

FIELD NOTES

OF RESURVEY OF

Gila and Salt River Meridian

thru Part of T. 31 N.

Part of the North Boundary

and Part of the Subdivision Lines

of

Township 31 North - Range 1 West

Of the Gila and Salt River Base and Meridian,

In the State of ARIZONA

EXECUTED BY

Sidney E. Blout, U.S. Cadastral Engineer

In the capacity of U. S. Surveyor, under Special Instructions dated January 31, 1928, issued by the District Cadastral Engineer to govern surveys included in Group No. 145 Arizona, which were approved by the Commissioner of the General Land Office, February 16, 1928, and Assignment Instructions dated , 1928.

ReSurvey commenced October 22, 1928.

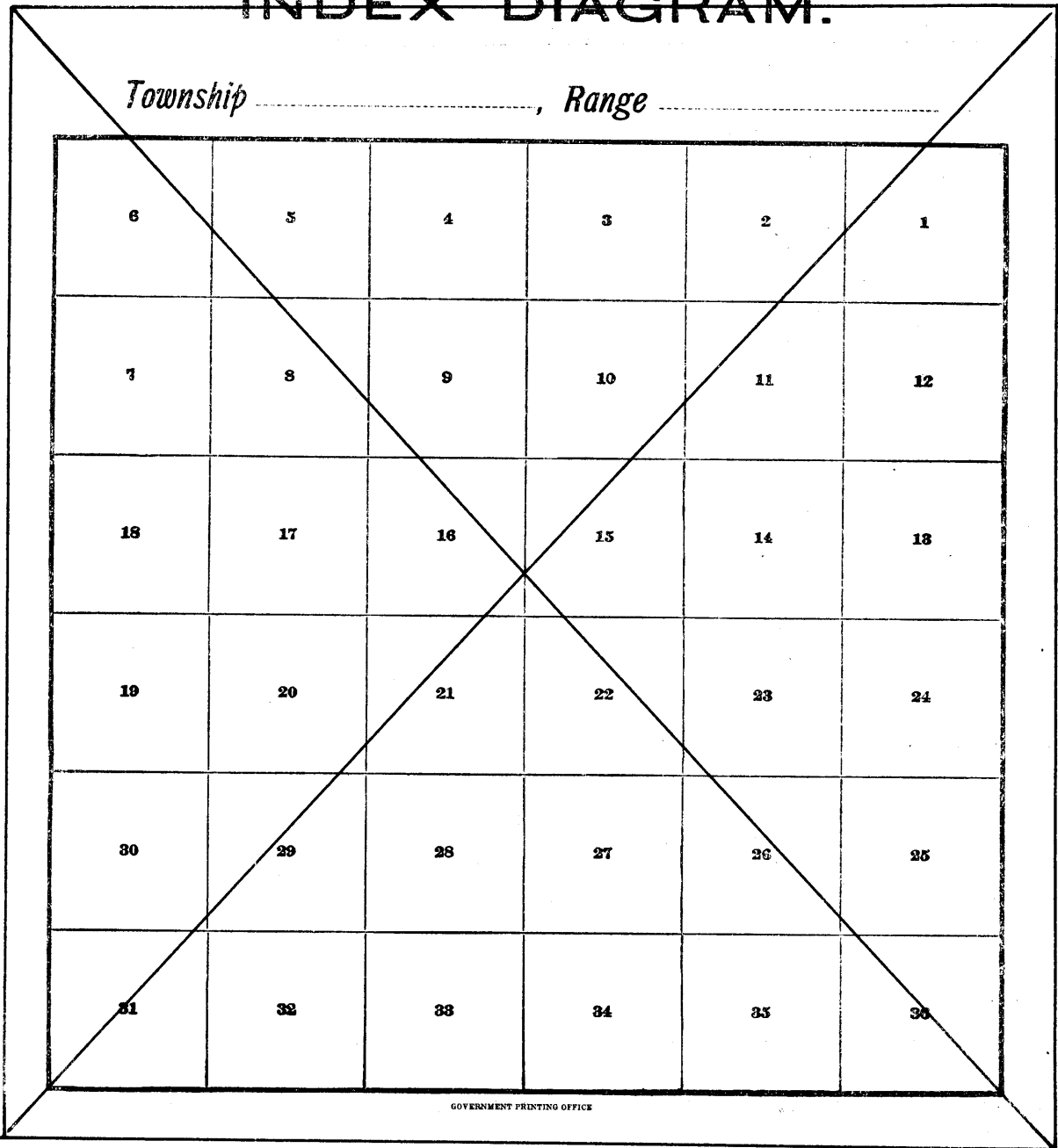
ReSurvey completed October 24, 1928.

3908

3908

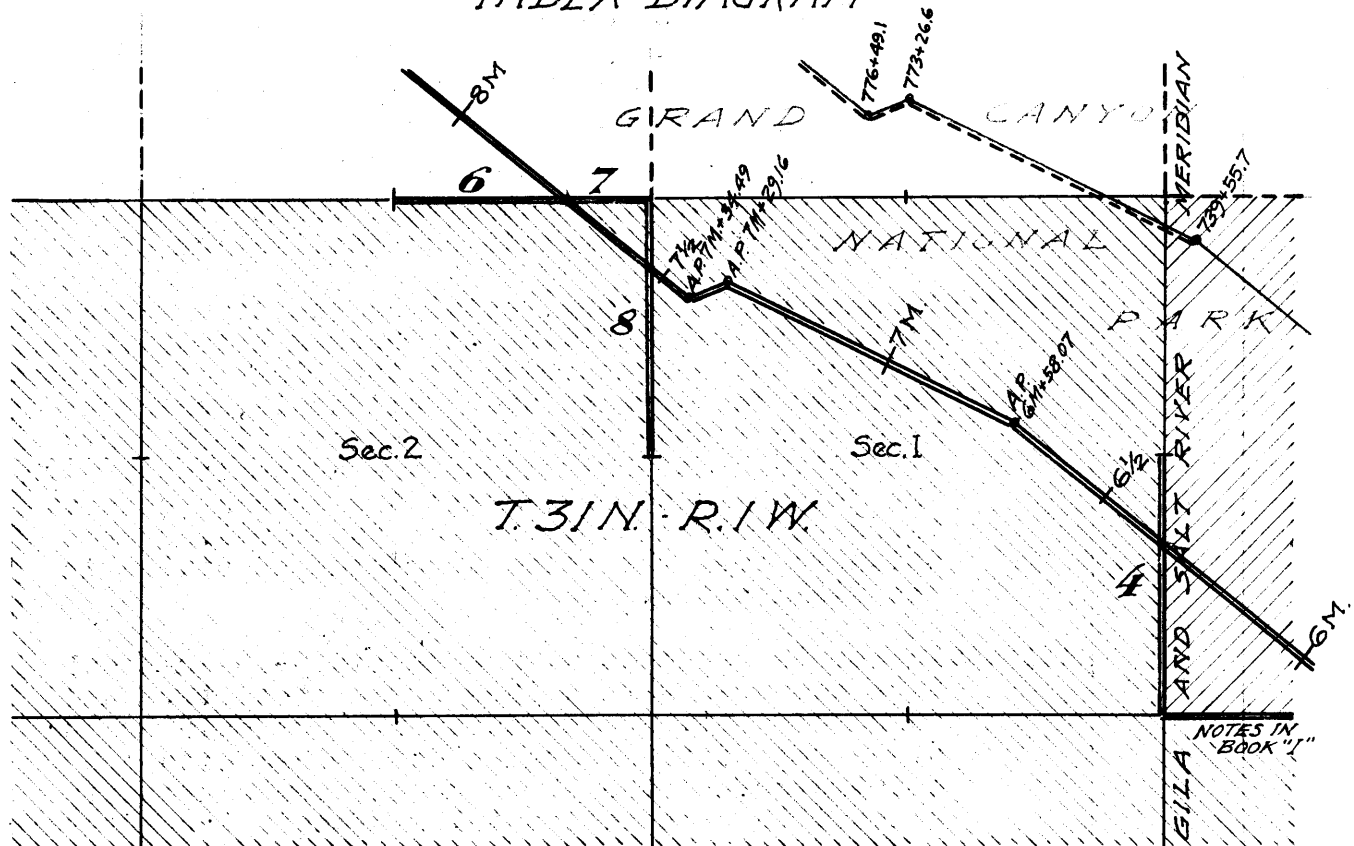
INDEX DIAGRAM.

Township , *Range*



1A

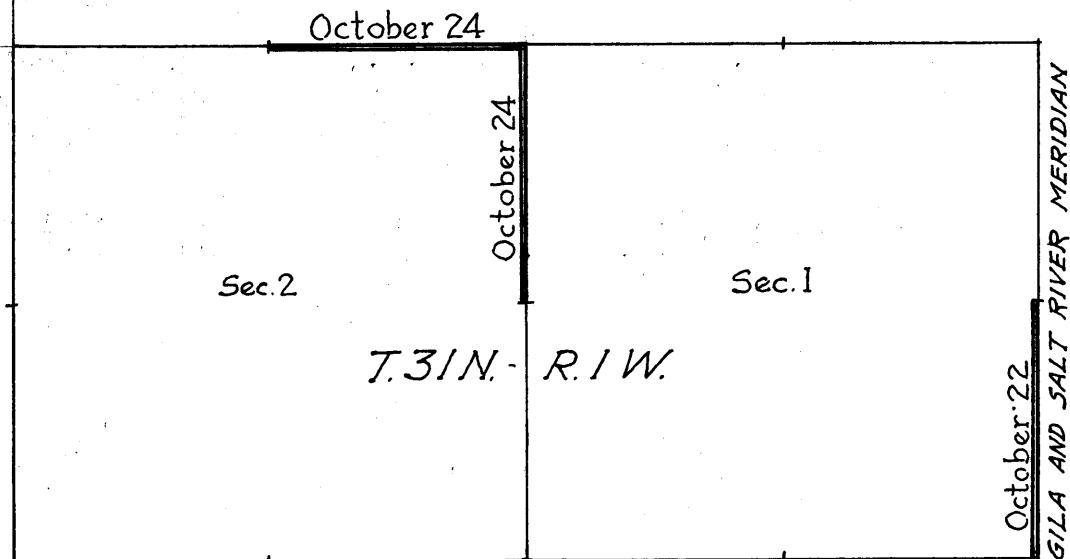
INDEX DIAGRAM



- Resurveyed under this group.
- Accepted, surveyed Tp. and Subdivision Lines.
- Bdy. of Grand Canyon National Park Surveyed under this group. (See Book "H")
- Unsurveyed Tp. bdrs. and Subdivision Lines.
- Supai Road (unconstructed) surveyed and staked by U.S. Bureau of Public Roads in 1925.
- Areas shown on accepted plats, which are bounded by surveyed lines.
- Supai Road Survey (1925) retraced under this group. Notes in Book "H".
- Areas shown on accepted plats which are bounded in part by protracted lines.

DATE DIAGRAM

1928



Resurveyed by Sidney E. Blout, U.S. Cadastral Engineer, on dates shown thereon.

The resurveys hereinafter described were executed on dates shown on diagram on page 1 hereof by Sidney E Blout, U.S. Cadastral Engineer, using an A Lietz solar transit No. 6166 with improved Smith solar attachment. The horizontal limb is provided with two double verniers placed opposite to each other reading to single minutes of arc which is also the least count of the verniers of the latitude and declination arcs.

The instrument was examined, tested on the true meridian at the Federal Building at Phoenix Arizona, found correct and was approved by the District Cadastral Engineer for Arizona and California, September 28, 1928 conditional upon satisfactory field tests. All azimuth determinations are accomplished with the solar attachment, except the special observations on Polaris and the sun for meridian upon which to test the solar apparatus as stated in the field notes.

All measurements are made with a Lallie 5-chain steel tape compared with a Chesterman steel tape and found correct. The measurements are made on the slope the vertical angles determined with a clinometer, and the slope measurements properly reduced to true horizontal distances for entry in the field notes.

October 16, 1928 At camp at the Pasture Wash Ranger Station near the N. bdy. of sec. 28, T32N., R1W. in approximate latitude $36^{\circ}08'N.$ and longitude $112^{\circ}23\frac{1}{2}'W.$; examine the adjustments of the instrument and find no errors, then to test the solar apparatus by compare its indications resulting from solar observations made during a.m., and p.m. hours with a meridian established by observations on Polaris; proceed as follows;

October 16, 1928. at $6^{h}03^{m}$ p.m., l.m.t., by watch which is set by Western Union clock to read correct local mean time, observe Polaris at eastern elongation, making four observations, two each with the telescope in direct and reversed positions and mark the mean point in the line thus determined by a tally pin driven in a stake set firmly in the ground about 5-chs. N.

Azimuth of Polaris at elongation----- $=1^{\circ}20'8''E.$

October 17, 1928. At $8^{h}00^{m}$ a.m., lay off the azimuth of Polaris $1^{\circ}20'$ to the west and mark the true meridian thus determined by a tally pin driven in a stake set firmly in the ground about 5- chs. N.

October 20, 1928. Set up instrument on the meridian and at $8^{h}30^{m}$ a.m., app. time set off $36^{\circ}8'N.$ on the lat. arc $10^{\circ}23'S.$ on the decl. arc and determine a meridian with the solar which falls $1'$ E. of the meridian established by the Polaris observations.

At apparent noon with the lat. arc unchanged, observe the sun on the meridian. the resulting reading on the decl. arc is $10^{\circ}27'S.$ which is slightly lower than the computed declination of the sun for this hour.

At $3^{h}00^{m}$ p.m., app. time with the lat arc unchanged, set off $10^{\circ}29'S.$ on the decl. arc and determine a meridian with the solar which falls $1\frac{1}{2}'W.$ of the meridian established by the Polaris observations.

Since all the solar observations, made during the usual hours of solar work define positions for meridians which agree within 1'30" with the true meridian established by the Polaris observations, conclude that the adjustments of the instrument are satisfactory.

Resurvey of the Gila and Salt River Meridian
through Part of Township 31 North, bet. Ranges 1 E., and 1 W.

Chains

The Gila and Salt River Meridian through Township 31 North between Ranges 1 East and 1 West was surveyed in 1899, by W.O. Secor, U.S. Deputy Surveyor. No retracement or resurvey of this part of the Meridian is of record.

Retracement for Resurvey.

From the $\frac{1}{4}$ sec. cor. of secs. 1 and 6 on the Gila and Salt River Meridian in T31N. bet. Rs. 1 E. and 1 W. hereinafter described,

South, (record bearing) on a random line, bet. secs. 1 and 6, ($S\frac{1}{2}$)

40.19 Intersect the reconstructed cor. of secs. 1, 6, 7, and 12 described in Book "I" of this group.

True course and dist. of the $S\frac{1}{2}$ of line bet. secs. 1 and 6 are therefore, North 40.19 chs.

Resurvey

From the reconstructed cor. of secs. 1, 6, 7, and 12,

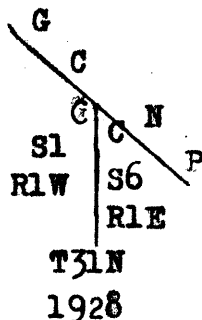
North, on true line, on the $S\frac{1}{2}$ of line bet. secs. 1 and 6.

Over rolling stony land, thru heavy timber and brush undergrowth.

26.66 Intersect that part of the Bdy. of the Grand Canyon National Park surveyed parallel to and 40.00 chs. $S45^{\circ}W.$ from the Supai Road Survey, as described in Book "H" of this group.

This intersection is at station, on said Park Bdy. 28.71 chs. $N51^{\circ}50'W.$ from the 6 Mile monument and 11.29 chs. $S51^{\circ}50'E.$ from the $6\frac{1}{2}$ Mile monument.

At this point of intersection, Set an iron post 3 ft. long, 2 ins. in diam. 26 ins. in the ground for closing cor. of Ts. 31 N., Rs. 1 E. and 1 W.; marked on brass cap,



from which

A juniper 18 ins. in diam. bears $S45\frac{1}{2}^{\circ}E.$ 153 lks. dist., marked T31N., R1E., S6 CC BT.

A pinion 6 ins. in diam. bears $S65\frac{1}{2}^{\circ}W.$ 72 lks. dist., marked T31N., R1W., S 1 CC BT.

Enter Grand Canyon National Park.
Continue line and measurement.

40.19 (13.53 chs. North from closing cor. of Ts. 31 N., Rs. 1 E. and 1 W.) Intersect the $\frac{1}{4}$ sec. cor. of secs. 1 and 6, which is a lime-stone 12x10x7 ins. firmly set in a mound of stone, properly marked, and witnessed by two bearing trees.

Resurvey of the Gila and Salt River Meridian
through Part of Township 31 North., bet. Ranges 1 E. and 1 W.

Chains

Land, rolling.
Soil, stony 3 rd. and 4 th. rate.
Timber, cedar, pinion, and juniper.
Undergrowth, sagebrush, cedar and pinion.

Resurvey of Part of the North Bdy.
of Township 31 North., Range 1 West.

Chains

This township boundary was surveyed by W.O. Secor, U.S. Deputy Surveyor in 1900 and no subsequent retracement or resurvey of this boundary is of record.

Retracement for Resurvey

From the cor. of secs. 1, 2, 35, and 36 on N. bdy. of T31N., R1W., hereinafter described,

S 89°58'W. (record bearing) on a random line bet. secs. 2 and 35. (E½)

40.24 Fall 2 lks. N. of the old ¼ sec. cor., hereinafter described.

True course and dist. of the E½ of line bet. secs. 2 and 35 are therefore, N89°56'E. 40.24 chs.

Resurvey

From the ¼ sec. cor. of secs. 2 and 35 on N. bdy. of T31N R1W., which is a limestone 16x12x8 ins. firmly set in a mound of stone, properly marked, and witnessed by two bearing trees also properly marked,

N 89°56'E. on true line bet. secs. 2 and 35 (E½)
Over rolling stony land thru. scattering timber and brush undergrowth.

6.00 Leave timber bears N. and S.

Enter old burnt area. bears N. and S.

13.75 Draw course S.; Old road in draw bears N. and S.,

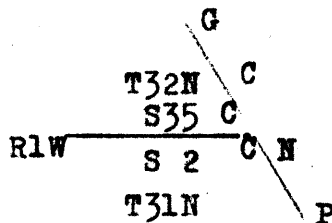
23.50 Leave old timber burn bears N. and S.

Enter heavy timber.

27.23 Intersect that part of the Bdy. of the Grand Canyon National Park surveyed parallel to and 40.00 chs. S45°W. from the Supai Road Survey, as described in Book "H" of this group.

This intersection is at the 59.24 chain station of the 8 th. mile of said Park Bdy. 19.24 chs. N51°09'W. of the 7½ Mile monument and 20.76 chs. S51°09'E. of the 8 Mile monument.

At this point of intersection, Set an iron post 3 ft. long 2 ins. in diam. 26 ins. in the ground for closing corner of Ts. 31 and 32 N., R. 1 W., marked on brass cap



1928

from which

A juniper 16 ins. in diam. bears S22½°E. 72 lks. dist., marked T31N., R1W., S2 CC BT.

A juniper 12 ins. in diam. bears N68½°W. 60 lks. dist., marked T32N., R1W., S35 CC BT.

Resurvey of Part of the North Boundary
of Township 31 North., Range 1 West.

BOOK 800

Chains	Enter Grand Canyon National Park Continue line and measurement.
40.24	(13.01 chs. N89°56'E. from closing cor. of Ts. 31 and 32 N., R1W.) Intersect the cor. of secs. 1, 2, 35, and 36, which is a limestone 24x18x12 ins. firmly set in a mound of stone, properly marked, and witnessed by three bearing trees, one each NE., SE., and SW. of cor.
	<p>Land, rolling. Soil, stony 3 rd. and 4 th. rate. Timber, cedar, pinion, and juniper. Undergrowth, sagebrush and scrub cedar and pinion.</p>

Resurvey of Part of the Subdivision lines
of Township 31 North., Range 1 West.

Chains

The Subdivision lines of this township were surveyed by W.O.Secor, U.S. Deputy Surveyor, in 1900, and no subsequent retracement or resurvey of same is of record.

The following notes describe the resurvey of the N. 1/2 of the line bet. secs. 1 and 2 of this township closing on the Bdy. of the Grand Canyon National Park.

Retracement for Resurvey

From the cor. of secs. 1, 2, 35, and 36. on N. bdy. of Tp. hereinbefore described,

S 0°3'E., (record bearing) on a random line, bet. secs. 1 and 2. (N 1/2)

40.20 Fall 2 lks. W. of the old 1/2 sec. cor. of secs. 1 and 2, hereinafter described.

True course and dist. of the N. 1/2 of line bet. secs. 1 and 2 are therefore, N0°5'W. 40.20 chs.

Resurvey

From the 1/2 sec. cor. of secs. 1 and 2, T31N., R1W. which is a limestone 20x12x6 ins. firmly set in a mound of stone, properly marked, and witnessed by two properly marked bearing trees,

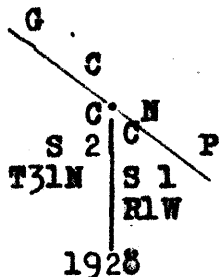
N 0°5'W. on true line, bet. secs. 1 and 2. (N 1/2)
Over rolling stony land thru. scattering timber and brush undergrowth.

6.00
29.74

Draw course SW.
Intersect that part of the Bdy. of the Grand Canyon National Park surveyed parallel to and 40.00 chs. S45°W. from the Supai Road Survey, as described in Book "H" of this group.

This intersection is at the 42.57 chain station of the 8th. mile of said Park Bdy., 2.57 chs. N51°09'W. from the 7 1/2 Mile monument thereon and 37.43 chs. S51°09'E. from the 8 Mile monument.

At this point of intersection, Set an iron post 3 ft. long 2 ins. in diam. 26 ins. in the ground for closing cor. of secs. 1 and 2., marked on brass cap



from which

A juniper 10 ins. in diam. bears S24 1/2°E. 76 lks. dist., marked T31N., R1W., S1 CC BT.

A juniper 10 ins. in diam. bears S7°W. 39 lks. dist., marked T31N., R1W., S2 CC BT.

Enter Grand Canyon National Park.

Continue line and measurement.

40.20 (10.46 chs. N0°5'W. from closing cor. of secs. 1 and 2)

Resurvey of Part of the Subdivision lines
of Township 31 North., Range 1 West.

9

BOOK 850

Chains

Intersect the cor. of secs. 1, 2, 35, and 36. on N. bdy. of Tp.
hereinbefore described.

Land, rolling mesa.
Soil, stony 3 rd. and 4 th. rate.
Timber, cedar, pinion, and juniper.
Undergrowth, sagebrush and scrub cedar and juniper
brush.

The continued satisfactory adjustment of the instrument
used in the execution of the resurveys described
in the foregoing notes is indicated from the
final field tests of said instrument, described
in Book "H" of this group.

CERTIFICATE OF UNITED STATES SURVEYOR.

BOOK 2008

I, Sidney E. Blout U.S. Cadastral Engineer, hereby certify upon honor that, in pursuance of special instructions received from the District Cadastral Engineer, for Group 145, Arizona bearing date of the 31st day of January, 1928, 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, resurveyed all those parts or portions of the Gila and Salt River Meridian in Tp. 31 N.
the North Boundary
 and
Subdivision Lines of
Township 31 North, Range 1 West 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 1 hereof as having been executed by me, and under my direction; and that all the corners of said resurvey 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 145, Arizona and in the specific manner described in the field notes, and that the foregoing are the original field notes of such resurvey.

Place: Phoenix, Arizona.
 Date: April 3, 1929.

Sidney E. Blout
 U.S. Cadastral Engineer.

APPROVAL.

OFFICE OF U. S. SUPERVISOR OF SURVEYS,

Denver, Colo., April 20, 1929.

The foregoing field notes of the resurvey of the Gila and Salt River Meridian thru Part of Tp. 31 North
Part of the North Boundary
 and
Part of the Subdivision Lines of
Township 31 North, Range 1 West
of the Gila and Salt River Base and Meridian, State of Arizona
 executed by Sidney E. Blout, U.S. Cadastral Engineer
 under his special instructions dated January 31, 1928, for Group 145 Ariz., having been critically examined, and the necessary corrections and explanations made, the said field notes, and the resurveys they describe, are hereby approved.

Walter 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.~~