

4-679
(April 1933)

BOOK 4160

FIELD NOTES

OF THE SURVEY OF

4160

PART OF THE SUBDIVISION LINES of,

and

TRAVERSE OF RIGHT RIM OF GLEN CANYON OF THE COLORADO RIVER

thru

FRAC. TOWNSHIP 42 NORTH, RANGE 9 EAST

Of the GILA AND SALT RIVER Meridian,

In the State of ARIZONA

EXECUTED BY

Benjamin J. Kinsey, Surveyor

4160

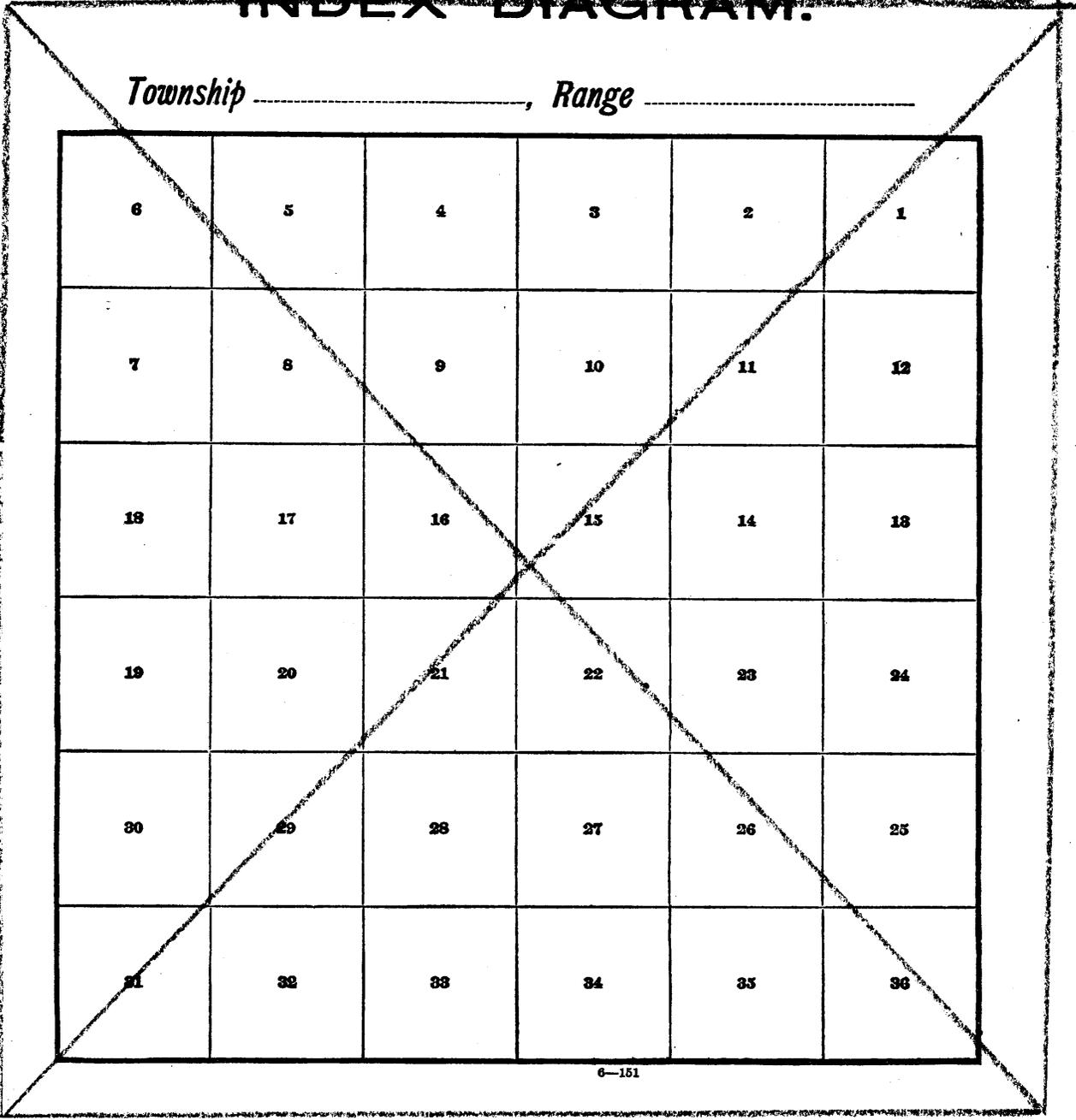
supplemental
Under special instructions dated March 27, 1936, which provided
for the surveys included under Group No 181, Arizona, bearing the approval of the
Commissioner of the General Land Office under date of July 24, 1936
and assignment instructions dated November 9, 1936

Survey commenced March 27, 1937

Survey completed March 28, 1937

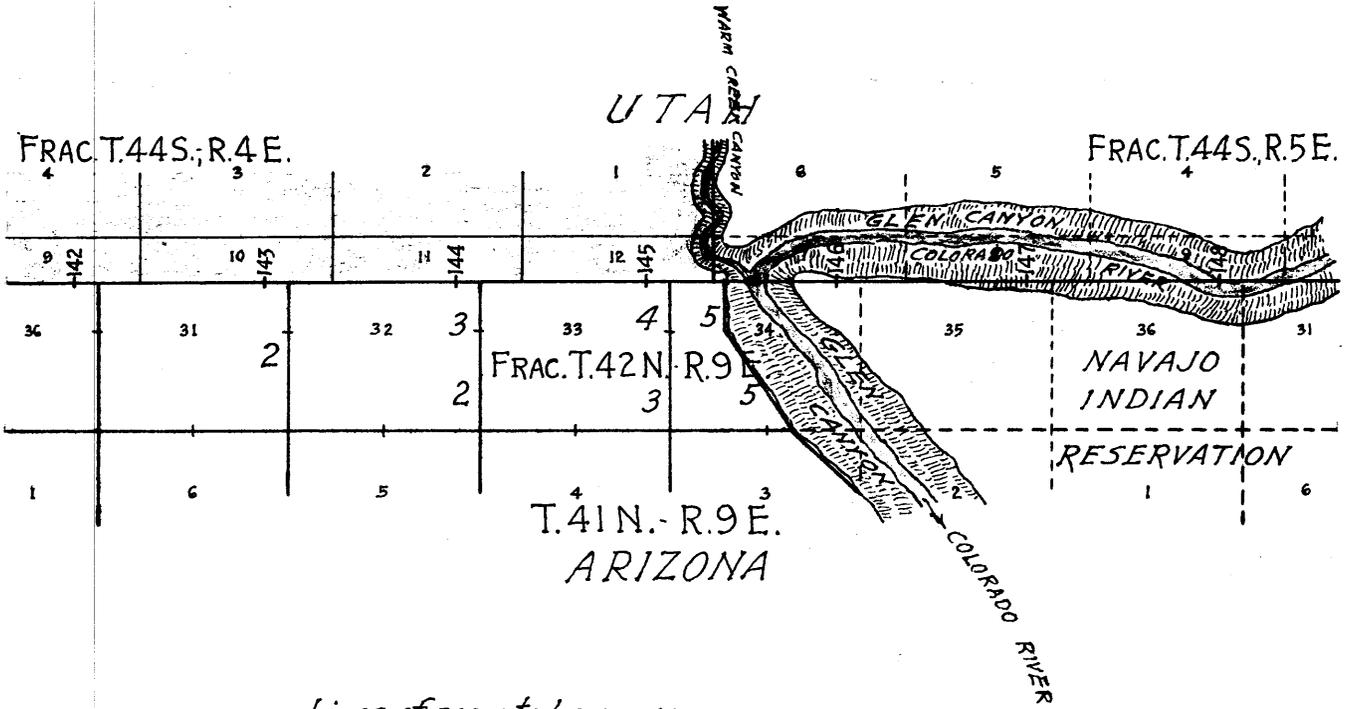
INDEX DIAGRAM.

Township _____, Range _____



~INDEX DIAGRAM~

LOCK 4160



————— Lines of accepted surveys.

- - - - - Unsurveyed lines.

————— Lines surveyed under this group (No. 181, Ariz.)

 Accepted, surveyed areas.

The surveys herein described were executed by Benjamin J. Kinsey, Surveyor, using Young and Son's transit No. 8570, which instrument is equipped with Smith solar attachment and otherwise conforms to the standard requirements of the General Land Office.

PRELIMINARY TEST OF INSTRUMENT

March 26, 1937: at station at cor. of Ts. 41 and 42 N., Rs. 8 and 9 E., in latitude $36^{\circ}59'21''$ N., longitude $111^{\circ}28'23''$ W., and on the meridian determined by Polaris observation at this station on March 20 and 21, 1937, as described in field notes of survey of T. 41 N., R. 9 E., test the solar apparatus of Young and Son's transit No. 8570 as follows:

At 9h. 00m., a.m., app.t., set off $36^{\circ}59\frac{1}{2}'$ N. on the lat. arc; $2^{\circ}14\frac{1}{2}'$ N. on the decl. arc; and determine a meridian with the solar, which agrees with the true meridian.

At app. noon, with the lat. arc unchanged, observe the sun on the meridian, and obtain a reading of $2^{\circ}17\frac{1}{2}'$ N. on the decl. arc, which agrees with the true meridian.

At 3h. 00m., p.m., app.t., with the lat. arc unchanged, set off $2^{\circ}20\frac{1}{2}'$ N. on the decl. arc, and determine a meridian with the solar, which agrees with the true meridian.

As all of the solar observations taken during the usual hours of solar work agree within 1' with the true meridian, conclude that this instrument is in satisfactory adjustment on this date.

Unless otherwise specified, all measurements recorded herein were made with a Lufkin steel tape, 5 chs. in length, which was compared with a Lufkin standard tape and found correct. The measurements were made on the slope, the vertical angles determined by a clinometer in good adjustment, and the slope measurements properly reduced to true horizontal values for entry in the field notes.

SURVEY: SUBDIVISION OF PART OF FRAC. T. 42 N., R. 9 E.

2.

Chains

From the cor. of secs. 5, 6, 31 and 32 on S. bdy. of the Tp., which is a brass-capped iron post, 2 ins. in diam. established under this group, as described in the field notes of the survey of part of T. 41 N., R. 9 E.

N. 0°01'E. bet. secs. 31 and 32.

Over gently rolling sandy land, thru scattering low undergrowth.

Desc. gradually over NW. slope.

7.30 Shallow draw, course West; asc. gradually over S. slope.

20.00 Low sand spur, slopes West; desc. gradually over NW. slope.

32.20 Shallow draw, course SW.; asc. gradually over S. slope to

40.00 Set an iron post, 3 ft. long, 1 in. in diam., on exposed sandstone surface rock, with a stone 4x4x3 ins., marked with a cross (+) deposited at base, and in a mound of stone to top, for $\frac{1}{4}$ sec. cor., with brass cap marked

$\frac{1}{4}$

S31 S32

1937

Continue over gently rolling sandy land, thru scattering low undergrowth; asc. gradually over S. slope to

61.46 Intersect the state boundary line bet. Utah and Arizona at a point 10.46 chs. East from the 143 mile monument thereon, which is an iron post, 2 ins. in diam., firmly set, projecting 3 ft. above ground, marked on brass cap and witnessed as described in the official record.

At point of intersection, set an iron post, 3 ft. long, 2 ins. in diam., 26 ins. in the ground, for closing corner of secs. 31 and 32, with brass cap marked

UTAH

S31 S32
T42N R9E

CC

1937

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

Land, gently rolling.

Soil, sandy and sandstone formations, 4th rate.

Timber, none.

Undergrowth, native weeds, sage, greasebrush and cacti.

From the cor. of secs. 4, 5, 32 and 33, on S. bdy. of the Tp. which is a brass-capped iron post, 2 ins. in diam., established under this group as described in the field notes of the survey of part of T. 41 N., R. 9 E.

N. 0°01'E. bet. secs. 32 and 33.

Over gently rolling sandy land thru scattering low undergrowth.

Asc. gradually over W. slope to

SURVEY: SUBDIVISION OF PART OF FRAC. T. 42 N., R. 9 E.

3

Chains

40.00

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

$\frac{1}{4}$
S32 | S33
1937

18x18x12 ins., N. and S. of cor., 3 ft. dist. dig pits

Desc. slightly over NW. slope.

41.50

Draw, course SW.; asc. gradually over SE. slope.

51.50

Low sand ridge, bears NE. and SW.; desc. gradually over NW. slope to

61.46

Intersect the State boundary line bet. Utah and Arizona at a point 10.31 chs. S. $89^{\circ}59'$ E. from the 144 mile monument thereon, which is a stone 24x12x6 ins. above ground, firmly set, marked and witnessed as described in the official record.

At point of intersection, set an iron post, 3 ft. long, 2 ins. in diam., 12 ins. in the ground to bedrock, with a stone 5x5x3 ins., marked with a cross (+) deposited at base, and in a mound of stone to top, for closing cor. of secs. 32 and 33, with brass cap marked

UTAH
S32 | S33
T42N | R9E
CC

1937

Land, gently rolling.

Soil, sandy and sandstone formations, 4th rate.

Timber, none.

Undergrowth, native weeds, sage, greasebrush and cacti.

From the cor. of secs. 3, 4, 33 and 34, on S. bdy. of the Tp. which is a brass-capped iron post, 2 ins. in diam., established under this group as described in the field notes of part of T. 41 N., R. 9 E.

N. $0^{\circ}02'$ E., bet. secs. 33 and 34.

Over narrow level bench, thru scattering low undergrowth.

3.25

Leave bench, brs. E. and W. Enter gently rolling land. Asc. 23 ft. over SE. slope.

10.00

Low ridge, bears E. and W., turns to NE. at about 5 chs. E. and to NW. at about 25 chs. W. Desc. 40 ft. over N. slope to

25.00

Rim of plateau. Leave gently rolling and enter broken and mountainous land. Desc. 146 ft. over sandstone cliffs on NW. slope.

36.35

Wash, 20 lks. wide, course NE. Leave mountainous and enter rolling land on bench, about 5 chs. E. from foot of steep slope from plateau. Desc. gradually over NE. slope to

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SURVEY: SUBDIVISION OF PART OF FRAC. T. 42 N., R. 9 E.

4.

Chains	
40.00	<p>Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., with brass cap marked</p> <p style="text-align: center;">$\frac{1}{4}$</p> <p style="text-align: center;">S33 S34</p> <p style="text-align: center;">1937</p> <p style="text-align: right;">dig pits</p> <p>18x18x12 ins., N. and S. of cor., 3 ft. dist.</p> <p>Continue over rolling land, on bench. Desc. 45 ft. over NE. slope to</p>
59.10	<p>Gulch, course NE.; asc. gradually over SE. slope to</p>
61.62	<p>Intersect the State boundary line bet. Utah and Arizona, at a point 10.29 chs. S. $89^{\circ}43'E.$ from the 145 mile monument thereon, which is a stone 14x10x8 ins. above ground, firmly set, marked and witnessed as described in the official record.</p> <p>At point of intersection, set an iron post, 3 ft. long, 2 ins. in diam., 12 ins. in the ground to bedrock, with a stone 4x4x3 ins., marked with a cross (+) deposited at base, and in a mound of stone to top, for closing cor. of secs. 33 and 34, with brass cap marked</p> <p style="text-align: center;">UTAH S33 S34 T42N R9E CC</p> <p style="text-align: center;">1937</p> <p>This closing cor. is on a rolling bench at foot of steep sandstone cliffs facing E., from rim of plateau, about 12 chs. W.</p> <p>Land, level, gently rolling, broken and mountainous. Soil, sandy and rocky sandstone formations, 4th rate. Timber, none. Undergrowth, native weeds, sage, greasebrush and cacti.</p>

TRAVERSE OF RIGHT RIM OF GLEN CANYON
of the COLORADO RIVER thru FRAC. T. 42 N., R. 9 E.
ARIZONA

BOOK 400

5.

From the closing cor. of secs. 33 and 34, Frac. T. 42 N., R. 9 E., chain measurement S. $89^{\circ}43'E$. (record bearing of 146th mile by retracement thereof in 1917 in connection with survey of Frac. T. 44 S., R. 4 E., S.L.B. M. Utah) 22.00 chs., over a rolling bench sloping NE. to intersection with the right rim of Glen Canyon of the Colorado River, at point where it is joined by the right rim of Warm Creek Canyon, at mouth of Warm Creek, course SE., and at bend of the Colorado River, course SE. from E.

At this point set temp. monument, thence

Traverse thru sec. 34.

Over rolling, broken and mountainous land, along right rim of Glen Canyon.

Bearing and measurement obtained by triangulation.

South 20.43 chs.; thence

S. $35^{\circ}15'E$., 50.30 chs. to temp. monument set at intersection of canyon rim with S. bdy. of Tp. at 51.07 chs. East from the cor. of secs. 3, 4, 33 and 34.

Land, rolling, broken and mountainous.

Soil, none, bare sandstone.

Timber, none.

Undergrowth, none.

GENERAL DESCRIPTION

The portion of Frac. T. 42 N., R. 9 E., surveyed as described in the foregoing field notes has an elevation of about 4,500 ft. above sea level, lying on a high plateau above Warm Creek Canyon and Glen Canyon of the Colorado River. The surface is gently rolling except in the E. part of sec. 33 and in sec. 34 near the Glen Canyon where it is broken by cliffs and sandstone ridges.

The soil is deep sand except in scattered areas where sandstone outcroppings occur.

No timber exists. The undergrowth consists of low native weeds, brigham sage, grease brush and cacti.

The land is suitable for grazing only, and it is now used for such purpose.

No settlers reside in this area, and there are no improvements.

There is no trace of valuable mineral deposits in this part of the township.

There is no permanent water, except in the Colorado River, which flows southeasterly in Glen Canyon thru sec. 34. Warm Creek, in a deep canyon, course southeasterly, flows into the Colorado River on the N. bdy. of sec. 34.

The center of the Colorado River, and the Utah-Arizona State Bdy. to the east thereof forms part of the boundary of the Navajo Indian Reservation; the portion of this fractional township situate East of the center of the Colorado River being within said reservation.

FINAL TEST OF INSTRUMENT.

March 28, 1937: at station at cor. of Ts. 41 and 42 N., Rs. 8 and 9 E., in latitude $36^{\circ}59'21''$ N., longitude $111^{\circ}28'23''$ W., and on the meridian determined by Polaris observation at this station on March 20 and 21, 1937, as described in field notes of survey of T. 41 N., R. 9 E., test the solar apparatus of Young and Son's transit No. 8570 as follows:

At 9h. 00m., a.m., app.t., set off $36^{\circ}59\frac{1}{2}'$ N. on the lat. arc; $2^{\circ}59\frac{1}{2}'$ N. on the decl. arc; and determine a meridian with the solar, which agrees with the true meridian.

At app. noon, with the lat. arc unchanged, observe the sun on the meridian and obtain a reading of $3^{\circ}04'$ N. on the decl. arc, which agrees with the computed declination of the sun.

At 3h. 00m., p.m., app.t., with the lat. arc unchanged, set off $3^{\circ}07\frac{1}{2}'$ N. on the decl. arc, and determine a meridian with the solar, which agrees with the true meridian.

As all of the solar observations taken during the usual hours of solar work agree within 1' with the true meridian, conclude that this instrument has remained in satisfactory adjustment throughout the surveys executed with same which are described in the foregoing field notes.

CERTIFICATE OF UNITED STATES SURVEYOR

I, Benjamin J. Kinsey, Surveyor, hereby certify upon honor that, in pursuance of supplemental special instructions received from the District Cadastral Engineer for Arizona

bearing date of the 27th day of March, 1936, 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

Subdivision Lines of and

Traverse of Right or West Rim of Glen Canyon of the Colorado River thru,

Frac. Township 42 North, Range 9 East of the Gila and Salt River Meridian, in the State of Arizona, which are represented in

the foregoing field notes as having been executed by me, 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 supplemental special written instructions of the District Cadastral Engineer for Arizona

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

Benjamin J. Kinsey, Surveyor.

Feb. 15, 1936. Phoenix, Arizona

APPROVAL

OFFICE OF SUPERVISOR OF SURVEYS,

Denver, Colorado, June 29, 1938

The foregoing field notes of the survey of

Part of the Subdivision Lines of and

Traverse of Right or West Rim of Glen Canyon of the Colorado River thru,

Frac. Township 42 North, Range 9 East

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

executed by Benjamin J. Kinsey, Surveyor supplemental under special instructions dated March 27, 1936, for Group 181, Arizona, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

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.

Supervisor of Surveys.