19 E.)

RANGE 20 EAST (S. bdy. of T. 1 N., R. 20 E.)

RANGE 21 EAST (S. bdy. of T. 1 N., R. 21 E.)

RANGE 22 EAST (S. bdy. of T. 1 N., R. 22 E.)

AND RANGE 23 EAST (S. bdy. of T. 1 N., R. 23 E.)

AND

EAST BOUNDARY OF T. 1 N., R. 23 E.

EAST BOUNDARY OF T. 2 N., R. 23 E.

EAST BOUNDARY OF T. 3 N., R. 23 E.

EAST BOUNDARY OF T. 4 N., R. 23 E.

Of the *Gila and Salt River Base and Meridian,*In the State of *Arizona**all within the White Mountain or San Carlos Indian Reservation and the Fort Apache Indian Reservation.*

EXECUTED BY

*William E. Hiester**U. S. Surveyor*

In the capacity of U. S. Surveyor..., under Special Instructions dated *October 16*,
 1930., issued by the District Cadastral Engineer to govern surveys included in Group
 No. *165 Arizona*..., which were approved by the Commissioner of the General Land
 Office, *March 26*, 1931., and Assignment Instructions dated *March 31*, 1931.

Survey commenced *April 23*, 1931.Survey completed *May 19*, 1931.

3932

3932

INDEX DIAGRAM.

Township _____, Range _____

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GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY
OF T.1 N., R.19 E.

Chains Set an iron post, 3 ft. long, 3 ins. diam., 28 ins. in the ground, for standard cor. of Tps. 1 N., Rs. 19 and 20 E., with brass cap marked.

S C
T1N
R19E | E20E
S36 | S31

1931

raise a mound
of stone, 4 ft. base, 3 ft. high, N. of cor.

Highest peak of Triplett Mt., bears S. 45° 10' W.
High lone peak, bears N. 39° 08' E.
Top of Mt. Turnbull, bears S. 7° 15' E.
Land, level.
Soil, clay and rocky; 2nd and 4th rates.
Timber, none; undergrowth, cactus and grass.

April, 25; At this point in order to verify the alinement of the tangent, at 9h 20m a.m., app. t. set off 33° 23' N., on the lat. arc; 13° 04½' N., on the decl. arc; and determine a meridian with the solar, from which a flag 40.00 chs. westerly on the tangent bears N. 89° 57' W.
As the theoretical bearing of the tangent at this point is N. 89° 56.6' W., the observation indicates that the line has been carried forward acceptably.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY
OF T.1 N., R.20 E.

From the standard cor. of Tps. 1 N., Rs. 19 and 20 E., East, with the establishment of the Gila and Salt River Base Line, along the S. bdy. of sec. 31, T.1 N., R.20 E., on a transit line, describing the tangent, which bears S. 89° 59.4' E.

2.30 Over rolling mesa land.
18.00 Stock trail, bears N. and S.
21.00 Stock trail, bears SE. and NW.
21.00 Draw, 300 lks. wide, course NW.

Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is nothing.

40.00 N. ½ lk. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for standard ¼ sec. cor. with brass cap marked.

S C
¼ S 31

1931

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

52.00 Stock trail, bears SE. and NW.

Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is nothing.

80.00 N. 1 lk. from the tangent,

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY
OF T.1 N., R.19 E.

Chains Diff. bet. meas. of 40.00 chs., by two sets of chainmen, is nothing.

40.00 N. 13 1/2 lks. from the tangent,

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

S C
1/4 S 35

1931

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

77.20 Stock trail, bears SE. and NW.
Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is nothing.

80.00 N. 16 1/2 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for standard cor. of secs. 35 and 36, with brass cap marked.

S C
T1N | R19E
335 | 336

1931

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

Land, level.
Soil, sandy and clay; 3rd rates.
Timber, none; undergrowth, catclaw, cactus and grass.

East, along the S. bdy. of sec. 36, on a transit line, describing the tangent, which bears S. 89° 56.6' E.

Over rolling mesa land.
8.70 Stock trail, bears N. and S.
13.60 Stock trail, bears N. and S.
20.00 Descend 20 ft. over SE. slope.
29.50 Wash, 50 lks. wide, course SW.; asc. 20 ft. over NW. slope.

Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is nothing.

40.00 N. 20 1/2 lks. from the tangent,

Set an iron post, 3 ft. long, 2 in. diam., 12 ins. in the ground to bedrock, with a lava stone, 14x12x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard 1/4 sec. cor. with brass cap marked.

S C
1/4 S 36

1931

68.77 Road, bears NE. to Ash Creek Ranch, and SW. to San Carlos.

Diff. bet. meas. of 80.00 chs. by two sets of chainmen, is nothing.

80.00 N. 24 1/2 lks. from the tangent,

84
6
GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY
OF T.1 N., R.19 E.

Chains
80.00

N. 6 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 20 ins. in the ground to bedrock, with a lava stone, 12x14x10 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 marked.

S C	
T1N	R19E
S33	S34

1931

Land, level.

Soil, clay and rocky; 2nd and 4th rates.

Timber, none; undergrowth, cactus and grass.

East, along the S. bdy. of sec. 34, on a transit line, describing the tangent, which bears S. 89° 57.7' E.

Over level mesa land.

Diff. bet. meas. of 40.00 chs., by two sets of chainmen, is nothing.

40.00 N. 8 lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for standard $\frac{1}{2}$ sec. cor. with brass cap marked.

S C	
$\frac{1}{2}$ S 34	

1931

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

Continue over level land.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is nothing.

80.00 N. 10 $\frac{1}{2}$ lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for standard cor. of secs. 34 and 35, with brass cap marked.

S C	
T1N	R19E
S34	S35

1931

from which

Highest peak of Triplett Mt. bears S. 22° 45' W.

Highest peak of Mt. Turnbull, bears S. 12° 31' E.

Land, level.

Soil, clay and rocky; 2nd and 4th rates.

Timber, none; undergrowth, cactus and grass.

East, along the S. bdy. of sec. 35, on a transit line, describing the tangent, which bears S. 89° 57.2' E.

Over level mesa land.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY
OF T.1 N., R.19 E.

Chains

23.45 Rim of mesa, bears SE. and SW.; continue over level land.
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 N. 1 1/2 lks. from the tangent,
Set an iron post, 3 ft. long, 1 in. diam., 12 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 1/4 sec. cor. with brass cap marked.

S C
1/4 S 32

1931

from which

Highest peak of Triplett Mt. bears S. 32° 40' E.

Continue over mesa land.
Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is
nothing.

80.00 N. 3 lks. from the tangent,
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 marked.

S C
T1N | R19E
S32 | S33

1931

from which

Highest peak of Triplett Mt. bears S. 23° 10' E.

Land, level and mountainous.
Soil, rocky; 4th rate.
Timber, none; undergrowth, cactus and grass.

East, along the S. bdy. of sec. 33, on a transit line, describing
the tangent, which bears S. 89° 58.3' E.

Over level mesa 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 N. 4 lks. from the tangent,
Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the
ground, for standard 1/4 sec. cor. with brass cap marked.

S C
1/4 S 33

1931

stone, 3 ft. base, 2 ft. high, N. of cor.

raise a mound of

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T. 1 N., R. 19 E.

Chains April 23, 1931, beginning at the standard cor of Tps. 1 N., Rs. 18 and 19 E., which is an iron post, 3 ins. diam., 12 ins. above ground, mkd, and witnessed as described in the official record. Turn 90° to the east from the meridian determined by Polaris observation, on the Gila and Salt River Base Line.

East, along the S. bdy. of sec. 31, on a transit line, describing the tangent, which bears S. 89° 59.4' E.

Over mountainous land, through scattering scrub oak. Ascend 43 ft. over SW. slope.

- 3.50 Limestone spur, slopes NW.; desc. 61 ft. over NE. slope.
- 12.00 Wash, 20 lks. wide, course NW.; asc. 488 ft. over SW. slope.
- 17.50 Continue ascending over NW. slope.
- 21.00 Trail, bears SE. and NW.
- 23.40 Top of rim rocks, 4 ft. high, bears NE. and SW.; continue ascending.
- 35.70 Top of rim rocks, bears NE. and SW.; continue over level mesa land.

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.

N. 1/2 lk. from the tang.

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

S. C
1/4 S 31

1931

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

- 44.50 Top of rim rocks, 8 ft. high, bears NE. and SW.; leave mesa desc. 85 ft. over SE. slope.
 - 52.00 Ravine, course SW.; asc. 25 ft. over W. slope.
 - 54.30 Same rim rocks, bears N. and S.; continue ascending along S. slope.
 - 70.00 Drain, course S.
 - 71.50 Spur, slopes SW.; desc. 45 ft. over SE. slope. nothing.
- Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is 8 lks. from the tang.
- 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 marked.

S. C
T1N | R19E
331 | 332

1931

raise a mound of stone, 3 ft. base, 2 ft. high, N. of cor.
Land, level and mountainous.
Soil, rocky; 4th rate.
Timber, scattering oak; undergrowth, manzanita and scrub oak.

East, along the S. bdy. of sec. 32 on a transit line, describing the tangent, which bears S. 89° 58.9' E.

Over mountainous land. Descend 23 ft. over SE. slope.

- 11.50 Ravine, course SE.; asc. 237 ft. over SW. slope.
- 19.23 Rim of mesa, bears N. and S.; continue over level mesa land.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T.1 N., R.19 E.

The survey of the Gila and Salt River Base Line, through ranges 19 to 23 E. incl., was executed with a lightmountain solar 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. The instrument is equipped with the improved Smith solar attachment; radius of latitude arc 2½ ins., and of declination arc 3½ ins., each with verniers reading to single minutes. The instrument was in good condition, having been placed in satisfactory adjustment prior to beginning the survey, tested and found free from appreciable errors, and was approved by the district cadastral engineer on March 31, 1931. Examine the instrumental adjustments before making the field tests hereinafter described.

As the line to be established runs over a country that is free from dense timber and undergrowth, the tangent method was selected; the controlling meridian was established by observation on Polaris, as shown in the field notes; the bearing of the tangent was deflected from the meridian and was carried forward by transit line.

The measurements were made with two Lallie steel tapes, 5 chs. in length; each tape is graduated every link for the first 100 lks. and thereafter at intervals of 10 lks. The tapes were tested by comparison with a Lufkin standard and found correct. Both sets of measurements were made on the slope; the vertical angles determined by clinometers in good adjustment; the field notes show the horizontal equivalents.

April 22, 1931, at the station of T.1 N., R.18 and 19 E., in latitude 33° 22' 40" N., longitude 110° 25' 00" W., as shown in the data furnished with the special instructions, at 5h 40m 18s or 6h 01m 58s a.m., by watch, which reads correct 105th meridian time as determined by Western Union clock time, observe Polaris at eastern 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. After sunrise lay off the azimuth of Polaris 16½° and mark a meridian on a second peg to the west of the mean point in the line determined by the observation.

In order to verify the latitude of this station and the reading of the watch, make a noon observation on the sun, first setting on the sun's 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-----68° 41' 30"
Reduced latitude-----33° 23' 00"
Mean watch time observation-----12h 20m 05s

Every 30 min. from 7 to 11 a.m. and from 1.30 to 5 p.m., make proper settings on the arcs of the solar attachment and ascertain that the resulting orientation of the instrument, when compared with the meridian established by Polaris observation, has a maximum error of less than 30"

Repeat the tests of the arcs daily by noon observations, and verify the meridional indications at frequent intervals throughout the survey.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T.1 N., R.20 E.

Chains Set an iron post, 3 ft. long, 2 ins. diam., 10 ins. in the ground to bedrock, with a sandstone 12x12x12 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 marked.

S C	
T1N	R20E
S31	S32

1931

from which

East peak of Triplett Mt. bears S. 55° 10' W.
Highest peak of Mt. Turnbull, bears S. 4° 34' E.

Land, rolling.
Soil, sandy and clay; 3 rd rates.
Timber, none; undergrowth, cactus and grass.

East, along the S. bdy. of sec. 32, on a transit line, describing the tangent, which bears S. 89° 58.9' E.

Over rolling mesa land.

Diff. bet. meas. of 40.00 chs., by two sets of chainmen, is nothing.

40.00 N. 1½ lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for standard ¼ sec. cor. with brass cap marked.

S C	
¼ S	S 32

1931

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

Ascend 71 ft. over gradual SW. 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 N. 3 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground to bedrock, with a granite stone 14x12x8 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 marked.

S C	
T1N	R20E
S32	S33

1931

Land, rolling.
Soil, sandy and rocky; 2nd and 4th rates.
Timber, none; undergrowth, cactus and grass.

East, along the S. bdy. of sec. 33, on a transit line, describing the tangent, which bears S. 89° 58.3' E.

Over mountainous land, through scattering juniper.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY
OF T.1 N., R.20 E.

Chains. Ascend 540 ft. over SW. 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

40.00 N. 4 lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 6 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
 $\frac{1}{4}$ sec. cor. with brass cap marked.

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

1931

from which

A cedar, 10 ins. diam., bears N. 79 $\frac{1}{2}$ ° W., 127 lks. dist., mkd.
 $\frac{1}{4}$ S 33 S C B T.

Top of Mt. Turnbull, bears S. 0° 28' E.

Coolidge Dam, bears S. 47° 30' W.

High lone peak, bears N. 31° 40' E.

Ascend 16 ft. over SW. slope.

44.50 Top of ridge bears SE. and NW.; continue along N. slope.

54.00 Thence along top of same ridge.

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 N. 6 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 6 ins. in the ground
to bedrock, and in a mound of stone to top, for standard
cor. of secs. 33 and 34, with brass cap marked.

S C
T1N | R20E
S33 | S34

1931

from which

A cedar, 20 ins. diam., bears N. 62 $\frac{3}{4}$ ° E., 103 lks. dist., mkd.
T 1 N R 20 E S 34 S C B T.

An oak, 6 ins. diam., bears N. 34° W., 158 lks. dist., mkd.

T 1 N R 20 E S 33 S C B T.

Land, mountainous.

Soil, rocky; 4th rate.

Timber, scattering juniper and pinon; undergrowth, scrub
oak, catclaw and grass.

OF T.1 N., R.20 E.

Chains East, along the S. bdy. of sec. 34, on a transit line, describing the tangent, which bears S. 89° 57.7' E.

Along top of ridge.

22.00 Leave ridge, bears SE. and NW.; desc. 158 ft. over SE. 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 N. 8 lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 8 ins. in the ground to bedrock, and in a mound of stone to top, for standard $\frac{1}{4}$ sec. cor. with brass cap marked.

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

1931

from which

A juniper, 20 ins. diam., bears N. 45 $\frac{3}{4}$ ° E., 70 lks. dist., mkd. $\frac{1}{4}$ S 34 S C B T.

A juniper, 6 ins. diam., bears N. 9° W., 188 lks. dist., mkd. $\frac{1}{4}$ S 34 S C B T.

NE. peak of Triplett Mt. bears S. 68° W.

Ascend 19 ft. over SW. slope.

54.00 Top of ascent; desc. 149 ft. over SE. slope.

67.75 Stock trail, bears NE. and SW.

71.00 Base of slope bears N. and S.; continue over level land in small valley.

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 N. 10 $\frac{1}{2}$ lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 28 ins. in the ground, for standard cor. of secs. 34 and 35, with brass cap marked.

S C
TLN | R20E
S34 | S35

1931

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

Land, mountainous.

Soil, sandy and clay, covered with gravel; 2nd and 4th rates. Timber, scattering juniper and pinon; undergrowth, scrub oak, catclaw, cactus and grass.

East, along the S. bdy. of sec. 35, on a transit line, describing the tangent, which bears S. 89° 57.2' E.

Over level land, through scattering juniper.

38.50 Wash, 20 lks. wide, course NW.; asc. 30 ft. over W. slope.

39.53 Road, bears SE. and NW.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T.1 N., R.20 E.

Chains 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 N. 13 1/2 lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 28 ins. in the ground for standard 1/4 sec. cor. with brass cap marked.

S C
1/4 S 35

1931

from which

A hackberry, 6 ins. diam., bears S. 34 3/4 W., 186 lks. dist., mkd. B T only.

A hackberry, 10 ins. diam., bears N. 67 1/2 W., 502 lks. dist., mkd. 1/4 S 35 S C B T.

Ascend 476 ft. over W. slope.

76.00 Top of ascent, on S. slope of knoll; continue along S. 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 N. 16 1/2 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 10 ins. in the ground to bedrock, and in a mound of stone to top; for standard cor. of secs. 35 and 36, with brass cap marked.

S C
T1N R20E
S35 S36

1931

from which

A juniper, 18 ins. diam., bears N. 17 1/4 E., 56 lks. dist., mkd. T 1 N R 20 E S 36 S C B T.

A juniper, 24 ins. diam., bears N. 21 1/2 W., 61 lks. dist., mkd. T 1 N R 20 E S 35 S C B T.

Land, mountainous.

Soil, rocky; 3rd rate.

Timber, scattering juniper, pinon and oak; undergrowth, scrub oak, catclaw, cactus and grass.

East, along the S. bdy. of sec. 36, on a transit line, describing the tangent, which bears S. 89° 56.6' E.

Over mountainous land, through scattering juniper.

Descend 245 ft. over SE. slope.

21.50 Continue along S. 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 N. 20 1/2 lks. from the tangent,

OF T.1 N., R.20 E.

Chains - Set an iron post, 3 ft. long, 1 in. diam., 12 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 $\frac{1}{4}$ sec. cor. with brass cap marked.

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

1931

from which

A juniper, 14 ins. diam., bears N. 32° E., 133 lks. dist., mkd. $\frac{1}{4}$ S 36 S C B T.

A juniper, 10 ins. diam., bears N. 36 $\frac{1}{2}$ ° W., 408 lks. dist., mkd. $\frac{1}{4}$ S 36 S C B T.

Highest point of Triplett Mt., bears S. 73° 12' W.

45.00 Base of slope, bears N. and S.

58.80 Wash, 10 lks. wide, course S.

64.10 Wash, 30 lks. wide, course SW.; asc. 51 ft. over W. slope.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is nothing.

80.00 N. 24 $\frac{1}{2}$ ° lks. from the tangent,

Set an iron post, 3 ft. long, 3 ins. diam., 18 ins. in the ground to bedrock, and in a mound of stone to top, for standard cor. of Tps. 1 N., Rs. 20 and 21 E., with brass cap marked.

S C
T1N
R20E | R21E
S36 | S31

1931

raise a mound of stone, 4 ft. base, 4 ft. high, N. of cor.

Land, mountainous.

Soil, rocky; 4th rate.

Timber, scattering juniper, oak and pinon; undergrowth, scrub oak, catclaw, cactus and grass.

April 29: At this point in order to verify the alinement of the tangent., at 6h 46m 18s p.m., l.m.t., or 7h 07m 08s by watch which reads correct 105th meridian time as determined by comparison with a Western Union Clock, make an hour angle observation of Polaris west of the meridian, making four readings two each with the telescope in direct and reversed positions, reading the horizontal deflection angle from a flag 40.00 chs. westerly, on the tangent, in the direction W-N to Polaris.

Mean horizontal angle to flag----- 88° 47' 51"
Azimuth of Polaris----- 1° 09' 09"
True bearing to flag----- N. 89° 57' 00" W.

As the theoretical bearing of the tangent at this point is N. 89° 56.6' W., the observation indicates that the line has been carried forward acceptably.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T.1 N., R.21 E.

Chains From the standard cor. of Tps. 1 N., Rs. 20 and 21 E. East, with the establishment of the Gila and Salt River Base Line, along the S. bdy. of sec. 31, T. 1 N., R. 21 E., on a transit line, describing the tangent, which bears S. 89° 59.4' E.

Over mountainous land, through scattering timber and undergrowth.

Ascend 158 ft. over rocky NW. slope.

14.75 Spur, slopes NW.; desc. 43 ft. over broken N. 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 N. 1/2 lk. from the tangent.

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for standard 1/2 sec. cor. with brass cap marked.

S C
1/2 S 31

1931

from which

A hackberry, 6 ins. diam., bears N. 60° E., 356 lks. dist., mkd. 1/2 S 31 S C B T.

A hackberry, 10 ins. diam., bears N. 89 3/4° E., 66 lks. dist., mkd. 1/2 S 31 S C B T.

40.27 Wash, 15 lks. wide, course N.; asc. 154 ft. over NW. slope.

51.37 Spur, slopes N.; desc. 43 ft. over NE. slope.

59.30 Ravine, course N.; asc. 134 ft. over W. slope.

70.00 Ridge, bears N. and S.; desc. 98 ft. over E. slope.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is nothing.

80.00 N. 1 lk. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 10 ins. in the ground to bedrock, with a sandstone 12x12x6 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 marked.

S C
T1N | R21E
S31 | S32

1931

Land, mountainous.

Soil, rocky; 4th rate.

Timber, scattering hackberry, juniper and oak; undergrowth, scrub oak, catclaw, cactus and grass.

East, along the S. bdy. of sec. 32, on a transit line, describing the tangent, which bears S. 89° 58.9' E.

Over mountainous land, through scattering juniper.

1.70 Wash, 10 lks. wide, course NE.

10.73 Wash, 50 lks. wide, course NW.; asc. 171 ft. over SW. slope.

OF T. 1 N., R. 21 E.

Chains.

38.70 Wash, course S. 70° W.

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 N. $1\frac{1}{2}$ lks. from the tangent,

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

S C
 $\frac{1}{4}$ S 32

1931

from which

A juniper, 10 ins. diam., bears N. 72 $\frac{1}{2}$ ° E., 231 lks. dist.,
mkd. $\frac{1}{4}$ S 32 S C B T.

A juniper, 4 ins. diam., bears N. 12 $\frac{1}{2}$ ° W 170 lks. dist., mkd.
 $\frac{1}{4}$ S 32 S C B. T.

51.25 Ridge, bears N. and S.; desc. 407 ft. over E. slope.

70.85 Wash, 10 lks. wide, course SE.; continue descending.

76.30 Wash, 30 lks. wide, course NE.

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 N. 3 lks. from the tangent,

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 marked.

S C
T1N | R21E
S32 | S33

1931

from which

A hackberry, 10 ins. diam., bears N. 5 $\frac{1}{2}$ ° W., 174 lks. dist.,
mkd. T 1 N R 21 E S 32 S C B T.

A hackberry, 6 ins. diam., bears N. 55 $\frac{3}{4}$ ° W., 290 lks. dist.,
mkd. T 1 N R 21 E S 32 S C B T.

Land, mountainous.

Soil, rocky; 3rd rate.

Timber, scattering juniper, hackberry, oak; undergrowth,
catclaw, cactus and grass.

East, along the S. bdy. of sec. 33, on a transit line, describing
the tangent, which bears S. 89° 58.3' E.

Over mountainous land, through scattering scrub oak.
Descend 11 ft. over E. slope.

4.70 Wash, 20 lks. wide, course N.; asc. 260 ft. over brushy W. slope.

20.00 Spur, slopes N.; desc. 213 ft. over E. slope.

34.50 Wash, 10 lks. wide, 4 ft. deep, course NE.

GILA AND SALT RIVER BASE LINE?ALONG THE SOUTH BOUNDARY

OF T.1 N., R.21 E.

Chains 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 N. 4 lks. from the tangent,

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

S. C
1/4 S. 33

1931

from which

A hackberry, 10 ins. diam., bears S. 70 1/4° E., 42 lks. dist., mkd. B T only.

A hackberry, 10 ins. diam., bears S. 76 1/4° W., 327 lks. dist., mkd. B T only.

61.00 Descend 28 ft. over E. slope.
Low spur, slopes NE.; desc. 72 ft. over SE. slope.
75.00 Descend over E. slope.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is nothing.

80.00 N. 6 lks. from the tangent,

Set an iron post, 3 ft. long, 8 ins. diam., 24 ins. in the ground, for standard cor. of secs. 33 and 34, with brass cap marked.

S C
T1N | R21E
S33 | S34

1931

from which

A black oak, 12 ins. diam., bears N. 41 1/4° E., 537 lks. dist., mkd. T 1 N R 21 E S 34 S C B T.

A black oak, 18 ins. diam., bears N. 78 3/4° E., 565 lks. dist., mkd. T 1 N R 21 E S 34 S C B T.

Land, mountainous.
Soil, clay and rocky; 2nd and 4th rates.
Timber, scattering juniper, hackberry, and oak; undergrowth, catclaw, cactus and grass.

East, along the S. bdy. of sec. 34, on a transit line, describing the tangent, which bears S. 89° 57.7' E.

Over mountainous land, through scattering timber.
Descend 50 ft. over E. slope.

7.93 Wash, 50 lks. wide, course N.; asc. 314 ft. over rocky W. slope.
24.80 Continue along broken S. slope.
36.00 Top of ridge, bears N. and S.; desc. 83 ft. over E. 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 N. 8 lks. from the tangent,

OF T.1 N., R.21 E.

Chains. Point falls on sandstone ledge, which mark X, setting an iron post, 3 ft. long, 1 in. diam., in a mound of stone to top, for standard $\frac{1}{2}$ sec. cor. with brass cap marked.

S C
 $\frac{1}{2}$ S 34

1931

from which

A black oak, 15 ins. diam., bears N. 29° E., 192 lks. dist.,
mkd. $\frac{1}{2}$ S 34 S C B T.

A black oak, 14 ins. diam., bears N. 58 $\frac{1}{2}$ ° W., 80 lks. dist.,
mkd. $\frac{1}{2}$ S 34 S C B T.

Descend 97 ft. over E. slope.

49.50 Wash, 10 lks. wide, course NE.

57.50 Wash, 30 lks. wide, course N.; asc. 166 ft. over SW. slope.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is nothing.

80.00 N. 10 $\frac{1}{2}$ lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 6 ins. in the ground to bedrock, with a sandstone 10x10x10 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 marked.

S C
T1N | R21E
S34 | S35

1931

from which

A juniper, 24 ins. diam., bears N. 63 $\frac{3}{4}$ ° W., 200 lks. dist.,
mkd. T 1 N R 21 E S 34 S C B T.

Land, mountainous.

Soil, sandy and gravelly; 2nd and 3rd rates.

Timber, scattering juniper, oak and hackberry; undergrowth, catclaw, chamisal, cactus and grass.

East, along the S. bdy. of sec. 35, on a transit line, describing the tangent, which bears S. 89° 57, 2' E.

Over mountainous land,

Ascend 46 ft. over SW. slope.

4.50 Ridge, bears N. and S.; desc. 222 ft. over E. slope.

15.60 Base of descent; continue over level land.

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 N. 13 $\frac{1}{2}$ lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground, for standard $\frac{1}{2}$ sec. cor. with brass cap marked.

S C
 $\frac{1}{2}$ S 35

1931

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY OF T.1 N., R.21 E.

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

42.07 Road, bears SE. to Ash Creek Ranch, and NW. to San Carlos. Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is nothing.

80.00 N. 16½ lks. from the tangent, Set an iron post, 3 ft. long, 2 ins. diam., 8 ins. in the ground to bedrock, with a lava stone, 12x12x10 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 marked.

S. C	
T1N	R21E
S35	S36

1931

from which

A rocky peak, bears S. 29° 37' E.
Point of rocky peak, bears S. 18° 51' E.

Land, level and mountainous.
Soil, clay and gravelly; 2nd and 3rd rates.
Timber, none; undergrowth, cactus and grass.

East, along the S. bdy. of sec. 36, on a transit line, describing the tangent, which bears S. 89° 56.6' E.

Over rolling land.
Descend 34 ft. over E. slope.

8.10 Wash, 50 lks. wide, course N.; asc. 63 ft. over W. slope.

14.90 Thence along N. slope.

17.00 Spur, slopes N.

36.29 Wash, 10 lks. wide, course N.

38.75 Wash, 10 lks. wide, course N.

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 N. 20½ lks. from the tangent, Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground to bedrock, with a lava stone 14x12x8 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap marked.

S C	
¼ S	36

1931

Ascend 40 ft. over W. slope.

49.50 Low spur, slopes N. and S.; desc. 74 ft. over E. slope.

62.40 Wash, 50 lks. wide, course N.; asc. 41 ft. over W. slope.

69.90 Spur, slopes N.; desc. along N. 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 N. 24½ lks. from the tangent,

OF T.1 N., R.21 E.

Chains Set an iron post, 3 ft. long, 3 ins. diam., 26 ins. in the ground, for standard cor. of Tps. 1 N., Rs. 21 and 22 E., with brass cap marked.

S C
T1N
R21E | R22E
S36 | S31

1931

raise a mound of
stone, 4 ft. base, 3 ft. high, N. of cor.

Land, rolling.

Soil, clay and rocky; 2nd and 4th rates.

Timber, none; undergrowth, scattering catclaw and cactus.

May 2, 1931: At this point, in order to verify the alignment of the tangent, at 8h 30m a.m., app. t., set off $33^{\circ} 23' N.$, on the lat. arc; $15^{\circ} 14' N.$ on the decl. arc; and determine a meridian with the solar, from which a flag 40.00 chs. westerly on the tangent, bears $N. 89^{\circ} 57' W.$

As the theoretical bearing of the tangent at this point is $N. 89^{\circ} 56.6' W.$, the observation indicates that the line has been carried forward acceptably.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T.1 N., R.22 E.

From the standard cor. of Tps. 1 N., Rs. 21 and 22 E. East, with the establishment of the Gila and Salt River Base Line, along the S. bdy. of sec. 31, T. 1 N., R. 22 E., on a transit line, describing the tangent, which bears $S. 89^{\circ} 59.4' E.$

Over rolling land, through scattering timber and undergrowth.

9.90 Wash, 10 lks. wide, course N.
28.20 Ravine, course N.; asc. 31 ft. over W. slope.
32.20 Spur, slopes N.; desc. 59 ft. over E. 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

40.00 $N. \frac{1}{2}$ lk. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 4 ins. in the ground to bedrock, and in a mound of stone to top, for standard $\frac{1}{4}$ sec. cor. with brass cap marked.

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

1931

from which

A hackberry, 5 ins. diam., bears $N. 63^{\circ} \frac{1}{2}' E.$, 49 lks. dist., mkd. $\frac{1}{4}$ S 31 S C B T.

A hackberry, 12 ins. diam., bears $S. 57^{\circ} \frac{1}{2}' E.$, 136 lks. dist., mkd. B T only.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY
OF T.1 N., R.22 E.

Chains. Descend 99 ft. over E. slope.

58.30 Rocky wash, 50 lks. wide, course NW; asc. 140 ft. over SW. slope.

69.40 Top of ascent; continue over mesa land.

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 N. 1 lk. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 28 ins. in the ground, for standard cor. of secs. 31 and 32, with brass cap marked.

S C
T1N | R22E
S31 | S32

1931

raise a mound of
stone, 4 ft. base, 2 ft. high, N. of cor.

Land, rolling.
Soil, clay and rocky; 2nd and 4th rates.
Timber, scattering juniper, oak and hackberry; undergrowth, manzanita, scrub oak, chamisal and cactus.

East, along the S. bdy. of sec. 32, on a transit line, describing the tangent, which bears S. 89° 58.9' E.

Over rolling land, through scattering timber and undergrowth.

10.00 Ascend 34 ft. over W. slope.

20.00 Descend gradual E. slope.

Ascend 23 ft. over W. 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 N. 1½ lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 12 ins. in the ground to bedrock, with a sandstone 10x10x6 ins. mkd. X, deposited at the base, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap marked.

S C
¼ S. 32

1931

Descend 23 ft. over NE. slope.

46.75 Wire fence, bears N. and S.

50.95 Wash, 20 lks. wide, course NW; asc. 190 ft. over SW. slope.

72.50 Spur, slopes N.; desc. 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 N. 3 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 10 ins. in the ground to bedrock, with a sandstone 12x8x8 ins. mkd. X, deposited at the base, and in a mound of stone to top for

OF T.1 N., R.22 E.

Chains. standard cor. of secs. 32 and 33, with brass cap marked.

S C	
T1N	R22E
<u>S32</u>	<u>S33</u>

1931

Land, rolling.
Soil, clay and rocky; 2nd and 4th rates.
Timber, scattering juniper; undergrowth, manzanita, catclaw
and cactus.

East, along the S. bdy. of sec. 33, on a transit line, describing
the tangent, which bears S. 89° 58.3' E.

Over mountainous land, through scattering timber and
undergrowth.

Descend 55 ft. over NE. slope.

7.00 Head of draw, course NW.; asc. 227 ft. over SW. slope.
28.40 Spur, slopes NW.; desc. 4 ft. over NE. slope.

Diff. bet. meas. of 40.00 chs. by two sets of chainmen, is
nothing.

40.00 N. 4 lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the
ground to bedrock, with a sandstone 8x8x8 ins. mkd. X,
deposited at the base, and in a mound of stone to top,
for standard $\frac{1}{4}$ sec. cor. with brass cap marked.

S C	
$\frac{1}{4}$	<u>S 33</u>

1931

58.00 Descend 244 ft. over NE. slope.
Gulch, course NW.; asc. 315 ft. over SW. slope.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is
nothing.

80.00 N. 6 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. 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 cor. of secs. 33 and 34, with brass cap
marked.

S C	
T1N	R22E
<u>S33</u>	<u>S34</u>

1931

from which

A juniper, 12 ins. diam., bears N. 39 $\frac{3}{4}$ ° W., 516 lks. dist.,
mkd. T 1 N R 22 E S 33 S C B T.

Land, mountainous.
Soil, sandy and rocky; 2nd and 4th rates.
Timber, scattering juniper and oak; undergrowth, scrub oak,
catclaw and cactus.

Section 17, .22

Plains. West, along the S. bdy. of sec. 34, on a transit line, describing the tangent, which bears S. 89° 37.7' E.

Over mountainous land, through scattering timber and undergrowth.

- 10.00 Top of asst. pt.; continue along rocky S. slope.
- 20.15 Base of 475 ft. over S. slope. From this point loose at Ash Creek battle panel, bears S. 85° 32' E.
- 30.00 E. cor. of corral, bears S. 80° 18' E.

Mid. lat. meas. of 40.00 chs. by two sets of chains, is 4 lks.; position of middle point - by lat set, 40.02 chs. by 2nd set, 39.98 chs.; the mean of which is

40.00 S. 1/2 lks. from the tangent.

Set an iron post, 3 ft. long, 1 in. diam., 4 ins. in the ground to be rock, with a sandstone 12x8x5 ins. mhd. l. deposited at the base, and in a mound of stone to top, for standard cor. of sec. 34 and 35, with brass cap marked.

39	40
39	40

1931

Base of 325 ft. over S. slope.

- 40.00 Back, 25 lks. wide, with small spring, branch 1 lks. wide, corral S.; sec. 17 ft. over S. slope.

Mid. lat. meas. of 80.00 chs. by two sets of chains, is 4 lks.; position of middle point - by lat set, 80.02 chs. by 2nd set, 79.98 chs.; the mean of which is

80.00 S. 1/2 lks. from the tangent.

Set an iron post, 3 ft. long, 2 in. diam., 6 ins. in the ground to be rock, with a sandstone 9.8x8 ins. mhd. l. deposited at the base, and in a mound of stone to top, for standard cor. of sec. 34 and 35, with brass cap marked.

39	40
39	40

1931

Soil, sandy and rocky; no water. Timber, scattering juniper and oak; undergrowth, cactus and fern.

West, along the S. bdy. of sec. 18, on a transit line, describing the tangent, which bears S. 91° 37.2' E.

Over mountainous land, through scattering timber and undergrowth.

- 11.00 Base of 40 ft. over S. slope.
- 20.00 Top of asst. pt.; base 125 ft. over S. slope.
- 30.00 East bank of Ash Creek, course S.
- 40.00 West bank of Ash Creek; sec. 180 ft. over S. slope.
- 50.00 Top of mesa, 20 ft. high, bears S. 85° E.
- 61.75 E. cor. of corral, bears S. 85° E.

Approximate location of house at Ash Creek panel, bears S. 80° E.

Mid. lat. meas. of 40.00 chs. by two sets of chains, is

OF T.1 N., R.22 E.

Chains 6 lks.; position of middle point-

By 1st set, 40.03 chs.

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

40.00 N.13½ lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bedrock, and in a mound of stone to top, for standard ¼ sec. cor. with brass cap marked.

S C
¼ S 35

1931

from which

A hackberry, 12 ins. diam., bears S.76½° W., 414 lks. dist., mkd. B T only.

A hackberry, 9 ins. diam., bears N.78¾° W., 470 lks. dist., mkd. ¼ S 35 S C B T.

Ascend 123 ft. over SW. slope.

57.25 Spur, slopes SW.; desc. 109 ft. over SE. slope.

68.22 Wash, 10 lks. wide, course S.30° W.

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 N.16½ lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 20 ins. in the ground to bedrock, and in a mound of stone to top, for standard cor. of secs. 35 and 36, with brass cap marked.

S C
T1N R22E
S35 S36

1931

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

Land, mountainous.

Soil, rocky 3rd rate.

Timber, scattering hackberry, juniper and oak; undergrowth, catclaw, cactus and grass.

East, along the S. bdy. of sec. 36, on a transit line, describing the tangent, which bears S.89° 56.6'E.

Over rolling land, through scattering timber and undergrowth.

Ascend 263 ft. over rocky SW. slope.

15.00 Ridge, bears N. and S.; desc. 299 ft. over E. slope.

23.51 Wire fence, bears N. and S.

37.00 Enter scattering oak timber.

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 N.20½ lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T.1 N., R.22 E.

Chains ground, for standard 1/4 sec. cor. with brass cap marked.

S C
1/4 S 36

1931

from which

A black oak, 12 ins. diam., bears N. 22 3/4° E., 146 lks. dist.,
mkd. 1/4 S 36 S C B T.

A black oak, 10 ins. diam., bears N. 49 3/4° W., 46 lks. dist.,
mkd. 1/4 S 36 S C B T.

- 44.25 Descend 74 ft. over E. slope.
- 49.90 Wash, 20 lks. wide, course SE.; asc. 30 ft. over SW. slope.
- 59.32 Spur, slopes S.; desc. 75 ft. over E. slope.
- 61.55 Wash, 10 lks. wide, course SE.
- 65.70 Wash, 20 lks. wide, course S.; asc. 38 ft. over gradual NW. slope.
- 67.40 Wash, 20 lks. wide, course S. 45 W.
- 68.10 Same wash, course N. 15 W.
- 73.85 Same wash, course S. 45 W.
- Ascend 52 ft. over NW. 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, 39.98 chs.; the mean of which is

80.00 N. 24 1/2 lks. from the tangent.

Set an iron post, 3 ft. long, 3 ins. diam., 26 ins. in the
ground, for standard cor. of Tps. 1 N., Rs. 22 and 23 E.,
with brass cap marked.

S C
T1N
R22E | R23E
S36 | S31

1931

from which

A black oak, 12 ins. diam., bears N. 23 1/4° E., 64 lks. dist.,
mkd. T 1 N R 23 E S 31 S C B T.

A black oak, 6 ins. diam., bears N. 79 1/4° W., 57 lks. dist.,
mkd. T 1 N R 22 E S 36 S C B T.

Land, rolling.
Soil, gravelly and rocky; 3rd and 4th rates.
Timber, scattering juniper, oak and hackberry; undergrowth,
scrub oak, cactus and grass.

May 5; At this point in order to verify the alinement
of the tangent., at 7h 51m 00s p.m., lm.t., or 8w 11m. 00s
by watch which reads correct 105th meridian time as
determined by comparison with a Western Union Clock,
make an hour angle observation of Polaris, west of the
meridian, making four readings two each with the telescope
in direct and reversed positions, reading the horizontal
deflection angle from a flag 40.00 chs. westerly, on the
tangent, in the direction W-N to Polaris.

Mean horizontal angle Polaris to flag-----89°05'00"N-W.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T.1 N., R.23 E.

Chains. Azimuth of Polaris---51'57" W.
True bearing to flag---N.89°56'57"W.

As the theoretical bearing of the tangent at this point is N.89 56!57" W., the observation indicates the the line has been carried forward acceptably.

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY
OF T.1 N., R.23 E.

From the standard cor. of Tps. 1 N., Rs. 22 and 23 E. East, with the establishment of the Gila and Salt River Base Line, along the S. bdy. of sec. 31, T.1 N., R.23 E. on a transit line, describing the tangent, which bears S.89°59.4'E.

Over rolling land, through scattering timber and undergrowth. Ascend 230 ft. over NW. slope.

- 2.80 Spur, slopes SW.
- 10.53 Ravine, 30 lks. wide, course SW.
- 19.22 Ravine, 20 lks. wide, course SW.; continue ascending over SW. slope.
- 29.50 Spur, slopes S.; desc. 122 ft. over SE. slope.
- 32.97 Draw, course SE.

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 N. 1/2 lk. from the tangent,

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

S C
1/4 S 31

1931

from which

A black oak, 6 ins. diam., bears S.34 3/4° E., 86 lks. dist., mkd B T only.

A black oak, 12 ins. diam., bears N.88 1/4° E., 435 lks. dist., mkd. 1/4 S 31 S C B T.

- 42.70 Draw, course SW.; asc. 297 ft. over W. slope.
- 55.40 Top of ascent on S. slope of knoll.; desc. 80 ft. over SE. slope.
- 77.00 Low spur, slopes S.; continue descending over SE. 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 N. 1 lk. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 6 ins. in the ground to bedrock with a sandstone 12x8x8 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 marked.

S C
T1N | R23E
S31 | S32

1931

Of T. 1 N., R. 23 E.

Chains Land, rolling.
Soil, gravelly; 3 rd rate.
Timber, scattering juniper, oak and hackberry; undergrowth,
scrub oak, cactus and grass.

East, along the S. bdy. of sec. 32, on a transit line, describing
the tangent, which bears S. 89° 58.9' E.

Over rolling land, through scattering timber and undergrowth.
Descend 348 ft. over rocky SE. slope.

29.60 Wash, 15 lks. wide, course S.; asc. 182 ft. over W. slope.

Diff. bet. meas. of 40.00 chs., by two sets of chainmen, is
nothing.

40.00 N. 1½ lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 14 ins. in the ground
to bedrock, and in a mound of stone to top, for standard
¼ sec. cor. with brass cap marked.

S C
¼ S 32

1931.

from which

A black oak, 10 ins. diam., bears N. 32° E., 83 lks. dist.,
mkd. ¼ S 32 S C B T.

A black oak, 10 ins. diam., bears N. 52½° W., 280 lks. dist.,
mkd. ¼ S 32 S C B T.

Ascend 198 ft. over W. slope.

50.55 Ridge, bears SE. and NW.; desc. 157 ft. over E. 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 N. 3 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 4 ins. in the ground
to bedrock, and in a mound of stone to top, for standard
cor. of secs. 32 and 33, with brass cap marked.

S C
T1N | R23E
S32 | S33

1931.

from which

A juniper, 30 ins. diam., bears N. 61° E., 918 lks. dist.,
mkd. T 1 N., R. 23 E S 33 S C B T.

A 2 ins. gas pipe telephone pole, bears N. 41° 10' E., 169
lks. dist.

A 2 ins. gas pipe telephone pole, bears S. 12° 33' E., 183
lks. dist.,

A hackberry, 10 ins. diam., bears N. 7° W., 195 lks. dist.,
mkd. T 1 N R 23 E S 32 S C B T.

Land, rolling.
Soil, gravelly; 2nd rate.

OF T.1 N., R.23 E.

Chains. Timber, scattering juniper, oak and hackberry; undergrowth, scattering scrub oak, cactus and grass.

East, along the S. bdy. of sec. 33, on a transit line, describing the tangent, which bears S. 89° 58.3' E.

Over rolling land, through scattering timber and undergrowth.

- .89 Telephone line, bears N. and S.
- 3.60 Trail, bears N. 30 E and S. 30 W.
- 3.70 Old road, bears NE. and SW.; desc. 29 ft. over gradual E. slope.
- 8.20 Wash, 20 lks. wide, course S.; asc. 18 ft. over W. slope.
- 12.90 Low spur, slopes S.; desc. 70 ft. over gradual E. slope.
- 23.48 Creek, 60 lks. wide, course S.; asc. 63 ft. over W. slope.
- 30.50 Low spur, slopes S.; desc. 16 ft. over E. slope.

Diff. bet. meas. of 40.00 chs., by two sets of chainmen, is nothing.

N. 4 lks. from the tangent

- 40.00 Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bedrock, and in a mound of stone to top, for standard $\frac{1}{4}$ sec. cor. with brass cap marked.

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

1931

from which

A black oak, 14 ins. diam., bears N. 53 $\frac{1}{2}$ ° E., 340 lks. dist., mkd. $\frac{1}{4}$ S 33 S C B T.

A black oak, 14 ins. diam., bears N. 81° E., 343 lks. dist., mkd. $\frac{1}{4}$ S 33 S C B T.

- 42.86 Rocky wash, 50 lks. wide, course S.; asc. 87 ft. over W. 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 N. 6 lks. from the tangent,

Set an iron post, 3 ft. long, 2 ins. diam., 14 ins. in the ground to bedrock, with a lava stone 12x12 x12 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 marked.

S C
T1N | R23E
S33 | S34

1931

from which

Top of Mt. Turnbull, bears S. 41° 17' W.

Top of small rocky peak, bears S. 16° 05' W.

Mound of stone on rock knoll, about four miles dist., bears S. 17° 46' E.

A pinon, 14 ins. diam., on top of small rocky knoll, about 20 chs. dist., bears N. 44° 08' W.

Land, rolling.

Soil, rocky; 4th rate.

Timber, scattering oak, juniper and hackberry; undergrowth,

GILA AND SALT RIVER BASE LINE ALONG THE SOUTH BOUNDARY

OF T.1 N., R.23 E.

Chains scrub oak, cactus and grass.

East, along the S. bdy. of sec. 34, on a transit line, describing the tangent, which bears S. $89^{\circ} 57.7' E.$

Over rolling land, through scattering timber and undergrowth.

8.40 Old road, bears N. and S.
10.00 Descend 58 ft. over E. slope.
19.65 Ash Creek, 10 lks. wide, course S.; asc. 258 ft. over W. 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 N. 8 lks. from the tangent,

Set an iron post, 3 ft. long, 1 in. diam., 18 ins. in the ground to bedrock, and in a mound of stone to top, for standard $\frac{1}{4}$ sec. cor. with brass cap marked.

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

1931

from which

A black oak, 20 ins. diam., bears N. $24\frac{1}{2}^{\circ} E.$, 124 lks. dist., mkd. $\frac{1}{4}$ S 34 S C B T.

A black oak, 8 ins. diam., bears N. $45\frac{3}{4}^{\circ} W.$, 49 lks. dist., mkd. $\frac{1}{4}$ S 34 S C B T.

May 6; At this point in order to verify the alinement of the tangent., at 4h 45m 18s a.m., l.m.t., or 5h 05m 04s by watch which reads correct 105th meridian time as determined by comparison with a Western Union Clock, observe Polaris at eastern elongation, making two sights two each with the telescope in direct and reversed positions, reading the horizontal deflection angle from a flag 40.00 chs. westerly on the tangent, in the direction W-N to Polaris.

Mean horizontal angle Polaris to flag ----- $91^{\circ} 13' 52'' W$
Azimuth of Polaris ----- $1^{\circ} 16' 38'' W$.
True bearing ----- $N. 89^{\circ} 57' 14'' W$.

As the theoretical bearing of the tangent at this point is N. $89^{\circ} 57.4' W.$, the observation indicates that the line has been carried forward acceptably.

As the remaining portion of the Gila and Salt River Base Line, crosses a high range of mountains, covered with dense timber and undergrowth, the solar method was selected.

From the standard $\frac{1}{4}$ sec. cor. of sec. 34.

East, along the S. bdy. of sec. 34, with continuous measurement.

Ascend 528 ft. over SW. slope.; through heavy timber, and undergrowth.

51.70 Draw, course SW.
64.40 High rocky spur, slopes S. $45^{\circ} W.$; desc. 92 ft. over SE. slope.
70.00 Draw, course S.; asc. 61 ft. over SW. 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

OF T.1.N., R.23 E.

Chains.

80.00 Set an iron post, 3 ft. long, 2 ins. diam., 18 ins. in the ground to bedrock, and in a mound of stone to top, for standard cor. of secs. 34 and 35, with brass cap marked.

S C	
T1N	R23E
S34	S35

1931

from which

A white oak, 14 ins. diam., bears N. 19° E., 82 lks. dist.,
mkd. T 1 N R 23 E S 35 S C B T.

A black oak, 6 ins. diam., bears N. 64° W., 86 lks. dist.,
mkd. T 1 N R 23 E S 34 S C B T.

Land, mountainous.

Soil, gravelly; 3rd rate.

Timber, scattering juniper, oak and hackberry; undergrowth, catclaw, scrub oak, and cactus.

East, along the S. bdy. of sec. 35.

Over mountainous land, through scattering timber and undergrowth.

.50 Spur, slopes S.; desc. 174 ft. over SE. slope.

9.92 Ravine, course S. asc. 477 ft. over SW. slope.

33.00 Draw, course S.

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., 6 ins. in the ground to bedrock, and in a mound of stone to top, for standard $\frac{1}{4}$ sec. cor. with brass cap marked.

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

1931

from which

A white oak, 10 ins. diam., bears N. 19 $\frac{3}{4}$ ° E., 26 lks. dist.,
mkd. $\frac{1}{4}$ S 35 S C B T.

A black oak, 6 ins. diam., bears N. 75 $\frac{1}{2}$ ° W., 35 lks. dist.,
mkd. $\frac{1}{4}$ S 35 S C B T.

67.00 Ascend 450 ft. over SW. slope., through heavy oak timber. Ridge, bears SE. and NW.; desc. 74 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., 26 ins. in the ground, for standard cor. of secs. 35 and 36, with brass cap marked.

S C	
T1N	R23E
S35	S36

1931

GILA AND SALT RIVER BASE LINE, ALONG THE SOUTH BOUNDARY

OF T.1.N., R.23 E.

Chains.

from which

A yellow pine, 24 ins. diam., bears N. $46\frac{3}{4}^{\circ}$ E., 48 lks. dist.,
mkd. T 1 N R 23 E S 36. S C B T.

A white oak, 18 ins. diam., bears N. 68° W., 55 lks. dist.,
mkd. T 1 N R 23 E S 35 S C B T.

Land, mountainous.

Soil, clay and rocky; 2nd and 4th rates.

Timber, oak, pine, pinon, fir, cedar and juniper; undergrowth,
scrub oak, willow, mahogany, manzanita and grass.

East, along the S. bdy. of sec. 36.

Over mountainous land, through heavy timber and scattering
undergrowth.

Descend 245 ft. over E. slope.

9.00 Continue descending along N. slope.

13.90 Spring branch, 2 lks. wide, course NE.

24.17 Creek, 10 lks. wide, course N.; asc. 227 ft. over W. slope.

34.00 Top of ascent; continue over 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., 26 ins. in the
ground, for standard $\frac{1}{4}$ sec. cor. with brass cap marked.

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

1931

from which

A yellow pine, 30 ins. diam., bears N. $18\frac{3}{4}^{\circ}$ E., 69 lks. dist.,
mkd. $\frac{1}{4}$ S 36 S C B T.

A white oak, 16 ins. diam., bears N. $32\frac{1}{4}^{\circ}$ W., 127 lks. dist.,
mkd. $\frac{1}{4}$ S 36 S C B T.

41.15 Wire fence, bears N. 5 E, and S. 5 W.

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, 3 ins. diam., 28 ins. in the
ground, for standard cor. of Tps. 1 N., Rs. 23 and 24 E.,
with brass cap marked.

S C
T1N
R23E | R24E
S36 | S31

1931

from which

A yellow pine, 30 ins. diam., bears N. $22\frac{3}{4}^{\circ}$ E., 63 lks. dist.,
mkd. T 1 N R 24 E S 31 S C B T.

A yellow pine, 14 ins. diam., bears N. 57° W., 141 lks. dist.,
mkd. T 1 N R 23 E S 36 S C B T.

OF T.1 N., R.23 E.

Chains Land, mountainous.
Soil, rocky; 4th rate.
Timber, pine, oak, juniper and cedar; undergrowth, scrub oak, willow, mahogany, manzanita, catclaw and cactus.

May 7; in camp near the standard cor. of secs. 34 and 35, T.1 N., R.23 E., at 4h 4m 24s a.m., 1.mt., or 5h 00m 59s a.m., by watch, which reads correct 105th meridian time as determined by comparison with a Western Union Clock. observe Polaris at eastern elongation, making two sights 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. After sunrise, lay off the azimuth of Polaris $1^{\circ}10'$ and mark a meridian on a second peg to the west of the mean point in the line determined by observation.

At 8h 30m a.m., app. t., set off $33^{\circ}23'N.$ on the lat. arc; $16^{\circ}40\frac{1}{2}'N.$ on the decl. arc; and determine a meridian with the solar, which agrees within $30''$ of the true meridian.

At 4h 15m p.m., app. t., with the lat. arc unchanged, set off $16^{\circ}46'N.$ on the decl. arc; and determine a meridian with the solar, which agrees within $30''$ of the true meridian.

As the solar observations agree within $30''$ of the true meridian, conclude that the adjustments of the transit has been maintained in satisfactory adjustment, and that the alinement of the base line has been carried forward acceptably.

EAST BOUNDARY OF T.1 N., R.23 E.

Beginning at the standard cor. of Tps. 1 N., Rs. 23 and 24 E. North, bet. secs. 31 and 36.

Over level land, through heavy timber and scattering undergrowth.

8.00 Leave level land; desc. 210 ft. over NW. slope.
11.20 Continue descending over NE. slope.
15.50 Draw, 30 lks. wide, course W.; asc. 354 ft. over SW. slope.
21.60 Trail, bears, SE. and NW.

Diff. bet. meas. of 40.00 chs., by two sets of chainmen, is

6 lks.; position of middle point-

By 1st set, 40.03 chs.

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

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

$\frac{1}{4}$
S36 | S31
1931

from which

A white oak, 24 ins. diam., bears $N.87\frac{1}{2}^{\circ}E.$, 08 lks. dist., mkd. $\frac{1}{4}$ S 31 B T.

A white oak, 12 ins. diam., bears $N.51^{\circ}W.$, 19 lks. dist., mkd. $\frac{1}{4}$ S 36 B T.

Ascend 19 ft. over SW. slope.

44.20 Ridge, bears SE. and NW.; desc. 514 ft. over N. slope.

Chains.

68.13 Creek, 5 lks. wide, course NE.; asc. 100 ft. over SE. 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., 24 ins. in the ground, for cor. of secs. 25, 30, 31 and 36, with brass cap marked

T1N
R23E R24E
S25 | S30
S36 | S31
1931

from which

A white oak, 8 ins. diam., bears N. 47° E., 55 lks. dist.,
mkd. T 1 N R 24 E S 30 B T.

A white oak, 8 ins. diam., bears S. 22½° E., 79 lks. dist.,
mkd. T 1 N R 24 E S 31 B T.

A white oak, 8 ins. diam., bears S. 50° W., 16 lks. dist.,
mkd. T 1 N R 23 E S 36 B T.

A yellow pine, 5 ins. diam., bears N. 8½° W., 149 lks. dist.,
mkd. T 1 N R 23 E S 25 B T.

Land, mountainous.

Soil, rocky; 4th rate.

Timber, pine, fir, cedar, oak and juniper; undergrowth, scrub oak, willow, mahogany and manzanita.

North, bet. secs. 25 and 30.

Over mountainous land, through heavy timber and scattering undergrowth.

Ascend 17 ft. over SE. slope.

5.00 Spur, slopes E.; desc. 113 ft. over NE. slope.

18.50 Gulch, course E.; asc. 204 ft. over S. slope.

26.00 Spur, slopes S.E.; continue ascending over S. slope.

Diff. bet. meas. of 40.00 chs., by two sets of chainmen, is 6 lks.; position of middle point-

By 1st set, 40.03 chs.

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

40.00 Set an iron post, 3 ft. long, 1 in. diam., 26 ins. in the ground for ¼ sec. cor. with brass cap marked.

¼
S25 | S30
1931

from which

A white oak, 12 ins. diam., bears S. 60½° E., 22 lks. dist.,
mkd. ¼ S 30 B T.

A juniper, 30 ins. diam., bears N. 5½° W., 75 lks. dist.,
mkd. ¼ S 25 B T.

Ascend 5 ft. over S. slope.

44.00 Spur, slopes SE.; desc. 500 ft. over NE. slope.

69.60 Low spur, slopes NE.; continue descending over NW. slope.

75.65 Spring branch, 3 lks. wide, course E.; asc. 20 ft. over S. slope.

Chains

77.00 Low spur, slopes NE.; asc. 14 ft. over SE. 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., 8 ins. in the ground to bedrock, and in a mound of stone to top, for cor. of secs. 19, 24, 25 and 30, with brass cap marked.

T1N	
R23E	R24E
S24	S19
S25	S30
1931	

from which

A yellow pine, 24 ins. diam., bears N. $61\frac{3}{4}^{\circ}$ E., 143 lks. dist.
mkd. T 1 N R 24 E S 19 B T.

A yellow pine, 10 ins. diam., bears S. $57\frac{1}{2}^{\circ}$ E., 49 lks. dist.,
mkd. T 1 N R 24 E S 30 B T.

A yellow pine, 12 ins. diam., bears S. 41° W., 30 lks. dist.,
mkd. T 1 N R 23 E S 25 B T.

A white oak, 12 ins. diam., bears N. $3\frac{1}{2}^{\circ}$ W., 88 lks. dist.,
mkd. T 1 N R 23 E S 24 B T.

Land, mountainous.

Soil, rocky; 3rd rate.

Timber, pine, fir, cedar, oak and juniper; undergrowth, scrub oak, locust, mahogany and manzanita.

North, bet. secs. 19 and 24.

Over mountainous land, through heavy timber and scattering undergrowth.

Descend 214 ft. over broken E. slope.

17.70 Change in slope; desc. over N. slope.

33.00 Creek, 15 lks. wide, course NW.

38.89 Same creek, course NE.

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 True point for $\frac{1}{4}$ sec. cor. falls in creek, 20 lks. wide, near W. bank, course SE.

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

$\frac{1}{4}$	
S24	S19
W C	
1931	

from which

A yellow pine, 10 ins. diam., bears N. 60° E., 60 lks. dist.,
mkd. W C $\frac{1}{4}$ S 19 B T.

A yellow pine, 6 ins. diam., bears N. $77\frac{3}{4}^{\circ}$ W., 33 lks. dist.,
mkd. W C $\frac{1}{4}$ S 24 B T.

- Chains Ascend 20 ft. over SE. slope.
- 48.00 Low spur, slopes NE.; desc. 45 ft. over gradual NW. slope.
- 59.75 Trail, bears NE. and SW.
- 60.55 Creek, 5 lks. wide, course N. 45° E.; asc. 14 ft. over gradual SE. 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., 18 ins. in the ground to bedrock, and in a mound of stone to top, for cor. of sec. 13, 18, 19 and 24, with brass cap marked.

T1N
 R23E R24E
 S13 | S18
 S24 | S19
 1931

from which

- A yellow pine, 24 ins. diam., bears N. 33³/₄° E., 104 lks. dist., mkd. T 1 N R 24 E S 18 B T.
- A white oak, 12 ins. diam., bears S. 69¹/₂° E., 140 lks. dist., mkd. T 1 N R 24 E S 19 B T.
- A yellow pine, 10 ins. diam., bears S. 7° W., 46 lks. dist., mkd. T 1 N R 23 E S 24 B T.
- A yellow pine, 30 ins. diam., bears N. 11¹/₂° W., 69 lks. dist., mkd. T 1 N R 23 E S 13 B T.

Land, mountainous.
 Soil, sandy loam and gravelly; 2nd and 3rd rates.
 Timber, pine, oak, juniper, fir and cedar; undergrowth, scrub oak, mahogany and willow.

North, bet. secs. 13 and 18.

Over mountainous land, through heavy timber and scattering undergrowth.

- Ascend 10 ft. over SE. slope.
- 2.00 Spur, slopes NE.; desc. 82 ft. over NW. slope.
- 18.00 Wash, 30 lks. wide, course NE.; asc. 58 ft. over SE. slope.
- 20.00 Point of spur, slopes E.; desc. 40 ft. over NE. slope.
- 22.90 Squaw, Creek, course NW.
- 24.98 Trail, bears SE. and NE.
- 30.00 Spur, slopes NW., continue descent 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., 26 ins. in the ground, for ¹/₄ sec. cor. with brass cap marked.

¹/₄
 S13 | S18
 1931

from which

Chains, A yellow pine, 10 ins. diam., bears N. 81 $\frac{1}{4}$ ^c E., 133 lks. dist., mkd. $\frac{1}{4}$ S 18 B T.

A yellow pine, 24 ins. diam., bears S. 12 $\frac{1}{4}$ ^c W., 20 lks. dist., mkd. $\frac{1}{4}$ S 13 B T.

Descend 18 ft. over gradual NE. slope.

48.30 Squaw Creek, 20 lks. wide, course NE.

48.50 Creek, 10 lks. wide, course NE.

52.80 Creek, 5 lks. wide, course E.

60.20 Squaw Creek, 40 lks. wide, course NW.

67.70 Trail bears NE. and SW.

71.50 Leave Squaw Creek, bottom.; asc. 20 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., 26 ins. in the ground, for cor. of secs. 7, 12, 13 and 18, with brass cap marked.

TLN
R23E R24E
S12 | S7
S13 | S18
1931

from which

A white oak, 10 ins. diam., bears N. 22 $\frac{3}{4}$ ^c E., 26 lks. dist., mkd. T 1 N R 24 E S 7 B T.

A yellow pine, 14 ins. diam., bears S. 12 $\frac{3}{4}$ ^c E., 42 lks. dist., mkd. T 1 N R 24 E S 18 B T.

A yellow pine, 12 ins. diam., bears S. 29 $\frac{1}{2}$ ^c W., 61 lks. dist., mkd. T 1 N R 23 E S 13 B T.

A yellow pine, 18 ins. diam., bears N. 13^c W., 162 lks. dist., mkd. T 1 N R 23 E S 12 B T.

land mountainous.

Soil, sandy loam and rocky; 1st and 4th rates.

Timber, pine, oak, juniper and fir; undergrowth, scrub oak, mahogany and willow.

North, bet. secs. 7 and 12.

Over rolling land, through scattering timber and undergrowth.

Ascend 40 ft. over rocky SW. slope.

0.50 Point of spur, slopes W.

15.00 Enter creek bottom, bears E. and W.

17.50 Trail, bears NE. and SW.

27.20 Same trail, bears NW. and SE.

28.00 Leave creek bottom, bears SE. and NW.; asc. 11 ft. over SW. slope.

29.70 Point of rocky spur, slopes W.; desc. 11 ft. over gradual NW. 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., 10 ins. in the ground to bedrock, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked.

Chains

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

S12	S7
1931	

from which

A yellow pine, 36 ins. diam., bears S. 59° E., 30 lks. dist.,
mkd. $\frac{1}{4}$ S 7 B T.

A yellow pine, 6 ins. diam., bears N. 24 $\frac{1}{2}$ ° W., 88 lks. dist.,
mkd. $\frac{1}{4}$ S 12 B T.

- 51.70 Enter bottom land, nears NE. and SW.
54.20 Same trail, bears NE. and SW.
56.30 Squaw Creek, 20 lks. wide, course NE.; asc. 35 ft. over SE. slope.
58.70 Spur, slopes E.; desc. 25 ft. over NE. slope.
69.00 Bend in same trail, bears SE. and NE., in wash 10 lks. wide,
course E.
73.95 Same trail, bears SE. and NW.
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., 10 ins. in the
ground to bedrock, and in a mound of stone to top, for
cor. of secs. 1, 6, 7 and 12, with brass cap marked.

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

T1N	
R23E R24E	
S. 1	S 6
S12	S 7
1931	

from which

A yellow pine, 24 ins. diam., bears N. 60 $\frac{1}{2}$ ° E., 49 lks. dist.,
mkd. T 1 N R 24 E S 6 B T.

A yellow pine, 14 ins. diam., bears S. 26° E., 70 lks. dist.,
mkd. T 1 N R 24 E S 7 B T.

A yellow pine, 30 ins. diam., bears S. 78 $\frac{1}{2}$ ° W., 124 lks. dist.,
mkd. T 1 N R 23 E S 12 B T.

A yellow pine, 30 ins. diam., bears N. 49 $\frac{1}{2}$ ° W., 134 lks. dist.,
mkd. T 1 N R 23 E S 1 B T.

Land, rolling.

Soil, sandy loam and rocky; 1st and 4th rates.

Timber, pine, oak, juniper and pinon; undergrowth, scrub oak,
willow mahogany and grass.

North, bet. secs. 1 and 6.

- Over rolling land, through scattering timber and undergrowth.
0.50 Leave scattering timber; continue over prairie land.
6.50 Squaw Creek, 20 lks. wide, course NW.
- 11.90 Trail, bears SE. and NW.
14.00 Leave prairie; enter scattering timber.
26.60 Same trail, bears NE. and SW.; thence along creek bottom.
31.60 Squaw Creek, 20 lks. wide, course NE.
35.00 Leave creek bottom; asc. 11 ft. over SE. 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., 20 ins. in the
ground to bedrock, and in a mound of stone to top, for
 $\frac{1}{4}$ sec. cor. with brass cap marked.

EAST BOUNDARY OF T.1 N.,R.23 E.

Chains

1/4
S1 | S6
1931

from which

A yellow pine, 24 ins. diam., bears N. 50 1/2° E., 91 lks. dist.,
mkd. 1/4 S 6 B T.

A yellow pine, 10 ins. diam., bears N. 21 1/2° W., 55 lks. dist.,
mkd. 1/4 S 1 B T.

Ascend 29 ft. over SE. slope.

50.00 Spur, slopes E.; desc. 79 ft. over E. slope.

75.86 Wire fence, bears N. 85° E. and S. 85° W.

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, 3 ins. diam., 26 ins. in the
ground, for cor. of Tps. 1 and 2 N., Rs. 23 and 24 E., with
brass cap marked.

T2N
R23E R24E
S36 | S31
S 1 | S 6
T1N
1931

from which

A yellow pine, 48 ins. diam., bears N. 14 1/2° E., 94 lks. dist.,
mkd. T 2 N R 24 E S 31 B T.

A yellow pine, 18 ins. diam., bears S. 30° E., 40 lks. dist.,
mkd. T 1 N R 24 E S 6 B T.

A yellow pine, 10 ins. diam., bears S. 23 3/4° W., 42 lks. dist.,
mkd. T 1 N R 23 E S 1 B T.

A yellow pine, 10 ins. diam., bears N. 75 3/4° W., 21 lks. dist.,
mkd. T 2 N R 23 E S 36 B T.

Land, rolling.

Soil, rocky; 3rd rate.

Timber, scattering pine, fir, cedar and juniper; undergrowth,
scrub oak, catclaw and cactus.

EAST BOUNDARY OF T.2 N.,R.23 E.

Beginning at the cor. of Tps. 1 and 2 N., Rs. 23 and 24 E.

North, along the E. bdy. of sec. 31.

Over rolling land, through scattering timber and under-
growth.

Descend 23 ft. over NE. slope.

4.10 Squaw Creek, 10 lks. wide, course W.; in wash 100 lks. wide.

Ascend 29 ft. over SW. slope.

10.00 Thence along W. slope.

18.50 Descend 92 ft. over NW. slope.

26.00 Bend in Squaw Creek, bears W. about 200 lks. dist.

37.75 Squaw Creek, 10 lks. wide, in wash 100 lks. wide, course NE.

Chains 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., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. with brass cap marked.

$\frac{1}{4}$ S36

1931

from which

A yellow pine, 36 ins. diam.; bears N. $35\frac{3}{4}^{\circ}$ W., 20 lks. dist.,
Mkd. $\frac{1}{4}$ S 36 B T.

A yellow pine, 20 ins. diam.; bears S. $19\frac{3}{4}^{\circ}$ W., 60 lks. dist.,
mkd. $\frac{1}{4}$ S 36 B T.

40.07 Wire fence, bears S. 65° E and N. 65° W.

45.43 Trail, bears SE. and NW.

48.60 Wash, 20 lks. wide, course E.; asc. 61 ft. over S. slope.

57.00 Top of ascent.; desc. 89 ft. over NE. slope.

61.30 Thence along W. rim of Clover Creek Canyon.

74.00 Leave rim, bears S. and NW.; desc. 75 ft. over NE. slope.

Diff. bet. meas. of 79.50 chs., by two sets of chainmen, is nothing.

79.50 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for witness cor. of secs. 25 and 36 only, with brass cap marked.

WC

T2N

R23E

S25

S36

1931

from which

A yellow pine, 48 ins. diam., bears S. 67° W., 79 lks. dist.,
mkd. W C T 2 N R 23 E S 36 B T.

A yellow pine, 12 ins. diam., bears N. $70\frac{3}{4}^{\circ}$ W., 262 lks. dist.,
mkd. W C T 2 N R 23 E S 25 B T.

80.00 True point for cor. of secs. 25 and 36, falls in Clover Creek wash, 100 lks. wide, course NW.

Land, rolling.

Soil, sandy and gravelly; 2nd and 3rd rates.

Timber, pine, fir, cedar, and juniper; undergrowth, scrub oak, willow, manzanita and cactus.

North, along the E. bdy. of sec. 25.

Over rolling land, through scattering timber and undergrowth.

0.75 Clover Creek, 10 lks. wide, course NW.; in wash 100 lks. wide.

1.80 Trail, bears SE. and NW.

13.00 Concrete trough at Indian Springs, bears W. about 200 lks. dist.; asc. 59 ft. over SW. slope.

15.00 E. rim of Clover Creek Canyon, bears SE. and NW.

25.20 Gulch, course SW.; asc. 107 ft. over SE. 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., 6 ins. in the ground to bedrock, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor.

Chains. of sec.25 only, with brass cap marked.

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

1931

from which

A white oak, 10 ins. diam., bears N. $78\frac{1}{4}^{\circ}$ W., 66 lks. dist.,
mkd. $\frac{1}{4}$ S 25 B T.

A yellow pine, 10 ins. diam., bears S. $69\frac{1}{2}^{\circ}$ W., 120 lks. dist.,
mkd. $\frac{1}{4}$ S 25 B T.

Ascend 35 ft. over SE. slope.

47.30 Spur, slopes SW.; desc. 20 ft. over NW. slope.

52.30 Head of draw, course SW.; continue along W. slope.

56.37 Trail, bears NE. and SW.

62.30 Draw, course SW.; asc. 79 ft. over SE. 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., 12 ins. in the
ground to bedrock and in a mound of stone to top, for
cor. of secs. 24 and 25 only, with brass cap marked.

$$\begin{array}{r} T2N \\ R23E \\ \hline S24 \\ \hline S25 \end{array}$$

1931

from which

A yellow pine, 18 ins. diam., bears S. $56\frac{1}{4}^{\circ}$ W., 81 lks. dist.,
mkd. T 2 N R 23 E S 25 B T.

A juniper, 40 ins. diam., bears N. 42° W., 217 lks. dist.,
mkd. T 2 N R 23 E S 24 B T.

Land, rolling.

Soil, sandy and rocky; 2nd and 4th rates,

Timber, pine, fir, cedar, oak and juniper; undergrowth, scrub
oak, mahogany, willow and grass.

North, along the E. bdy. of sec. 24.

Over rolling land, through scattering timber and under-
growth.

Ascend 79 ft. over SE. slope.

15.00 Thence continue over level land.

15.02 Trail, bears SE. and NW.

19.70 Same trail, bears NE. and SW.

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., 26 ins. in the ground
for $\frac{1}{4}$ sec. cor. of sec. 24 only, with brass cap marked.

$$\frac{1}{4} S24$$

1931

from which

Chains. A juniper, 36 ins. diam., bears S. 38° W., 111 lks. dist.,
mkd. S 24 B T.

A juniper, 36 ins. diam., bears N. 39° E., 116 lks. dist.,
mkd. S 24 B T.

Continue over level mesa land.

50.00 Ascend 51 ft. over gradual S. 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

50.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the
ground, for cor. of secs. 13 and 24, only, with brass cap
marked.

T22
123
S13
S24
1931.

from which

A juniper, 30 ins. diam., bears S. 53° W., 102 lks. dist.,
mkd. S 24 B T.

A juniper, 50 ins. diam., bears N. 67° E., 219 lks. dist.,
mkd. S 24 B T.

Land, rolling.

Soil, clay and sandy; 2nd rate.

Timber, scattering pine, juniper, oak and fir; undergrowth,
scrub oak.

North, along the E. bdy. of sec. 15.

Over rolling mesa land, through scattering timber and
undergrowth.

Ascend 59 ft. over gradual S. slope.

50.00 Ridge, bears SE. and NW.; desc. 28 ft. over NE. 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., 36 ins. in the ground
for S. sec. cor. of sec. 13 only, with brass cap marked.

S 13
1931

from which

A juniper, 36 ins. diam., bears S. 30° W., 83 lks. dist., mkd.
S 13 B T.

A white oak, 12 ins. diam., bears N. 12½° W., 240 lks. dist.,
mkd. S 13 B T.

Descend 141 ft. over gradual S. slope.

60.00 Head of draw, course N.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is
4 lks.; position of middle point-

By 1st set, 80.03 chs.

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

Chains.
80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for cor. of secs. 12 and 13 only, with brass cap marked.

T2N
R23E
S12
S13
1931

from which

A juniper, 30 ins diam., bears S. 18¹/₄° W., 550 lks. dist., mkd. T 2 N R 23 E S 13 B T.

A juniper, 20 ins. diam., bears N. 11³/₄° W., 141 lks. dist., mkd. T 2 N R 23 E S 12 B T.

Land, rolling.
Soil, sandy loam and gravelly; 1st and 3rd rates.
Timber, scattering pine, oak, juniper and fir; undergrowth, scrub oak and grass.

North, along the E. bdy. of sec. 12.

Over rolling land, through scattering timber and undergrowth.

Descend 148 ft. over gradual NE. slope.

39.50 Draw, course NW.

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., 26 ins. in the ground, for ¹/₄ sec. cor. of sec. 12 only, with brass cap marked.

¹/₄ S 12.
1931

from which

A juniper, 12 ins. diam., bears S. 1³/₄° W., 341 lks. dist., mkd. ¹/₄ S 12 B T.

A juniper, 30 ins. diam., bears N. 14¹/₂° W., 448 lks. dist., mkd. ¹/₄ S 12 B T.

Ascend 81 ft. over gradual SW. slope.

74.00 Ridge, bears SE. and NW.; desc. 20 ft. over NE. slope.

74.55 Wire fence, bears N. 13³/₄° E., and S. 13³/₄° W.

78.80 Wire fence, bears SE. and NW.

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 cor. of secs. 1 and 12 only, with brass cap marked.

T2N
R23E
S 1
S12
1931

from which

A white oak, 18 ins. diam., bears S. 35³/₄° W., 180 lks. dist., mkd. T 2 N R 23 E S 12 B T.

EAST BOUNDARY OF T.2 N., R.23 E.

Chains. A juniper, 48 ins. diam., bears N. 63 1/2 W., 43 lks. dist., mkd. T 2 N R 23 E S 1 B T.

Land, rolling. Soil, sandy loam and gravelly; 2nd and 3rd rates. Timber, scattering pine, oak and juniper; undergrowth, scrub oak and grass.

North, along the E. bdy. of sec. 1.

Over rolling land, through scattering timber and undergrowth.

Descend 133 ft. over gradual NE. slope.

6.70 Wire fence, bears NE. and SW.

14.00 Draw, course NE.; asc. 6 ft. 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

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

1/4 S 1

1931

from which

A juniper, 30 ins. diam., bears S. 41° W., 75 lks. dist., mkd. 1/4 S 1 B T.

A juniper, 36 ins. diam., bears N. 47° W., 140 lks. dist., mkd. 1/4 S 1 B T.

44.00 Low spur, slopes E.; desc. 103 ft. over NE. slope.

62.25 Wash, 50 lks. wide, course N. 70 W.; asc. 74 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, 3 ins. diam., 16 ins. in the ground to bedrock, and in a mound of stone to top, for cor. of secs. 1 and 36 of Tps. 2 and 3 N., R. 23 E., with brass cap marked.

T3N

R23E

S36

S 1

T2N

1931

from which

A juniper, 24 ins. diam., bears S. 17° W., 457 lks. dist., mkd. T 2 N R 23 E S 1 B T.

A juniper, 36 ins. diam., bears N. 14° W., 131 lks. dist., mkd. T 3 N R 23 E S 36 B T.

Land, rolling. Soil, sandy loam and gravelly; 2nd and 3rd rates. Timber, scattering pine, oak and juniper; undergrowth, scrub oak and grass.

- Chains Beginning at the cor. of Tps. 2 and 3 N., R. 23 E.
 North, along the E. bdy. of sec. 36.
 Over rolling land, through scattering timber and undergrowth.
 Ascend 75 ft. over rocky SW. slope.
 20.00 Ridge, bears SE. and NW.; desc. 58 ft. over NE. 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., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. of sec. 36 only, with brass cap marked.

$\frac{1}{4}$ S 36
 1931

from which

A juniper, 24 ins. diam., bears S. 27 $\frac{1}{2}$ ° W., 140 lks. dist., mkd. $\frac{1}{4}$ S 36 B T.

A juniper, 8 ins. diam., bears N. 13° W., 82 lks. dist., mkd. $\frac{1}{4}$ S 36 B T.

- Ascend 18 ft. over gradual SE. slope.
 65.00 Ridge, bears E. and W.; desc. 481 ft. over N. slope.
 Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is 6 lks.; position of middle point-
 By 1st set, 80.03 chs.
 By 2nd set, 79.97 chs.; the mean of which is
 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 26 ins. in the ground, for cor. of secs. 25 and 36 only, with brass cap marked.

T3N
 R23E
 S25
 S36
 1931

from which

A white oak, 12 ins. diam., bears S. 82° W., 48 lks. dist., mkd. T 3 N R 23 E S 36 B T.

A yellow pine, 10 ins. diam., bears N. 84 $\frac{1}{2}$ ° W., 64 lks. dist., mkd. T 3 N R 23 E S 25 B T.

Land, rolling.
 Soil, sandy loam and gravelly; 2nd and 3rd rates.
 Timber, scattering pine, fir, oak and juniper; undergrowth, scrub oak, catclaw and grass.

North, along the E. bdy. of sec. 25.

- Over mountainous land, through scattering timber and undergrowth.
 .60 Left bank of Black River, course W.
 2.80 Right bank of Black River, course SW.; asc. 325 ft. over steep S. slope.

Chains.

- 8.80 Trail, bears NE. and SW., on spur sloping W.
 21.80 Spur, slopes NW.; desc. 133 ft. over NW. slope.
 30.90 Gulch, course SW.; asc. 203 ft. over SE. slope.
 39.50 Rim of Black River Canyon, bears NE. and SW.; continue over rolling mesa land.

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., 26 ins. in the ground for $\frac{1}{4}$ sec. cor. of sec. 25 only, with brass cap marked.

$\frac{1}{4}$ S 25
 1931

from which

A cedar, 10 ins. diam., bears S. 72° W., 93 lks. dist., mkd.
 $\frac{1}{4}$ S 25 B T.

A juniper, 24 ins. diam., bears N. 20° W., 51 lks. dist., mkd.
 $\frac{1}{4}$ S 25 B T.

- Ascend 21 ft. over S. slope.
 48.00 Spur, slopes W.; desc. 124 ft. over NW. slope.
 54.70 S. rim of deep canyon, bears NE. and SW.; desc. 72 ft. over NW. slope.
 64.85 Top of cliff, 40 ft. high.
 66.28 Gulch, course SW.; asc. 255 ft. over SE. slope.
 76.70 N. rim of deep canyon, bears NE. and SW.; continue over mesa land.

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, and in a mound of stone to top, for cor. of secs. 24 and 25 only, with brass cap marked.

T3N
 R23E
 S24
 S25
 1931

from which

A juniper, 18 ins. diam., bears S. 36 $\frac{3}{4}$ ° W., 65 lks. dist., mkd. T 3 N R 23 E S 25 B T.

A white oak, 10 ins. diam., bears N. 34 $\frac{1}{2}$ ° W., 104 lks. dist., mkd. T 3 N R 23 E S 24 B T.

Land, mountainous.
 Soil, gravelly; 3rd rate.
 Timber, scattering cedar, pine, oak and juniper; undergrowth, scrub oak, maple, willow and grass.

North, along the E. bdy. of sec. 24.

Over rolling mesa land, through scattering timber and undergrowth.

Diff. bet. meas. of 40.00 chs., by two sets of chainmen, is nothing.

Chains.

40.00 Set an iron post, 3 ft. long, 1 in. diam., 10 ins. in the ground, to bedrock, and in a mound of stone to top, for 1/4 sec. cor. of sec. 24 only, with brass cap marked.

1/4 S 24

1931

from which

A juniper, 24 ins. diam., bears S. 65 3/4 W., 111 lks. dist., mkd. 1/4 S 24 B T.

A white oak, 12 ins. diam., bears N. 39 3/4 W., 156 lks. dist., mkd. 1/4 S 24 B T.

61.00 Leave scattering timber.; enter prairie land.

72.70 Trail, bears SE. and NW.

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 cor. of secs. 13 and 24 only, with brass cap marked.

T3N
R23E
S13
S24

1931

from which

A juniper, 24 ins. diam., bears N. 37 W., 1283 lks. dist., mkd. T 3 N R 23 E S 13 B T.

A juniper, 18 ins. diam., bears N. 21 1/2 W., 1037 lks. dist., mkd. T 3 N R 23 E S 13 B T.

Land, rolling.

Soil, sandy loam and gravelly; 2nd and 3rd rates.

Timber, scattering pine, oak, cedar and juniper; undergrowth, scrub oak and grass.

North, along the E. bdy. of sec. 13.

Over rolling mesa land, through scattering timber and undergrowth.

19.00 Enter scattering timber.

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., 26 ins. in the ground, for 1/4 sec. cor. of sec. 13 only, with brass cap marked.

1/4 S 13

1931

from which

A juniper, 6 ins. diam., bears S. 43 W., 205 lks. dist., mkd. 1/4 S 13 B T.

A juniper, 18 ins. diam., bears N. 74 1/4 W., 60 lks. dist., mkd. 1/4 S 13 B T.

Chains

- 52.70 S.rim of gulch, bears E. and W.; desc. 188 ft. over N. slope.
 54.32 Trail, bears NE. and SW.
 61.56 Gulch, course W.; asc. 206 ft. over steep S. slope.
 67.00 N.rim of gulch, bears NE. and SW.
 78.00 S.rim of Bonito Canyon, bears NE. and SW.; desc. 60 ft. over NW. slope.

Diff. bet. meas. of 79.75 chs., by two sets of chainmen, is
 2 lks.; position of middle point-
 By 1st set, 79.76 chs.
 By 2nd set, 79.74 chs., the mean of which is

- 79.75 Set an iron post, 3 ft. long, 2 ins. diam., 12 ins. in the ground to bedrock, and in a mound of stone to top, for witness cor. of secs. 12 and 13, only, with brass cap marked.

WC
 T3N
 R23E |
 S12 |
 S13 |
 1931

from which

A yellow pine, 12 ins. diam., bears S. $34\frac{1}{2}^{\circ}$ W., 37 lks. dist.,
 mkd. W C T 3 N R 23 E S 13 B T.

A yellow pine, 8 ins. diam., bears N. $21\frac{3}{4}^{\circ}$ W., 90 lks. dist.,
 mkd. W C T 3 N R 23 E S 12 B T.

- 80.00 True point for cor. of secs. 12 and 13, falls on edge of cliff 20 ft. high.

Land, rolling and mountainous.
 Soil, sandy loam and rocky; 2nd and 3rd rates.
 Timber, scattering pine, fir, pinon, cedar and oak; undergrowth,
 scrub oak and willow.

North, along the E. bdy. of sec. 12.

Over mountainous land, through scattering timber and dense undergrowth.

- Descend 257 ft. over rocky NW. slope.
 18.28 Left bank of Bonito Creek, course SW.
 19.70 Right bank of Bonito Creek.
 21.38 Wire fence, bears SE. and NW.; asc. 79 ft. over SE. slope. through dense undergrowth.

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., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. of sec. 12 only, with brass cap marked.

$\frac{1}{4}$ S 12 |
 1931

from which

A white oak, 10 ins. diam., bears S. $24\frac{1}{2}^{\circ}$ W., 63 lks. dist.,
 mkd. $\frac{1}{4}$ S 12 B T.

A white oak, 14 ins. diam., bears S. $46\frac{1}{4}^{\circ}$ W., 49 lks. dist.,
 mkd. $\frac{1}{4}$ S 12 B T.

- 55.30 Continue ascending 272 ft. over SE. slope.
 N.rim of Bonito Canyon, bears NE. and SW.

- Chains Continue over rolling mesa land.
- 68.53 Trail, bears NE. and SW.
- 69.27 Wire fence, bears NE. and SW.
- 75.00 Leave timber and undergrowth; continue over open prairie land.

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., 26 ins. in the ground, for cor. of secs. 1 and 12 only, with brass cap marked.

T3N
 R23E
 S. 1
 S12
 1931

from which

A juniper, 10 ins. diam., bears S. 12 $\frac{1}{2}$ ° W., 385 lks. dist.,
 mkd. T 3 N R 23 E S 12 B T.

A juniper, 12 ins. diam., bears S. 25 $\frac{1}{2}$ ° E., 195 lks. dist.,
 mkd. B T only.

Land, mountainous.
 Soil, gravelly; 3rd rate.
 Timber, scattering pine, fir, oak, cedar and pinon; undergrowth,
 scrub oak, willow, alder and manzanita.

North, along the E. bdy. of sec. 1

Over rolling prairie land.
 Ascend 61 ft. over gradual S. 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., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. of sec. 1 only, with brass cap marked.

$\frac{1}{4}$ S 1
 1931

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

- 51.40 Old road, bears NE. and SW.
- 60.00 Descend 12 ft. over gradual 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, 3 ins. diam., 14 ins. in the ground to bedrock, and in a mound of stone to top, for cor. of secs. 1 and 36, Tps. 3 and 4 N., R. 23 E., only, with brass cap marked.

T4N
 R23E
 S36
 S 1
 T3N
 1931

EAST BOUNDARY OF T.3 N.,R.23 E.

EC

Chains. Land, rolling.
Soil, sandy loam and gravelly; 2nd and 3rd rates.
Timber, none; undergrowth, grass.

EAST BOUNDARY OF T.4 N.,R.23 E.

Beginning at the cor. of Tps. 3 and 4 N., R. 23 E.

North, along the E. bdy. of sec. 36.

Over rolling prairie land.

2.90 Wash, 10 lks. wide, course SW.; asc. 86 ft. over gradual S. 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., 26 ins. in the ground, for 1/4 sec. cor. of sec. 36 only, with brass cap marked.

1/4 S 36
1931

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

Continue over rolling prairie land.

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 cor. of secs. 25 and 36 only, with brass cap marked.

T4N
R23E
S25
S36
1931

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

Land, rolling.
Soil, sandy loam and gravelly; 2nd and 3rd rates.
Timber, none; undergrowth, grass.

North, along the E. bdy. of sec. 25.

Over rolling prairie land.

Ascend 30 ft. over gradual S. 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., 26 ins. in the ground, for 1/4 sec. cor. of sec. 25 only, with brass cap marked.

1/4 S 25
1931

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

High peak, bears S. 63 1/4 W.

Ascend 14 ft. over gradual SW. slope.

Chains

- 42.50 Wash, 10 lks. wide, course SW.
 64.12 Telephone line, bears SE. and NW.
 64.40 Road, bears SE. and NW.
 65.06 Wire fence, bears SE. and NW.

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 cor. of secs. 24 and 25 only, with brass cap marked.

T4N
 R23E
 S24
 S25
 1931

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

Land, rolling.

Soil, sandy loam, and gravelly; 2nd and 3rd rates.
 Timber, none; undergrowth, grass.

North, along the E. bdy. of sec. 24.

Over rolling prairie land.

Descend 6 ft. over N. slope.

- 5.60 Wash, 30 lks. wide, course SW.; asc. 17 ft. over S. slope.
 15.00 Road, bears E. and W.
 25.00 Ridge, bears E. and W.; desc. 60 ft. over NW. slope.
 29.10 Wire fence, bears NE. and SW.; leave prairie land; enter heavy timber and undergrowth.
 34.80 Wash, 50 lks. wide, course SW.; asc. 89 ft. over SE. 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., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor. of sec. 24 only, with brass cap marked.

$\frac{1}{4}$ S 24
 1931

from which

A white oak, 10 ins. diam., bears S. 40° W., 95 lks. dist., mkd. $\frac{1}{4}$ S 24 B T.

A white oak, 8 ins. diam., bears N. $26^{\frac{3}{4}}$ W., 21 lks. dist., mkd. $\frac{1}{4}$ S 24 B T.

Ascend 127 ft. over SE. slope.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is 4 lks. dist.; 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., 26 ins. in the ground, for cor. of secs. 13 and 24 only, with brass cap marked.

Chains.

T4N
R23E
S13
S24
1931

from which

A juniper, 18 ins. diam., bears S.40 $\frac{1}{2}$ ^c W., 121 lks. dist.,
mkd. T. 4 N R 23 E S 24 B T.

A juniper, 36 ins. diam., bears N.77 $\frac{1}{2}$ ^c W., 527 lks. dist.,
mkd. T 4 N R 23 E S 13 B T.

Land, rolling.

Soil, sandy loam and gravelly; 2nd and 3rd rates.

Timber, pine, fir, cedar, oak, pinon and juniper; undergrowth,
scrub oak, alder, manzanita, locust, mahogany and grass.

North, along the E. bdy. of sec. 13.

Over rolling land through scattering timber and undergrowth.

15.00 Descend 85 ft. over NE. slope.

24.60 Fence, bears SE. and NW.

33.30 Fence, bears W. and NE.; enter small pasture and garden.

34.79 Creek, 5 lks. wide, course W.

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., 30 ins. in the ground,
for $\frac{1}{4}$ sec. cor. of sec. 13 only, with brass cap marked.

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

1931

from which

A white oak, 8 ins. diam., bears N.20 $\frac{1}{2}$ ^c W., 220 lks. dist.,
mkd. $\frac{1}{4}$ S 13 B T.

A white oak, 10 ins. diam., bears N.63^c W., 237 lks. dist.,
mkd. $\frac{1}{4}$ S 13 B T.

41.95 Wire fence, bears NE. and SW.; leave pasture; asc. 75 ft. over
SE. slope.

61.30 SW. cor. of house, bears N.65 $\frac{1}{2}$ E. about 10 chs. dist.

64.10 Road, bears SE. and NW.

65.53 Same house, bears E. about 9 chs. dist.

69.80 Road, bears SE. and NW.

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., 15 ins. in the
ground to bedrock, and in a mound of stone to top, for
cor. of secs. 12 and 13 only, with brass cap marked.

T4N
R23E
S12
S13

1931

from which

- Chains
- A yellow pine, 8 ins. diam., bears S. 7° W., 41 lks. dist., mkd. T 4 N R 23 E S 13 B T.
 - A yellow pine, 28 ins. diam., bears N. 59° W., 115 lks. dist., mkd. T 4 N R 23 E S 12 B T.

Land, rolling.
 Soil, sandy loam and gravelly; 2nd and 3rd rates.
 Timber, scattering pine, pinon, oak, cedar and juniper; undergrowth manzanita, white thorn, locust and scrub oak.

North, along the E. bdy. of sec. 12.

- Over rolling land, through heavy timber and undergrowth.
- 1.70 Road, bears NE. and SW.
- 5.80 Wash, 20 lks. wide, course S. 45° W.
- 14.20 Same wash, course SE.
- 31.60 Same wash, course SW.
- 37.30 Same wash, course SE.

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., 16 ins. in the ground to bedrock, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked.

$\frac{1}{4}$ S 12
1931

from which

- A yellow pine, 6 ins. diam., bears S. 36 $\frac{3}{4}$ ° W., 73 lks. dist., mkd. $\frac{1}{4}$ S 12 B T.
- A yellow pine, 24 ins. diam., bears N. 41 $\frac{1}{2}$ ° W., 71 lks. dist., mkd. $\frac{1}{4}$ S 12 B T.

- 46.10 Same wash, course SW.
- 66.20 Same wash, course SE.; asc. 68 ft. over SE. 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 chs.; the mean of which is

- 80.00 Set an iron post, 3 ft. long, 2 ins. diam., 28 ins. in the ground, for cor. of secs. 1 and 12 only, with brass cap marked.

T4N
R23E
S 1
S12
1931

from which

- A pinon, 14 ins. diam., bears N. 77 $\frac{3}{4}$ ° W., 32 lks. dist., mkd. T 4 N R 23 E S 1 B T.
- A juniper, 15 ins. diam., bears S. 35 $\frac{3}{4}$ ° W., 36 lks. dist., mkd. T 4 N R 23 E S 12 B T.

Land, rolling.
 Soil, sandy and rocky; 2nd and 3rd rates.
 Timber, pine, cedar, pinon, oak and juniper; undergrowth, scrub oak, manzanita, maple, white thorn and alder.

Chains North, along the E. bdy. of sec. 1.

Over mountainous land, through heavy timber and undergrowth.

- 26.40 Draw, course E.; asc. 64 ft. over SE. slope.
- 33.83 Small drain, course SE.

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., 12 ins. in the ground to bedrock, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor. with brass cap marked.

$\frac{1}{4}$ S 1
 . 1931

from which

- A pinon, 12 ins. diam., bears S. $73\frac{1}{2}^{\circ}$ W., 141 lks. dist., mkd. $\frac{1}{4}$ S 1 B T.
- A juniper, 8 ins. diam., bears N. $50\frac{1}{2}^{\circ}$ W., 38 lks. dist., mkd. $\frac{1}{4}$ S 1 B T.

- 49.40 Descend 42 ft. over gradual N. slope.
- 57.00 Ravine, course E.; asc. 56 ft. over S. slope.
- 57.00 Spur, slopes SE.; desc. 14 ft. over NE. slope.
- 60.00 Head of ravine, course E.

Diff. bet. meas. of 80.00 chs., by two sets of chainmen, is nothing.

- 80.00 Set an iron post, 3 ft. long, 3 ins. diam., 6 ins. in the ground to bedrock, and in a mound of stone to top, for cor. of secs. 1 and 36, Tps. 4 and 4 $\frac{1}{2}$ N., R. 23 E., with brass cap marked.

T4 $\frac{1}{2}$ N
 R23E
 S36
 S. 1
 T4N
 1931

from which

- A yellow pine, 18 ins. diam., bears S. $46\frac{1}{2}^{\circ}$ W., 66 lks. dist., mkd. T 4 N R 23 E S 1 B T.
- A juniper, 18 ins. diam., bears N. $49\frac{1}{2}^{\circ}$ W., 107 lks. dist., mkd. T 4 $\frac{1}{2}$ N R 23 E S 36 B T.

Land, mountainous.
 Soil, gravelly; 3rd rate.
 Timber, pine, oak, fir, cedar, pinon and juniper; undergrowth, manzanita, scrub oak, maple, willow, white thorn and mahogany.

FINAL TEST OF SOLAR ATTACHMENT.

May 17; at camp near the $\frac{1}{4}$ sec. cor of sec. 25, T. 4 N., R. 23 E. bisect Polaris, follow the motion of the star to eastern elongation, at 4h 02m 06s a.m., app. t., and mark the direction upon a peg driven firmly in the ground 10 chs. N.; then reverse the instrument, and again bisect Polaris, and mark the direction upon the peg. Without changing the instrument in horizontal motion, sight Polaris to make certain that the settings were made at elongation; there appeared to be no deviation in azimuth for some 15 or 20 minutes.

After sunrise, lay off the azimuth of Polaris $1^{\circ} 17'$ to the west of the meridian.

May 19; at camp on the meridian established by Polaris, hereinbefore described; at 7h 20m 00s a.m., app. t., set off $33^{\circ} 39\frac{1}{2}'$ N., on the lat. arc; $19^{\circ} 39\frac{1}{2}'$ N., on the decl. arc; and orient the instrument with the solar; the line of sight agrees with the meridian established by Polaris observation. At 4h 15m 00s p.m., app. t., set off $33^{\circ} 39\frac{1}{2}'$ N., on the lat. arc; $19^{\circ} 44\frac{1}{2}'$ N., on the decl. arc; and repeat the test of the solar, which agrees within 30" of the meridian established by Polaris observation.

GENERAL DESCRIPTION.

A considerable variety of land and soil are found along the Gila and Salt River Base Line, through Tps. 1 N., Rs. 19 to 23 E., incl., the general elevation is about 4500 ft. above sea level. The soil is sandy loam and clay, and through portions of the Base line, covered with volcanic stones. The timber is scattering juniper, oak and hackberry; the undergrowth, is scattering scrub oak, manzanita, chamisal mahogany and cactus.

The east portion of T. 1 N., R. 23 E., from the standard $\frac{1}{4}$ sec. cor. of sec. 34, is rough mountainous land, covered with scattering pine, fir, cedar, pinon and oak; the undergrowth, is dense scrub oak, manzanita, chamisal, mahogany, catclaw, willow and cactus.

The range line, through T. 1 N., R. 23 E., is rough mountainous land, covered with scattering pine, fir, oak, cedar, juniper, pinon and hackberry; the undergrowth is scrub oak, manzanita, chamisal, scrub oak, and willow. Through Tps. 2 to 4 N., R. 23 E., is rolling mesa land, covered with scattering yellow pine, oak and juniper; the soil is sandy loam, covered with volcanic stones. Black River crosses the range line, near the cor. of secs. 25 and 36, T. 3 N., R. 23 E. Bonito Creek, crosses the range line, near the cor. of secs. 12 and 13, T. 3 N., R. 23 E. The land along the Base line, and the range line, is generally used for grazing purposes.

BOOK 3932

CERTIFICATE OF UNITED STATES SURVEYOR

I, William E. Hiester, U. S. Surveyor, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer, for Group 165 Arizona bearing date of the 16th day of October, 1930, I have well, faithfully, and truly in my own proper person, and in strict conformity with said instructions, the Manual of Surveying Instructions, and the laws of the United States, surveyed all those parts or portions of the Gila and Salt River Base Line thru Ranges 19, 20, 21, 22, and 23 East and the East Boundaries of T.1 N., R.23 E., T.2 N., R.23 E., T.3 N., R.23 E., and T.4 N., R.23 E. of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes ^{and by diagram on page 2 hereof} as having been executed by me, and under my direction; and that all the corners of said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the District Cadastral Engineer, for Group 165 Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such survey.

Place: Phoenix, Arizona.

William E. Hiester
U. S. Surveyor.

Date: November 16, 1931.

APPROVAL

OFFICE OF U. S. SUPERVISOR OF SURVEYS,
Denver, Colo., May 25, 1932

The foregoing field notes of the survey of the Gila and Salt River Base Line thru Ranges 19, 20, 21, 22 and 23 East and the East Boundaries of T.1 N., R.23 E., T.2 N., R.23 E., T.3 N., R.23 E., and T.4 N., R.23 E. of the Gila and Salt River Base and Meridian, in the State of Arizona

executed by William E. Hiester U.S. Surveyor under his special instructions dated Oct. 16, 1930 for Group 165 Arizona, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Samuel A. Johnson
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