

3527

E. J. ...

4-679

BOOK 3527

Book "K"

FIELD NOTES

OF THE RETRACEMENT OF

part of the Arizona-Utah State Boundary (23rd mile),

AND OF THE SURVEY OF

the East boundary,

and the Subdivision lines of

Fractional Township 42 North, Range 12 West,

Of the Gila and Salt River Base and Meridian,

In the State of Arizona

EXECUTED BY

Joseph P. Davis, U. S. Cadastral Engineer.

In the capacity of U. S. Surveyor..., under Special Instructions dated September 29, 1920, issued by the United States Surveyor General to govern surveys included in Group No. 112, Arizona, which were approved by the Commissioner of the General Land Office, November 10, 1920, and Assignment Instructions dated December 15, 1920

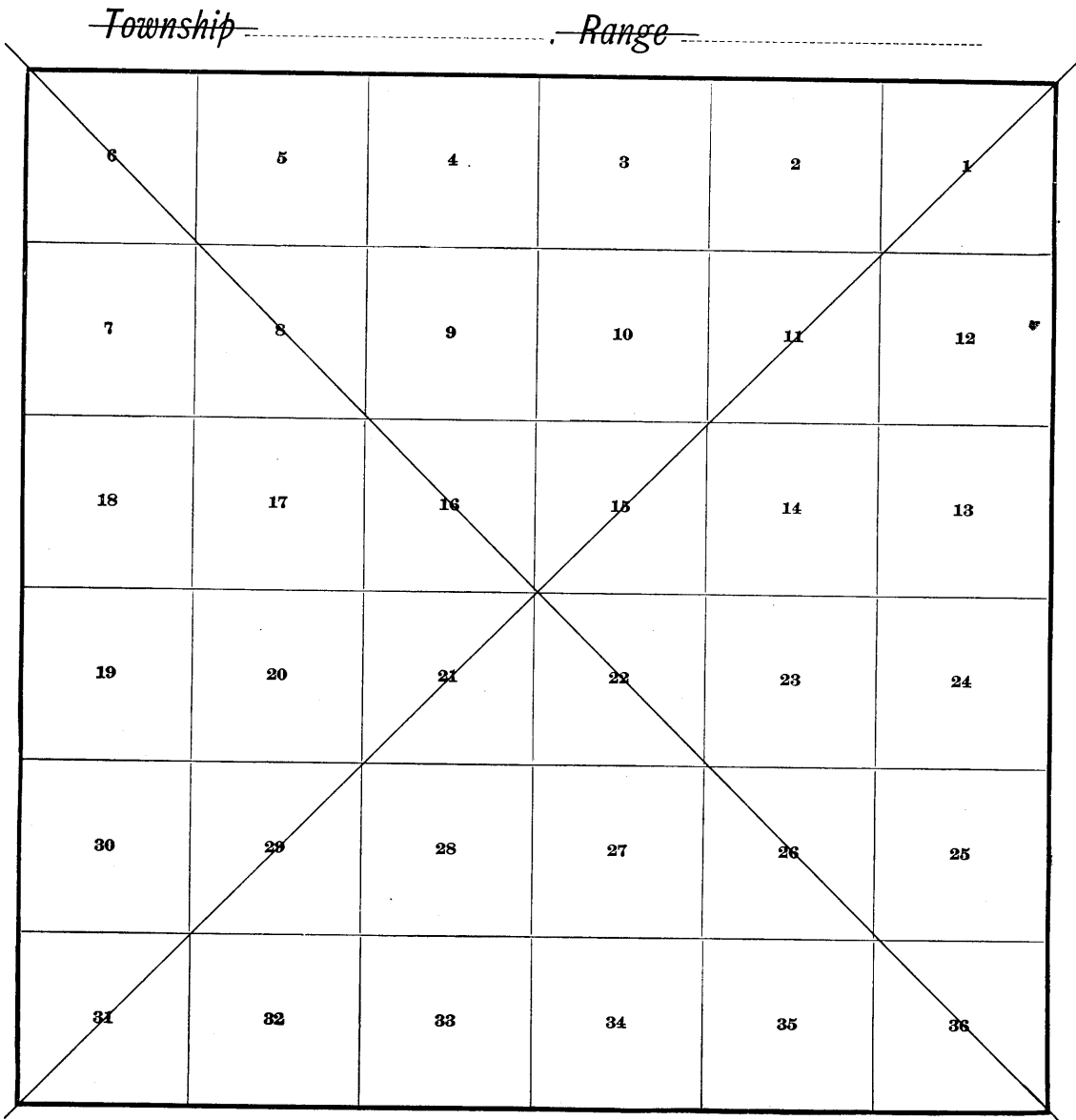
Retracement & Survey commenced April 11, 1921

Retracement & Survey completed April 14, 1921

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INDEX DIAGRAM.

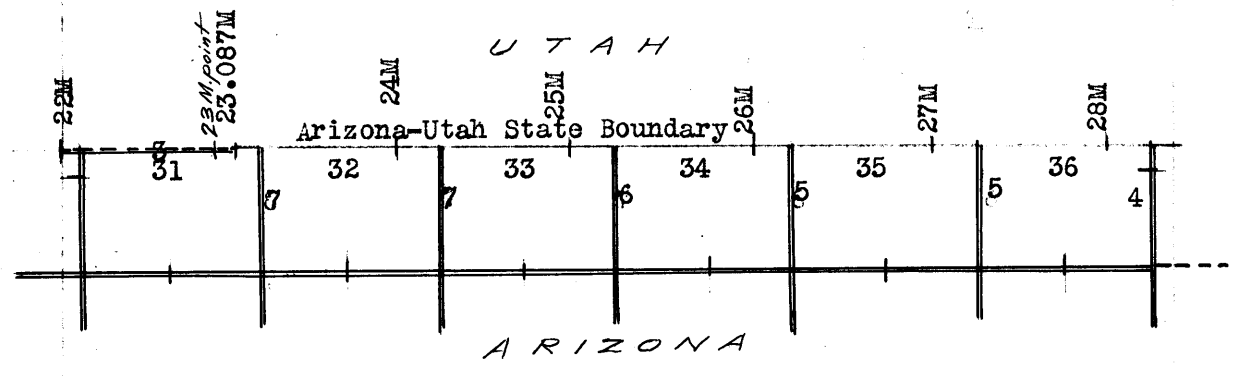


BOOK 3527

Book "K"

Index Diagram

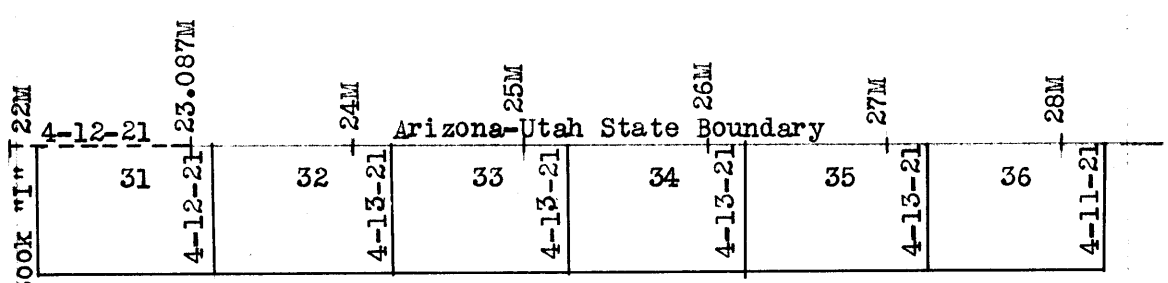
Fractional Township 42 North, Range 12 West,



- Lines surveyed under this Group.
- Accepted survey
- Lines retraced under this Group.
- Unsurveyed.

Date Diagram

Fractional Township 42 North, Range 12 West,



See Book "J" for dates of survey of this line

On the above diagram, black lines indicate surveys, and dotted black lines, retracements, executed by Joseph P. Davis, U. S. Cadastral Engineer, on dates shown thereon.

Retracements and surveys hereinafter described executed Joseph P. Davis, U. S. Cadastral Engineer, on dates shown on diagram on page 1 hereof, using Buff light mountain transit No. 10125. For description of instrument and certificate of approval, see Book "A".

Unless otherwise specified, all measurements are made with a Lufkin steel tape, 5 chs. in length, compared with a Chesterman standard steel tape and found correct. The measurements are made on the slope, the vertical angles determined and the slope measurements properly reduced to true horizontal distances.

Field test of Instrument No. 10125.

Examine the adjustments of the transit and correct all errors; then, to test the solar apparatus, by comparing its indications, resulting from solar observations made during a.m. and p.m. hours, with a meridian determined by observations on Polaris at elongation, proceed as follows:

April 10, 1921: At camp in sec. 16, T. 41 N., R. 12 W., G. and S. R. B. and M., lat. $36^{\circ}57'N.$, long. $113^{\circ}36'W.$, using the meridian established as described in Book "J", at 9 hrs. 0 m. a.m., l.m.t., set off $36^{\circ}57'N.$ on the lat. arc; $7^{\circ}55\frac{1}{2}'N.$ on the decl. arc; and determine a meridian with the solar which agrees with the true meridian.

At apparent noon, with the lat. arc unchanged, observe the sun on the meridian; the resulting decl. is $7^{\circ}58\frac{1}{2}'N.$, which is the computed decl. of the sun.

At 3 hrs. 0 m., p.m., l.m.t., with the lat. arc unchanged, set off $8^{\circ}1\frac{1}{2}'N.$ on the decl. arc, and determine a meridian with the solar, which agrees with the true meridian.

As all of the solar observations during the usual hours of solar work come within $1'30''$ of the true meridian, conclude that the adjustments of the solars are satisfactory.

Retracement of part of the Arizona-Utah State Boundary
Line (23rd Mile).

Chains.

That part of the Arizona-Utah State Boundary line forming the North boundary of Fracl. T.42 N., R.12 W., was surveyed in April, 1901, by Howard B. Carpenter, U.S. Surveyor and Astronomer, and no retracement or resurvey of such portion of the line is of record.

This portion of the State boundary is closed upon by Ts. 43 S., Rs.15 and 16 W. of the Utah surveys, and the closing cors. relating thereto are monumented with iron posts with brass caps.

The following notes describe a retracement of the 23rd mile of the State Boundary:

The 22nd mile monument is a limestone, 16x14x8 ins. above ground, firmly set, marked "UTAH" on N. face, "37NL" on E. face, "ARIZ." on S. face, and "22M" on W. face, and witnessed by four pits, one each N., S.E. and W., and a mound of earth E. of mon. No bearing trees.

Thence, East, on a random line, on 23rd mile. Over mountainous land, thru. scattering undergrowth.

Ascend 50 ft.

5.75 Descend 35 ft.

8.80 Ascend 180 ft.

33.25 Descend 75 ft. to

37.25 Intersect the closing cor. of fracl. secs. 33 and 34, T.43 S., R.16 W., S.L.B. & M., Utah, which is an iron post, firmly set in ground, properly marked on brass cap, and witnessed by a mound of stone, N. of cor.

Continue line and measurement.

Descend slightly to

37.60 Ascend 40 ft.

41.35 Descend 205 ft.

63.40 Gulch, course NE. Ascend 235 ft., over NW. slope to 23.087 mile mon.

71.39 Point for 23rd mile monument falls on face of cliff. This mile point was not monumented in the State Bdy. survey, but was witnessed at 7 chs. E. herefrom by a monument designated in the record as the 23.087 mile mon.

78.39 Right rim of gulch, bearing NE and SW. Intersect the 23.087 mile monument which is a limestone 30x12x10 ins. firmly set in a mound of stone, marked "UTAH" on N. face, "37NL" on E. face, "ARIZ." on S. face, and "23.087M" on W. face, and witnessed by a mound of stone E. of mon. No bearing trees.

Land, mountainous.

Soil, rocky, 4th rate.

No timber.

Undergrowth, black brush.

True course and dist. of the 23rd mile are therefore, East 71.39 chs.

True course and dist., bet. the 22nd mile mon., and the 23.087 mile mon. are therefore, East, 78.39 chs.

4 Survey of East bdy. of Fracl. Township 42 North, Range 12 West.

Chains.

From the cor. of Ts. 41 North, Ranges 11 and 12 West, and
fracl. Ts. 42 North, Rs. 11 and 12 W., described in
Book "J,"

North, on true line, bet. fracl. secs. 31 and 36.
Over gently rolling land, thru. scattering undergrowth.
Descend slightly to

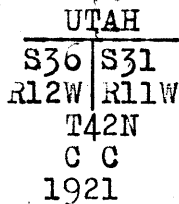
40.00 Head of shallow draw, course N. 60° E. Set an iron post
3 ft. long, 1 in. in diam., 26 ins. in the ground, for
¼ sec. cor., marked on brass cap,



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

55.00 Intersect Arizona-Utah State Boundary Line, 17.74 chs.
East of the 28th mile monument, which is an iron post,
2 ins. in diam., projecting 24 ins. above ground, sur-
rounded by a mound of earth and stone, with brass cap,
marked "UTAH" in N. half, "ARIZ." in S. half and "28M"
in the center, and witnessed by 4 pits, one each N., S.,
E. and W. of mon. No bearing trees.

At the point of intersection, set an iron post, 3 ft.
long, 3 ins. in diam., 24 ins. in the ground, for clos-
ing cor. of fracl. Ts. 42 N., Rs. 11 and 12 W.,
marked on brass cap.



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

Land, gently rolling.
Soil, 3rd and 4th rate.
No timber.
Undergrowth, black brush.

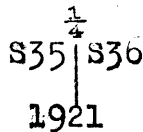
Boundaries of fracl. Township 42 North, Range 12 West.
Latitudes, departures and Closing errors.

Line designated.	True bearing.	Dist.	Latitudes.		Departures.	
			N.	S.	E.	W.
South boundary,	West,	479.32				479.32
West boundary,	North,	55.04	55.04			
North boundary, (Ariz. Utah Bdy.)	East,	479.32			479.32	
East boundary,	South,	55.00		55.00		
Convergency,					..06	
Totals,			55.04	55.00	479.38	479.32
			55.00		479.32	
	Error in latitude,		0.04			
	Error in departure,				0.06	

Survey of Subdivision lines of fracl. T. 42 N., R. 12 W.

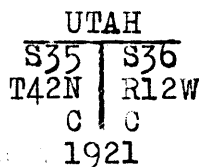
Chains.

From the cor. of secs. 1 and 2, and fracl. secs. 35 and 36, on the S. bdy. of the Tp., described in Book "J," North, on true line, bet. fracl. secs. 35 and 36. Over rolling and broken land, thru. scattering undergrowth. Descend 35 ft.
 3.00 Draw, course N. 60° W. Asc. 10 ft.
 10.00 Point of spur, slopes W. Descend 57 ft.
 17.10 Wash, course N. 85° W. Asc. 45 ft.
 25.00 Spur, slopes W. Desc. 75 ft.
 33.80 Wash, 15 lks. wide, course W. Asc. 15 ft. to
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,



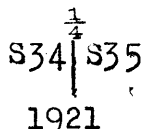
and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Ascend 25 ft.
 50.00 Descend 5 ft.
 53.00 Draw, course S. 45° W. Asc. 20 ft. to
 55.01 Intersect the Arizona-Utah State Boundary Line, 17.60 chs.

East on the 27th mile monument, which is an iron post, 2 ins. in diam. projecting 24 ins. above ground, firmly set in ground, and in mound of earth, with brass cap, marked "UTAH" on N. half, "ARIZ." in S. half and "27M" in the center, and witnessed by 4 pits, one each N., S. E. and W. of monument. No bearing trees. At the point of intersection, Set an iron post 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for closing cor. of fracl. secs. 35 and 36, marked on brass cap,



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, S. of cor. Land, rolling and broken. Soil, rocky, 3rd and 4th rate. No timber. Undergrowth, black brush.

From the cor. of secs. 2 and 3, and fracl. secs. 34 and 35, on the S. bdy. of the Tp., described in Book "J," North, on true line, bet. fracl. secs. 34 and 35. Over rolling and broken land, thru. scattering undergrowth. Descend 30 ft.
 12.50 Draw, course NW. Ascend 15 ft.
 20.00 Descend 35 ft.
 36.50 Wash, 30 lks. wide, 6 ft. deep, course N. 60° W. Ascend slightly to
 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,



and raise a mound of stone, 2 ft. base, 1 1/2 ft. high, W. of cor. Ascend 20 ft.
 55.01 Intersect the Arizona-Utah State Boundary Line, 17.74 chs.

6 Subdivision lines of fracl. Township 42 North, Range 12 West.

Chains.

east of the 26th mile monument, which is an iron post, 2 ins. in diam., projecting 24 ins. above ground, firmly set in ground, and in mound of earth, with brass cap, marked "UTAH" in N. half; "ARIZ." in S. half, and "26M" in the center, and witnessed by 4 pits, one each N., S. E. and W. of mon. No bearing trees.

At the point of intersection,

Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for closing cor. of fracl. secs. 34 and 35, marked on brass cap,

UTAH	
S34	S35
T42N	R12W
C C	
1921	

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

Land, rolling and broken.

Soil, rocky, 3rd and 4th rate.

Timber, none.

Undergrowth, black brush.

From the cor. of secs. 3 and 4, and fracl. secs. 33 and 34, on the S. bdy. of the Tp., described in Book "J,"

North, on true line, bet. fracl. secs. 33 and 34.

Over gently rolling land, thru. scattering undergrowth. Descend very gradually.

9.20 Old road, brs. N.15°W. to Bloomington, Utah, and S.15°E.
40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for ¼ sec. cor., marked on brass cap,

¼	
S33	S34
1921	

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

47.80 Wash, 120 lks. wide, course N.10°W. Continue very gradual descent.

55.03 Intersect the Arizona-Utah State Boundary Line, 17.82 chs. East of the 25th mile monument, which is a black lava stone, 14x10x7 ins. above ground, firmly set, marked "UTAH" on N. face, "37NL" on E. face, "ARIZ." on S. face, and "25M" on W. face, and witnessed by a mound of stone, S. of mon. No bearing trees.

At the point of intersection,

Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for closing cor. of fracl. secs. 33 and 34, marked on brass cap,

UTAH	
S33	S34
T42N	R12W
C C	
1921	

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

Land, gently rolling.

Soil, sandy and rocky, 3rd and 4th rate.

No timber.

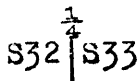
Undergrowth, sagebrush and greasewood.

Subdivision lines of fracl. Township 42 North, Range 12 West.7

Chains.

From the cor. of secs. 4 and 5, and fracl. secs. 32 and 33, on the S. bdy. of Tp., described in Book "J," North, on true line, bet. fracl. secs. 32 and 33. Over rolling land, thru. scattering undergrowth. Ascend 35 ft.

- 7.50 Descend 17 ft.
- 9.00 Draw, course S. 85°W. Ascend 40 ft.
- 14.60 Low ridge, brs. E. and W. Desc. 20 ft. to
- 22.00 Draw, course N. 30°E. Desc. 05 ft. to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,

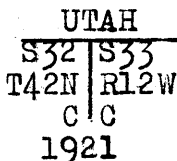


1921

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

- Descend 30 ft. to
- 46.00 Shallow wash, course N. 75°E. Desc. 20 ft. to
- 55.01 Intersect the Arizona-Utah State Boundary line, 17.71 chs. East of the 24th mile monument, which is a limestone, 36x12x10 ins., firmly set in mound of stone, marked "UTAH" on N. face, "ARIZ." on S. face, "37NL" on E. face, and "24M" on W. face, and witnessed by a mound of stone E. of mon. No bearing trees.

At the point of intersection, Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for closing cor. of fracl. secs. 32 and 33, marked on brass cap,



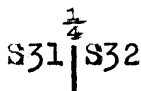
1921

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

Land, rolling.
Soil, sandy and rocky, 3rd and 4th rate.
No timber.
Undergrowth, sagebrush and greasewood.

From the cor. of secs. 5 and 6, and fracl. secs. 31 and 32, on the S. bdy. of the Tp., described in Book "J," North, on true line, bet. fracl. secs. 31 and 32. Over rolling land, thru. scattering undergrowth. Ascend 85 ft.

- 9.85 Ridge, brs. E. and W. Descend 90 ft.
- 20.25 Draw, course W. Ascend 75 ft.
- 26.00 Spur, slopes W. Descend 55 ft. to
- 40.00 Set an iron post, 3 ft. long, 1 in. in diam., 26 ins. in the ground, for $\frac{1}{4}$ sec. cor., marked on brass cap,



1921

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

- Descend 30 ft.
- 49.00 Draw, course N. 15°E. Desc. 10 ft. to
- 54.98 Intersect the Arizona-Utah State Boundary Line, 10.76 chs. East of the 23.087 mile monument, hereinbefore

8 Subdivision lines of Township 42 North, Range 12 West.

Chains.

described, or 17.76 chs. N. of the 23rd mile point thereon.

At the point of intersection,
Set an iron post, 3 ft. long, 2 ins. in diam., 24 ins. in the ground, for closing cor. of fracl. secs. 31 and 32, marked on brass cap,

UTAH	
S31	S32
T42N	R12W
C C	
1921	

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

Land, rolling.

Soil, sandy and rocky, 3rd and 4th rate.

No timber.

Undergrowth, sagebrush and greasewood.

The continued satisfactory adjustment of the solar apparatus during the survey of this fractional township is shown by the final test of instrument on April 29, 1921, as described in Book "H,"

The cor. of those portions of the Subdivision of Ts. 43 S., Rs. 15 and 16 W., S.L.B., and M., Utah, erroneously extended across the Arizona-Utah State Boundary Line into Arizona were obliterated during this survey.

GENERAL DESCRIPTION.

This fractional township consists of rolling mesa land, sandy and rocky in texture, covered with greasewood, sagebrush and black brush undergrowth, draining thru. shallow draws and washes northward into the Virgin River or its tributaries. This country is fair grazing land, but is without developed water, and is unsettled. There are no evidences of mineral. An old road runs northward to Bloomington, Utah, thru. the center of the township.

ESCE

CERTIFICATE OF UNITED STATES CADASTRAL ENGINEER.

I, Joseph P. Davis, U. S. Cadastral Engineer, hereby certify upon honor that, in pursuance of special instructions received from the U. S. Surveyor General for Group 112, Arizona, bearing date of the 29th day of September, 1920, 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, retraced surveyed all those parts or portions of the Arizona-Utah State Boundary, and surveyed all those parts or portions of the East boundary, and the Subdivision lines of

Fractional Township 42 North Range 12 West,

of the Gila and Salt River

Base and Meridian, in the State of Arizona, which are represented in and by diagram on page 1 hereof the foregoing field notes as having been executed by me, and under my direction; and that all the corners of retracement and said survey have been established and perpetuated in strict accordance with the Manual of Surveying Instructions, and the special written instructions of the U. S. Surveyor General for Group 112, Arizona

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

Place Boring, Idaho

Date January 16, 1922

Joseph P. Davis U. S. Cadastral Engineer

APPROVAL.

OFFICE OF THE UNITED STATES SURVEYOR GENERAL,

Phoenix, Arizona, January 25, 1922

The foregoing field notes of the survey of retracement of part of the Arizona-Utah State Boundary, and of the survey of the East boundary and Subdivision lines of

Fractional Township 42 North, Range 12 West,

of the Gila and Salt River Base and Meridian,

in the State of Arizona,

executed by Joseph P. Davis, U. S. Cadastral Engineer,

under his special instructions dated September 29, 1920, for Group 112, Arizona, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

Frank P. Frost U. S. Surveyor General.

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. Surveyor General.