U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  

FIELD NOTES  

EXCHANGE  
SURVEY NO. 664  

SITUATED IN THE  
COCOPINO  
NATIONAL FOREST  

ADMINISTRATIVE DISTRICT NO.  

In Section 21, surveyed, Township 21 N., Range 10 E.  

Retracement N/2 E. and W. Boundaries Sec. 21, T. 21 N., R. 10 E.  

of the  
Gila and Salt River Base and Meridian.  

State of  
ARIZONA  

Exchange  
Applicant for  
Rabbitt Bros. Lands, Inc.  

Residence  

Application No. dated 19  
List No. dated 19  

Applicant for survey  

Residence  
H. N. No. dated 19  

Land Office  

Survey executed by Thomas F. Myers,  
Associate C. E. Inspector, Forest Service  

Under special instructions dated June 30, 1938  

Survey commenced July 18, 1938  

Survey completed July 21, 1938  

We hereby certify that we assisted Thomas F. Myers, Associate C. E. Inspector, Forest Service in surveying all those parts or portions of the Exchange Survey No. 664, in the State of Arizona which are represented in the following field notes as having been surveyed by him and under his direction; and that said survey has been in all respects, to the best of our knowledge and belief, well and faithfully surveyed, and the corner monuments established, according to the instructions furnished by the United States Surveyor General for Arizona.

NOTE: It would have been very expensive and inconvenient to appear before an officer to administer oaths to assistants; hence, they were taken by the Associate C. E. Inspector.

Subscribed and sworn to before me this 23rd day of July, 1938.

Thomas F. Myers

OATH OF SURVEYOR.

I, Thomas F. Myers, Associate C. E. Inspector, Forest Service, do solemnly swear that, in strict conformity with the special instructions of the Office of Public Surveys for Arizona, dated June 30, 1938, and the laws of the United States, I have well, faithfully, and truly, in my own proper person, surveyed a tract of land, No. 664, Office of Public Surveys, for Arizona, dated March 20, 1922 and June 16, 1938, and the same to be known as the Coconino National Forest, in the Gila & Salt River Base & meridian, Arizona, and the related retracements and resurveys and section subdivisions, which are represented in the following field notes as having been surveyed by me; and I further solemnly swear that all the corners of said survey have been established and perpetuated in strict accordance with the stated special instructions, and in the specific manner described in the field notes, and that the following are the original field notes of such survey.

Th omas F. Myers

Associate C. E. Inspector, Forest Service.

Subscribed and sworn to before me this 20th day of July, 1938.

My Commission Expires July 2, 1938

Oscar R. C. Buyer, Notary Public
Chains

The tract of land embraced in this survey is in private ownership and was surveyed for acquisition by the United States under the Acts of March 20, 1932 and June 16, 1938.

Applicant for Exchange - Rabbit Bros. Lands, Inc.

The land embraced in this survey is situated in Sec. 21, T. 21 N., R. 10 E., surveyed and accepted, Gila and Salt River Base and Meridian, Coconino National Forest, Arizona.

Surveyed under special instructions from the Public Survey Office for Arizona, dated June 30, 1938 and designated as Exchange Survey No. 664.

The survey was commenced July 16, 1938 and executed with a Buff and Buff transit No. 10019.

I test the adjustments of the transit and make all necessary corrections. All distances are horizontal and were reduced from measurements made directly on the slope with a 400 link steel tape. The slope angles were determined with a clinometer.

July 21, 1938

At my station, which is approximately 11 chs. North/ the 1/4 cor. bet. Sec's 20 and 21, T. 21 N., R. 10 E., C.R.S.R.B.M. hereinafter described, in lat. 35° 11' 37" N., long. 111° 20' 30" W. from Forest Service Base Map, I observe Polaris as follows:

Reference mark best of star - a stake set in ground about 8000 chs. northerly of my station.

<table>
<thead>
<tr>
<th>Match Time</th>
<th>Telescope</th>
<th>Angle From Star to Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 h. 24 m. 09 s.</td>
<td>Direct</td>
<td>0° 24'</td>
</tr>
<tr>
<td>7 h. 28 m. 26 s.</td>
<td>Reversed</td>
<td>0° 24'</td>
</tr>
</tbody>
</table>

Mean 7 h. 24 m. 43 s.
25 m. 22 E. cor. to l.m.t.
6 h. 49 m. 31.1 m. l.m.t. obsn.

My watch is set for 105th Meridian Standard Time, and compared with Western Union time today at Flagstaff was found to be correct.

Greenwich H. C. Polaris July 22, 1938
Corr. for long.

l.m.t. H. C. Polaris July 22, 1938
l.m.t. obsn. Polaris July 21, 1938

Hour Angle
Azimuth of Polaris
Bearing of Reference Mark

10 h. 44' 44.4 m.
0° 25' 35" E.
N. 0° 0' 23" W.
CHAINS

Match Time | Telescope | Angle from Star to Mark
--- | --- | ---
7 h. 23 m. 36 s. | Direct | 0° 25'
7 h. 27 m. 31 s. | Reversed | 0° 25'
Mean 7 h. 26 m. 39 s. | | 0° 25'
26 m. 32 s. corr. to I.M. | | |
7 h. 01 m. 41 s. I.M. obsn.

I.M. obsn. Polaris July 22, 1938 | 5 h. 43.7 m. am |
I.M. obsn. Polaris July 22, 1938 | 7 h. 1.7 m. pm |

Hour Angle | 10 h. 42 m.
Azimuth of Polaris | 0° 24.3' E.
Bearing of Reference Mark | N. 0° 49' 49" W.

Mean bearing of reference mark is N. 0° 0' 32" W. I accept bearing of reference mark as N. 0° 01' W.

NOTE: The courses of this survey were run on an assumed azimuth and subsequently corrected to the Meridian as above determined. All courses were carried forward by sustained angulation.

July 21, 1938.

RETRACMENTS

July 15, 1938

Beginning at the 1/4 cor. bet. Sec's 21 and 22, T. 21 N., R. 10 E.
An iron post 1 in. in dia. 10 ins. above ground with brass cap marked and witnessed as described by Office of Public Surveys.
Thence N. 0° 02' W.

Retracing line bet. Sec's 21 and 22 N/2.

40.00
Fall 7 lbs. West of cor. Sec's 15, 16, 21 and 22.
An iron post 2 ins. in dia. 24 ins. above ground in mound of stone with brass cap marked and witnessed as described by Office of Public Surveys.
Thence N. 0° 04' W.

On true line bet. Sec's 21 and 22 N/2.

2.05
Bottom canyon Young's Creek Course E. asc. 40 ft.

3.20
South rim rock Young's Canyon bra. E. and W.
Thence over rolling land through dense pinon and cedar.

28.31
A.T.& S.F. Ry. fence along right-of-way North side of track bra. N. 89° 39' W. and E. 89° 39' E.
Chains
29.63 Center A.T.& S.F. Ry. track bears N. 89° 39' W. and S. 89° 39' E. 
(North main line or East bound track)
29.63 Center A.T.& S.F. Ry. track brs. N. 89° 39' W. and S. 89° 39' E. 
(South main line or West bound track) Set temp. pt.
31.35 A.T.& S.F. Ry. fence along right-of-way brs. N. 89° 39' W. and 
S. 89° 39' E. Set point for Cor. No. 3 of this survey hereinafter 
described.
40.00 1/4 cor. bet. Sec's 21 and 22 previously described.

From 1/4 cor. bet. Sec's 20 and 21, T. 21 N., R. 10 E.
An iron post 1 in. in dia. 10 ins. above ground with brass cap 
marked and witnessed as described by Office of Public Surveys.
Thence N. 0° 03' W.
Retracing line bet. Sec's 20 and 21, N/2.
a cedar tree 12 ins. in dia. marked and witnessed as 
described by Office of Public Surveys.

NOTE: Pinon bearing trees N. 38 3/4° E. 27 lbs. and 
N. 88° W. 42 lbs. have been fire-killed by wood cutters 
burning brush. Trunks of trees have been charred and markings 
nearly obliterated.
Thence S. 0° 03' E.
On true line over level land through pinon and cedar.
27.65 A.T.& S.F. Ry. right-of-way fence brs. N. 89° 39' W. and & S. 89° 39' E.
29.16 Center A.T.& S.F. Ry. track brs. N. 89° 39' W. and S. 89° 39' E. 
(North main line or East bound track)
29.36 Center A.T.& S.F. Ry. track brs. N. 89° 39' W. and S. 89° 39' E. 
(South main line or West bound track) Set temp. pt.
30.66 A.T.& S.F. Ry. fence along right-of-way brs. N. 80° 39' W. and 
S. 80° 39' E. Set point for Cor. No. 2 of this survey hereinafter 
described.
39.98 The 1/4 cor. bet. Sec's 20 and 21 previously described.

Thence East.
Over level land through dense pinon and juniper.

Fall 3 lks. S. of 1/4 cor. bet. Sec's 21 and 22 previously described.

True line is N. 89° 59' E. 79.98 chs.

July 16, 1936.

Retrace Center Line of A.T.& S.F. Ry. Right of Way through Sec. 21, T. 21 N., R. 10 E.

July 19, 1936.

Beginning at a point in center of South main line track (West bound track) on line bet. Sec's 21 and 22 previously determined.

Thence N. 89° 59' W.

Along center South main track.

Intersect point on line bet. Sec's 20 and 21 previously determined.

BOUNDARIES OF SURVEY

Beginning at the 1/4 cor. bet. Sec's 20 and 21 previously described.

I adopt the 1/4 cor. for Cor. No. 1 of this survey and alongside to East set a limestone 26x10x6 ins. 16 ins. in ground marked 1 ES 664 on E. face. Whence from cor.

a juniper 7 ins. in dia. brs. N. 2° E. 30 lks. dist. blazed and scribed 1 ES 664 + BT

a juniper 6 ins. in dia. brs. S. 46° 30' E. 81 lks. dist.

blazed and scribed 1 ES 664 + BT

Lat. 35° 11' 30'' N. Long. 111° 20' 30'' W. from Forest Service Base Map.

Mag. decl. 8:00 am 14° 49' E. Mean mag. decl. 14° 44.8' E.

Thence N. 0° 03' W.

Along sec. line bet. Sec's 20 and 21, N/2.

To Cor. No. 2 and closing cor. on line bet. Sec's 20 and 21.

Deposit a limestone 3x3x4 ins. marked with a + 14 ins. in ground over which set a limestone 20x10x4 ins. marked + on top for point CC on East face, and 2 ES 664 on SE face. Raise mound of stone 3 ft. base 2 ft. high on line 3 ft. S. 69° 39' E. of cor. Whence from cor.

a pinon 12 ins. in dia. brs. S. 73° W. 84 lks. dist. blazed
Chains and scribed CC 2 ES 664 + BT
   a juniper 8 ins. in dia. brs. S. 19° E. 13 lks. dist. blazed
   and scribed CC 2 ES 664 + BT
   1 a juniper 9 ins. in dia. brs. S. 27° E. 187 lks. dist. blazed
   and scribed CC 2 ES 664 + BT

1/4 cor. bet. Sec's 20 and 21 previously described brs. S. 0° 03' E. 9.10 chs. dist.
Cor. Sec's 16,17,20 and 21 previously described brs. N. 0° 05' W. 30.88 chs. dist.

Thence S. 69° 39' E.
Along S. bdy. of A.T.&S.F. Ry. right-of-way 100 ft. dist. from center of South main track, along Ry. fence.

79.97

To Cor. No. 3 and closing corner on line bet. Sec's 21 and 22.
Deposit a limestone 4x2x2 ins. marked with a + 14 ins. in ground over which set a limestone 24x2x2 ins. marked + on top for exact point. C3 on W. face and 5 ES 664 on SW face. Raise mound of stone 3 ft. base 2 ft. high on line N. 69° 39' W. 3 ft. dist.

Thence from cor.
   a juniper 10 ins. in dia. brs. S. 62° 30' W. 183 lks. dist. blazed and scribed CC 3 ES 664 + BT
   a juniper 6 ins. in dia. brs. S. 30° W. 119 lks. dist. blazed and scribed CC 3 ES 664 + BT

1/4 cor. bet. Sec's 21 and 22 previously described brs. S. 0° 04' W. 8.65 chs. dist.
Cor. Sec's 15,15,21 and 22 previously described brs. N. 0° 04' E. 31.35 chs. dist.

Thence S. 0° 04' W.
Along line bet. Sec's 21 and 22 N/3
Over level land through scattering pinon and cedar.

8.65

To Cor. No. 4
Identical with 1/4 cor. bet. Sec's 21 and 22 previously described
I adopt 1/4 cor. for Cor. No. 4 of this survey and alongside to West set limestone 20x4x6 ins. 12 ins. in ground. Marked 4 ES 664
HOMESTEAD ENTRY
SURVEY NO. 664
EXCHANGE
COCONINO NATIONAL FOREST
STATE OF ARIZONA

<table>
<thead>
<tr>
<th>Chains</th>
</tr>
</thead>
<tbody>
<tr>
<td>On West face. Whence from cor.</td>
</tr>
<tr>
<td>a pinon 5 ins. in dia. brs. S. 60° 30' W. 7 lks. dist. blazed and scribed 4 ES 664 + BT</td>
</tr>
<tr>
<td>a pinon 9 ins. in dia. brs. N. 13° W. 164 lks. dist. blazed and scribed 4 ES 664 + BT</td>
</tr>
</tbody>
</table>

Thence S. 89° 59' W.
Along latitudinal 1/4 sec. line through center sec.
Over level land through dense pinon and cedar.

72.96
To Cor. No. 1 previously described and place of beginning.

July 19, 1938.

AREA

Area of Survey 70.97 acres.

Survey completed July 21, 1938.

Thomas J. Neely
Associate C. F. Inspector,
Forest Service.
### TABLELING AND CALCULATIONS OF EXCHANGE

#### SURVEY NO. 664, STATE OF ARIZONA

<table>
<thead>
<tr>
<th>CORNERS</th>
<th>BEARING</th>
<th>DISTANCE</th>
<th>LATITUDES</th>
<th>DEPARTURES</th>
<th>DOUBLE M. D.</th>
<th>N. AREAS</th>
<th>S. AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lat. Ctr. Line Sec. 21</td>
<td>S. 89° 59' W.</td>
<td>79.98</td>
<td>02</td>
<td>79 98</td>
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<tr>
<td>N/2 W Bay.</td>
<td>N. 0° 03' W.</td>
<td>39.98</td>
<td>02</td>
<td>80 00</td>
<td>04</td>
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<tr>
<td>N Bay. (Record)</td>
<td>S. 89° 59' E.</td>
<td>80.00</td>
<td>02</td>
<td>80 00</td>
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<tr>
<td>N/2 E Bay.</td>
<td>S. 0° 04' W.</td>
<td>40.00</td>
<td>02</td>
<td>80 00</td>
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<td>239.96</td>
<td>39 98</td>
<td>40 04</td>
<td>80 00</td>
<td>80 07</td>
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**Closure N/2 Sec. 1/2608**
<table>
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<tr>
<th>CORNERS</th>
<th>BEARING</th>
<th>DISTANCE</th>
<th>LATITUDES</th>
<th>DEPARTURES</th>
<th>DOUBLE M. D.</th>
<th>N. AREAS</th>
<th>S. AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>NORTH</td>
<td>SOUTH</td>
<td>EAST</td>
<td>West</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>9.10</td>
<td>9.10</td>
<td>79.97</td>
<td>0.01</td>
<td>0.01</td>
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<td>2 - 3</td>
<td>E. 89° 39' E.</td>
<td>79.97</td>
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<td>49.75</td>
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<td>3 - 4</td>
<td>S. 0° 01' 4 E.</td>
<td>8.65</td>
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<td>8.65</td>
<td>79.98</td>
<td>0.01</td>
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<tr>
<td>4 - 1</td>
<td>S. 89° 59' W.</td>
<td>79.98</td>
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<td>79.98</td>
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<tr>
<td></td>
<td></td>
<td>177.70</td>
<td>9.10</td>
<td>9.16</td>
<td>79.97</td>
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<td></td>
<td>9.10</td>
<td>79.97</td>
<td>0.00</td>
<td>0.00</td>
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</table>

Error in lat. and dep. 0.06 0.03
Closing error 1/2643
APPROVAL
PUBLIC SURVEY OFFICE

Phoenix, Arizona, January 27, 1938

The foregoing field notes of

EXCHANGE SURVEY NO. 664

executed by Thomas F. Myers, Associate C.E. Inspector, Forest Service
under his special instructions, dated June 30, 1938, having been critically examined, and the necessary corrections and explanations made, the said field notes, and the surveys they describe, are hereby approved.

[Signature]
Office Cadastral Engineer

I certify that the foregoing transcript of the field notes of the above-described survey in the State of Arizona, has been correctly copied from the original notes on file in this office.

[Signature]
Office Cadastral Engineer