

# FIELD NOTES

## OF THE RETRACEMENT OF

Part of the Subdivision Lines of

Township 25 North, Range 10 West

## AND OF THE SURVEY OF

Boundary of Tract No. 37

(Ballast Pit of the A.T. & S.F. Ry.)

in the Hualpai Indian Reservation

Sections 19, 20, 29 and 30 of

Township 25 North, Range 10 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 March 20, 1928, issued by the District Cadastral Engineer to govern surveys included in Group No. 151 Arizona, which were approved by the Commissioner of the General Land Office, April 3, 1928, and Assignment Instructions dated April 14, 1928

Retracement & Survey commenced April 19, 1928

Retracement & Survey completed April 27, 1928

3825

3825

# INDEX DIAGRAM.

*Township* ..... , *Range* .....

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Group 151 Arizona  
 Tract 37  
 Township 25 North, Range 10 West

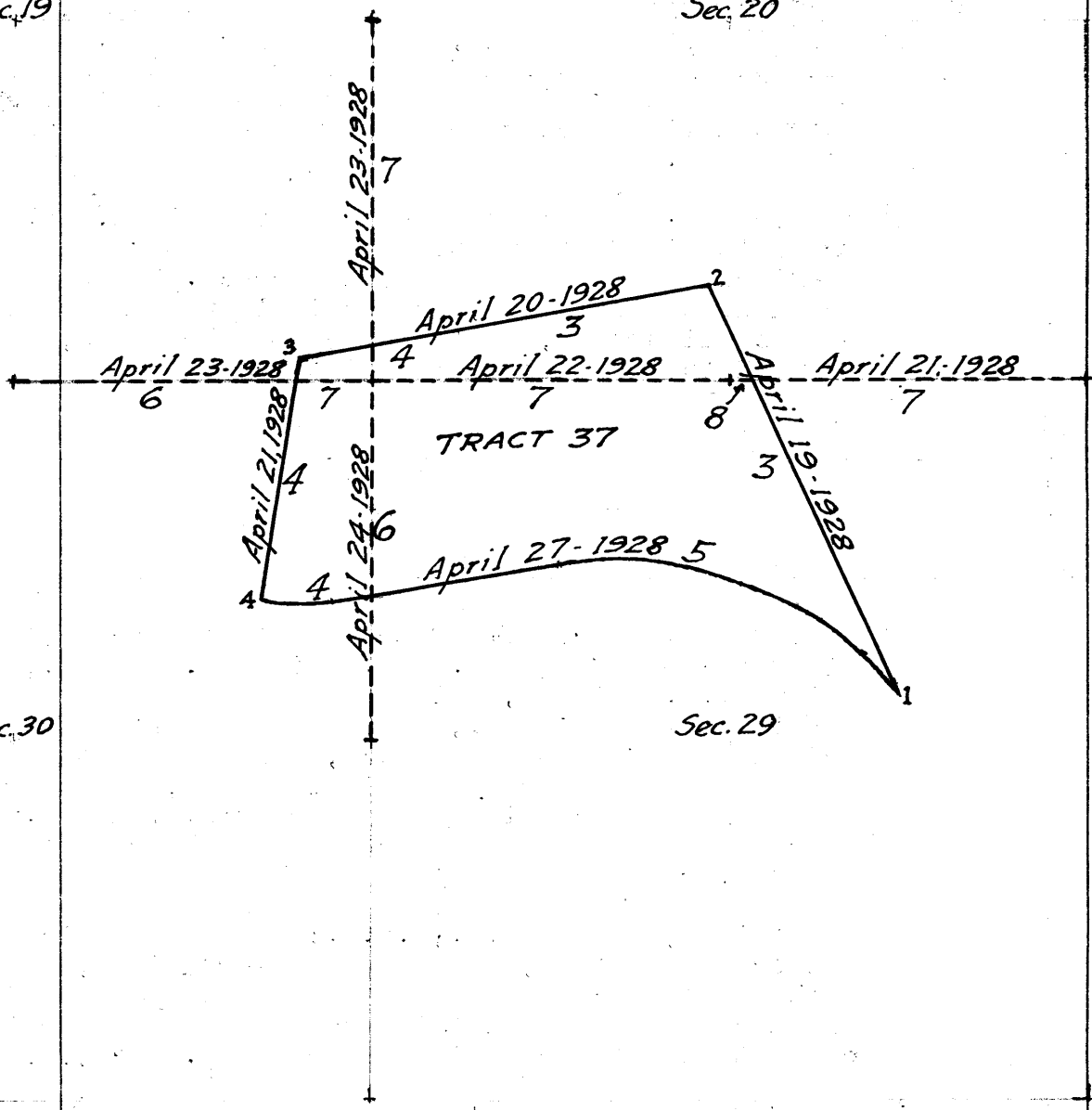
INDEX & DATE DIAGRAM

Sec. 19

Sec. 20

Sec. 30

Sec. 29



Surveyed by Sidney E. Blott, U.S. Cadastral Engineer  
 on dates shown thereon. Indexed in red figures.

Retraced by Sidney E. Blout, U.S. Cadastral Engineer  
 on dates shown thereon. Indexed in red figures.

The retracements and surveys, hereinafter described were executed on dates shown on diagram on page 1 hereof by Sidney E Blout, U.S. Cadastral Engineer, using a Buff "Rocky Mountain Favorite" solar transit No. 16724 with U-shaped standards,  $4\frac{1}{2}$  inch horizontal circle, 4 inch vertical circle, and improved Smith Solar attachment.

The instrument was examined, tested on the meridian at the Federal Building at Phoenix Arizona, found correct and was approved by the District Cadastral Engineer for Arizona and California, April 14, 1928, conditional upon satisfactory field tests.

All azimuth determinations, except retracements, are accomplished by deflection from the true meridian determined by observations on Polaris. The azimuth of all retraced lines being determined with the solar attachment.

All measurements are made with a Lallie 100 ft. steel tape graduated in feet and tenths, compared with a Lufkin standard steel tape and found correct. The measurements are made on the slope, the vertical angle determined with a clinometer, and the slope measurements, properly reduced to true horizontal distances.

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 TEST OF BUFF SOLAR TRANSIT NO. 16724  
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April 18, 1928: At cor. No. 1 of Gravel pit on north line of Right-of-Way of the AT. & SF. Ry. in sec. 29, T25N., R10W. G & SRB. & M. Arizona, latitude  $35^{\circ}31'42''$  N. and longitude  $113^{\circ}22'03''$  W., examine the adjustments of the transit and find them correct, 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; proceed as follows

h m

At same station, at 5 03 p.m., l.m.t.; observe Polaris at western elongation, making four observations, two each with the telescope in direct and reversed positions and mark the mean point in the line thus determined on a stake set firmly in the ground 5.00 chs. N.

Azimuth of Polaris =  $1^{\circ}19\frac{1}{2}'$

April 19, 1928: lay off the azimuth of Polaris  $1^{\circ}19\frac{1}{2}'$  to the east and mark the true meridian thus determined by a tack driven in a stake driven firmly in the ground 5.00 chs. N.

h m

At same station at 9 00 a.m., app. time set off  $35^{\circ}31\frac{1}{2}'$  N. on the lat. arc,  $11^{\circ}15\frac{1}{2}'$  N. on the decl. arc and determine a meridian with the solar which falls  $0^{\circ}1'$  W. of the true meridian.

h m

At the same station at 4 00 p.m., app. time, set off  $35^{\circ}31\frac{1}{2}'$  N. on the lat. arc,  $11^{\circ}22'$  N. on the decl. arc and determine a meridian with the solar which agrees with the true meridian established by the Polaris observations.

The solar apparatus by a.m. and p.m. observations defines positions for meridians which agree within 1' with the true meridian established by the Polaris observation, therefore conclude that the adjustments of the instrument are satisfactory.

Survey of Tract 37, T.25 N., R.10 W.

(Ballast pit of AT & SF. Ry. Co.)

Chains

The following notes describe the survey of a tract of land in secs. 19, 20, 29, and 30, Township 25 North, Range 10 West of the Gila and Salt River Base and Meridian, Arizona, embracing a gravel pit on the Hualpai Indian Reservation, purchased by the Atchison, Topeka, and Santa Fe Railway Company under the Act of March 3, 1909.

Begin at Cor. No. 1 of said Tract which is on the north line of right-of-way of the AT. & SF. Ry. in sec. 29, T25N., R10W. and is marked with an iron pipe 1 1/2 ins. in diam. with wooden plug in end, set with top 6 ins. below the surface of the ground.

Alongside of iron pipe, Set an iron post 3 ft. long, 2 ins. in diam. with glass bottle alongside, 30 ins. in the ground for Cor. No. 1 of Ballast pit, marked on brass cap.

ATSFRR  
Cor 1

1928

Deflect 24°31' in the direction N-W. from the meridian established at this station by Polaris observation April 18, 1928.

Thence

N 24°31' W. along line 1-2 of bdy. of Tract No. 37.

Over level sandy land in narrow valley.

4.80

Old road bears NW. and SE.

18.62

Sand wash 20 lks. wide 1 ft. deep course W.

22.70

Leave level sandy valley land, bears N80°W. and S80°E.

Enter stony mountainous land and scattering juniper timber bears NW. and SE.

47.64

Ascend 358 ft. over SE. slope.

Top of limestone spur bears SE.

Descend 27 ft. over NW. slope.

50.14

(3309.2 ft.) Set an iron post 3 ft. long, 2 ins. in diam. 28 ins. in the ground for Cor. No. 2 of Ballast pit, marked on brass cap

ATSFRR  
Cor 2

1928

from which

A pinion 10 ins. in diam. bears S20 1/2° E. 93 lks. dist., marked ATSFRR BP Cor. 2 BT.

A juniper 12 ins. in diam. bears S13° W. 72 lks. dist., marked ATSFRR BP Cor. 2 BT.

Thence

S 80°19' W along line 2-3 of bdy. of Tract No. 37.

Ascend 30 ft. over NE. slope over rolling stony mountainous land, thru. scattering juniper and pinion timber and undergrowth.

5.30

Top of rocky spur bears SE, thence along SE. slope.

Ascend 3 ft.

22.00

Top of spur bears S20° W.

Descend 118 ft. over NW. slope.

32.63

Ravine course SW.

Ascend 93 ft. over SE. slope.

40.67

Top of spur bears S10° W.

Descend 120 ft. over NW. slope.

Survey of Tract No. 37 of T. 25 N., R. 10 W.

(Ballast pit of AT &amp; SF. Ry. Co.)

Chains	
45.73	Ravine 5 lks. wide course S10°W. Ascend 15 ft. over SE. slope.
46.48	(3067.68 ft.) Set an iron post 3 ft. long, 2 ins. in diam. 27 ins. in the ground for cor. No. 3 of the Ballast pit, marked on brass cap
	ATSFRR Cor 3
	1928
	from which
	A pinion 8 ins. in diam. bears S11½°E. 52 lks. dist., marked ATSFRR BP Cor. 3 BT.
	A pinion 12 ins. in diam. bears S44½°E. 150 lks. dist., marked ATSFRR BP Cor. 3 BT.
	Thence
	S 8°21'W. along line 3-4 of bdy. of Tract No. 37. Descend 57 ft. over SE. slope over stony mountainous land thru. scattering cedar and pinion timber and brush undergrowth.
8.30	Ravine 6 lks. wide course S10°W.
10.70	Same ravine 6 lks. wide course S40°E. Ascend 25 ft. over stony NE. slope.
13.40	Top of rocky spur slopes SE. Descend 146 ft. over SW. slope.
25.00	Foot of descent in canyon.; leave stony mountainous land bears E. and NW. Enter rolling gravelly land.
26.74	Road bears NW. and SE.
26.94	(1778.04 ft.) Intersect the north line of right-of-way of AT. & SF. Ry. at stake driven by Santa Fe. Ry. Engineers to mark point of cor. No. 4 of Ballast pit Set an iron post 3 ft. long, 2 ins. in diam. with glass bottle at the base for cor. No. 4 of Ballast pit., marked on brass cap
	ATSFRR Cor 4
	1928
	Thence
	Along line 4-1 of bdy. of Tract No. 37. S82°39'E. along chord of curve (2° curve on C.L. of R. of W.) Over rolling sandy land along right-of-way fence
1.46	(96.36 ft.) To point on North line of right-of-way of AT. & SF. Ry.
	Thence
	N89°21'E. along chord of curve (4° curve on C.L. of R. of W.) Along N. side of wire fence line.
4.93	(325.38 ft.) To point on north line of right-of-way of AT. & SF. Ry. on fence line.
	Thence
	N81°20'E. along chord of curve (2° curve on C.L. of R. of W.) Along N. side of wire fence line.
1.46	(96.36 ft.) To point on fence line on north line of right- of-way of AT. & SF. Ry.
	Thence
	N80°20'E. along north line of right-of-way of AT. & SF. Ry. (1700.00 ft.) To point of curve.
25.75	Thence, along S. side of wire fence; S 83°21'E. along chord of curve (2½° curve on C.L. of R. of W.)
20.36	(1343.76 ft.) To point on north line of right-of-way of AT. & SF. Ry.
	Thence

Survey of Tract No. 37 of T. 25 N., R. 10 W.

Chains  
 6.82 S 67°02'E. along north line of right-of-way of AT. & SF. Ry  
 Along wire fence  
 (450.12 ft.) To point of curve.  
 Thence  
 1.58 S 65°47'E. along chord of curve (27° curve on C.L. of R. of W.)  
 Along S. side of wire fence.  
 (104.28 ft.) To point on north line of right-of-way of  
 AT. & SF. Ry.  
 Thence  
 12.15 S 45°46'E. along chord of curve (5° curve on C.L. of R. of W.)  
 Along S. side of wire fence.  
 (801.94 ft.) To point on north line of right-of-way of  
 AT. & SF. Ry.  
 Thence  
 1.58 S 25°45'E. along chord of curve (27° curve on C.L. of R. of W.)  
 (104.28 ft.) To cor. No. 1 on north line of right-of-way  
 the place of beginning.

Boundary of Tract No. 37.

Latitudes, Departures, and Closing Errors.

Line Designated	True course	Distance	Latitudes		Departures	
			N	S	E.	W
East line (1-2)	N24°31'W	50.14	45.62			20.81
North line (2-3)	S80°19'W	46.48		7.82		45.82
West line (3-4)	S 8°21'W	26.94		26.65		3.91
South line (4-1)	S82°39'E. N89°21'E N81°20'E N80°20'E S83°21'E S67°02'E S65°47'E S45°46'E S25°45'E	1.46 4.93 1.46 25.75 20.36 6.82 1.58 12.15 1.58	.06 .22 4.32	.19 2.36 2.66 .65 8.47 1.42	1.45 4.93 1.44 25.38 20.22 6.28 1.44 8.71 .69	
Totals			50.22	50.22	70.54	70.54
			50.22			70.54
	Error in Latitude		0.00			
	Error in Departure				0.00	

Retracement of part of the subdivision lines of T25N.,R10W

This township was surveyed in 1920 by Horace M Muscott and Francis R Ihre, U.S. Transitmen, under Group No. 108 Arizona and no retracement or resurvey is of record.

The following retracements were made for the purpose of determining the points of intersection of the subdivision lines with the boundary of Tract No. 37 (Ballast Pit)

Begin at the cor. of secs. 19, 20, 29, and 30, T25N., R10W., which is an iron post 2 ins. in diam. firmly set in a mound of stone and properly marked on brass cap. April 24, 1928. At 8<sup>h</sup> 00<sup>m</sup> a.m., app. time set off 35°32' N. on the lat. arc 12°56' N. on the decl. arc and determine a meridian with the solar, whence Cor. No. 3 of the Ballast Pit bears N75°55' W. 8.45 chs. dist.

40.02 Thence S 0°3' E. on a random line bet. secs. 29 and 30. (N½) Fall 2½ lks. W. of the ¼ sec. cor., which is an iron post 1 in. in diam. projecting 14 ins. above ground with brass cap properly marked, and witnessed by two bearing trees. True course and dist. of N. ½ of line bet. secs. 29 and 30 are therefore, N0°5' W. 40.02 chs.

14.78 Thence, from sec. 30. N 0°5' W., on true line, bet. secs. 29 and 30 (N. ½) Center line of right-of-way of AT. & SF. Ry., bears N80°20' E. and S80°20' W.

16.32 Intersect the north line of right-of-way of AT. & SF. Ry. 4.41 chs. (292.2 ft.) N80°20' E. of point of 2° curve. At point of intersection, Set an iron post 3 ft. long, 1 in in diam. with broken pottery at base, 28 ins. in the ground for closing cor. of secs. 29 and 30 on boundary of Tract No. 37., marked on brass cap.

ATSFR  
S30 | S29  
T25N | R10W  
CC  
1928

40.02 The cor. of secs. 19, 20, 29, and 30.

39.97 From the cor. of secs. 19, 20, 29, and 30. S89°54' W. on a random line bet. secs. 19 and 30. (E½) Intersect the ¼ sec. cor. which is an iron post 1 in. in diam. firmly set in a mound of stone, properly marked on brass cap, and witnessed by two bearing trees? True course and dist. of E. ½ of line bet. secs. 19 and 30 are therefore, N89°54' E. 39.97 chs.

31.63 Thence N89°54' E., on true line, bet. secs. 19 and 30 (E½) Intersect line 3-4 of boundary of Tract No. 37 at 2.06 chs. S8°21' W. of cor. No. 3 At point of intersection, Set an iron post 3 ft. long, 1 in in diam. 6 ins. in the ground to bedrock, supported in a mound of stone for closing cor. of secs. 19 and 30 on bdy. of Tract No. 37., marked on brass cap

T25N | A  
T | T  
S | S  
R10W | R  
R | R  
1928



Retracement of part of the Subdivision lines of T25N.,R10W

Chains	<p>from which</p> <p>A pinion 14 ins. in diam. bears S18<math>\frac{1}{2}</math>°W.124 lks. dist., marked T25N.,R10W.,S30 CC BT.</p> <p>A cedar 6 ins. in diam.bears N60<math>\frac{1}{2}</math>°W.77 lks. dist., marked T25N.,R10W.,S19 CC BT.</p> <p>39.97 The cor. of secs.19,20,29,and 30.</p>
39.97	<p>From the cor. of secs.19,20,29,and 30,</p> <p>N0°03'W, on a random line, bet. secs.19 and 20. (S<math>\frac{1}{2}</math>)</p> <p>Fall 2 lks. E. of the <math>\frac{1}{4}</math> sec.cor. which is an iron post 1 in. in diam.supported in a mound of stone with brass cap properly marked. and witnessed by two bearing trees.</p> <p>True course and dist. of S<math>\frac{1}{2}</math> of line bet. secs.19 and 20 are therefore, N0°5'W., 39.97chs.</p> <p>Thence, from sec. sec.</p> <p>36.57 S0°5'E, on true line, bet. secs.19 and 20 (S<math>\frac{1}{2}</math>)</p> <p>Intersect line 2.53 of body of Tract No.37 at 8.14 chs.</p> <p>N80°19'E. of cor. No.3</p> <p>At point of intersection, Set an iron post 3 ft. long, 1 in in diam. over cross (x) on limestone ledge, supported in a mound of stone for closing cor. of secs. 19 and 20., marked on brass cap</p> <p style="text-align: center;">CC T25N   R10W S19   S20 ----- ATSFRR 1928</p>
39.97	<p>from which</p> <p>A cedar 4 ins. in diam. bears N26<math>\frac{1}{2}</math>°E.90 lks. dist., marked T25 N.,R10W.,S20 CC BT.</p> <p>A cedar 12 ins. in diam. bears N71<math>\frac{1}{2}</math>°W.126 lks. dist., marked T25N.,R10W.,S19 CC BT.</p> <p>39.97 The cor. of secs.19,20,29,and 30.</p>
40.10	<p>From the cor. of secs.19,20,29,and 30,</p> <p>S89°55'E., on a random line, bet. secs.20 and 29 (W<math>\frac{1}{2}</math>)</p> <p>Fall 1 lk.N. of the <math>\frac{1}{4}</math> sec. cor. which is an iron post, 1 in. in diam. set in a mound of stone, properly marked on brass cap and witnessed by two bearing trees.</p> <p>True course and dist. of W<math>\frac{1}{2}</math> of line bet. secs. 20 and 29 are therefore, N89°54'W., 40.10 chs.</p>
39.95	<p>Thence,</p> <p>S89°55'E, on a random line, bet. secs.20 and 29 (E<math>\frac{1}{2}</math>)</p> <p>Fall 2 lks. N. of the cor. of secs.20,21,28, and 29, which is an iron post 2 ins. in diam. firmly set in a mound of stone, properly marked on brass cap and witnessed by four bearing trees.</p> <p>True course and dist. of E<math>\frac{1}{2}</math> of line bet. secs.20 and 29 are therefore, N89°53'W., 39.95 chs.</p>
37.80	<p>Thence, from cor. of secs.20,21,28, and 29</p> <p>N89°53'W., on true line, bet. secs.20 and 29 (E<math>\frac{1}{2}</math>)</p> <p>Intersect line 2.53 of body of Tract No.37 at 10.92 chs.</p> <p>S24°31'E. of cor. No.2</p>

## Retracement of part of the subdivision lines of T25N.,R10W

## Chains

At the point of intersection, Set an iron post 3 ft. long  
1 in. in diam. 15 ins. in the ground to bedrock,  
supported in a mound of stone for closing cor. of  
secs. 20 and 29, marked on brass cap

A	
T	T25N
S	S20
F	S29
R	R10W
R	

1928

from which.

A cedar 6 ins. in diam. bears  $N9\frac{3}{4}^{\circ}E$ . 99 lks. dist.,  
marked T25N., R10W., S20 CC BT.

A cedar 6 ins. in diam. bears  $S64\frac{1}{4}^{\circ}W$ . 92 lks. dist.,  
marked T25N., R10W., S29 CC BT.

39.95 The  $\frac{1}{4}$  sec. cor. of secs. 20 and 29.

Thence

109.54 ft. on true line bet. secs. 20 and 29 (W+)

40.10 Intersect the cor. of secs. 19, 20, 29, and 30.



CERTIFICATE OF UNITED STATES SURVEYOR.

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 151, Arizona bearing date of the 20th day of March, 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, retraced all those parts or portions of the Subdivision lines of Township 25 North, Range 10 West and surveyed all those parts or portions of the Boundary of Tract No. 37 of Township 25 North, Range 10 West of the Gila and Salt River Base and Meridian, in the State of Arizona, which are represented in the foregoing field notes <sup>and by diagram on page 1 hereof</sup> as having been executed by me, and under my direction; and that all the corners of said retracement and 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 151, 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: Phoenix, Arizona.  
 Date: August 3, 1928.

*Sidney E. Blout*  
 U.S. Cadastral Engineer.

APPROVAL.

OFFICE OF U. S. SUPERVISOR OF SURVEYS,

Denver, Colorado, Sept. 27, 1928

The foregoing field notes of the retracement of Part of the Subdivision lines of Township 25 North, Range 10 West and of the survey of the Boundary of Tract No. 37 (Ballast Pit of the A.T. & S.F. Ry.) in the Hualpai Indian Reservation, sections 19, 20, 29 and 30, of Township 25 North, Range 10 West of the Gila and Salt River Base and Meridian, in the State of Arizona executed by Sidney E. Blout, U.S. Cadastral Engineer under his special instructions dated March 20, 1928, for Group 151 Arizona, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the retracements and surveys they describe, are hereby approved.

*Martin Jensen*  
 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.~~