

ORIGINAL

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(April 1965)  
(formerly 4-679)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

# FIELD NOTES

OF THE

DEPENDENT RESURVEY OF

TRACT 37

(BETATAKIN SECTION, NAVAJO NATIONAL MONUMENT)

AND THE SURVEY OF

TRACT 38

IN TOWNSHIP 38 NORTH, RANGE 17 EAST

Of the GILA AND SALT RIVER Meridian,

In the State of ARIZONA

## EXECUTED BY

LEONARD W. MURPHY

CADASTRAL SURVEYOR

Under special instructions dated February 24, 1967, which provided for the surveys included under Group Number 491, approved February 24, 1967, and assignment instructions dated February 24, 1967.

Survey commenced March 1, 1967

Survey completed March 10, 1967

BOOK 4795  
INDEX DIAGRAM

Township 38 North, Range 17 East

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1A

Township 38 North, Range 17 East,  
Gila and Salt River Meridian, Arizona

CHAINS

The following field notes are those of a dependent resurvey of Tract 37 (Betatakin Section, Navajo National Monument) and a survey of Tract 38 in unsurveyed Township 38 North, Range 17 East, Gila and Salt River Meridian, Arizona.

The boundaries of Tract 37 (Betatakin Section, Navajo National Monument) were originally surveyed by W. B. Douglass in 1909.

The surveys were executed in accordance with the specifications set forth in the Manual of Surveying Instructions 1947, and the special instructions dated February 24, 1967. The directions of all lines were determined by solar observations and all lines refer to the true meridian. The adjusted horizontal distances, only, are entered in this field note record.

The geographic position of Cor. 4 of Tract 37 (Betatakin Section, Navajo National Monument), identical with Cor. 8 of Tract 38, derived from the tie made to U.S. Coast and Geodetic Survey station "Coal Mine" by Boyd Owens, cadastral surveyor, in 1962 is:

Latitude: 36° 40.9' N.  
Longitude: 110° 32.3' W.

The magnetic declination as derived from the U.S. Coast and Geodetic Survey Isogonic Chart 1960 is: 14½° E.

Dependent Resurvey of Tract 37  
(Betatakin Section, Navajo National Monument)  
Township 38 North, Range 17 East,  
Gila and Salt River Meridian, Arizona

Re-establishment of the Survey Executed by  
W.B. Douglass in 1909

Beginning at Cor. 1, identical with Cor. 7 of Tract 38, monumented with a cross at the base of a 300 ft. vertical cliff, with the markings NIR on the E. side and USNM on the W. side.

from which

A pinon, 10 ins. diam., bears N. 27¼° E., 55½ lks. dist., mkd. COR NO 1 NIR BT.

A red fir, 10 ins. diam., bears S. 78¾° W., 55 lks. dist., mkd. COR NO 1 NIR BT.

A juniper, 9 ins. diam., bears N. 43¼° W., 56 lks. dist., mkd. COR NO 1 USNM BT.

At the corner point, in the center of the cross

Set a brass tablet in concrete into a drill hole, mkd.

T38N R17E  
COR 1  
TR 37 | NIR  
COR 7  
TR 38  
1967

Dependent Resurvey of Tract 37  
 (Betatakin Section, Navajo National Monument)  
 Township 38 North, Range 17 East  
 Gila and Salt River Meridian, Arizona

CHAINS	
	Thence, N. 0° 13' E., on line 1-2. Descend through scattering timber.
7.50	Stream, 3 lks. wide, course E., begin ascending.
14.00	Foot of vertical cliff, 500 ft. high.
16.40	Top of cliff.
16.53	Witness point on line 1-2 monumented at the request of the National Park Service. Set a brass tablet in concrete into a drill hole, mkd.  T38N R17E W P TR 37   USNM   NIR 1967  build a mound of stone, 3 ft. base, 2 ft. high, S. of the tablet.  Ascend along E. slope of rock outcrop.
29.23	Tsegi Point road, bears E. and W.
30.63	A sandstone, 24x9x4 ins., mkd. WP COR 2 on W. face, firmly set in a mound of stone. This monument not recorded in the original field notes.  Set an iron post, 30 ins. long, 2½ ins. diam., 6 ins. in the ground to bedrock, in a mound of stone, 3 ft. base, to top, with brass cap mkd.  T38N R17E W P TR 37   NIR 1967  bury the sandstone alongside the iron post.
31.00	Descend vertical cliff, approximately 500 ft. down.
40.13	Cor. 2, monumented with a sandstone, 24x12x4 ins., mkd. COR 2 on S. face, NIR on N. face and USNM on W. face, firmly set.  from which  A fallen red fir, 8 ins. diam., bears N. 20¾° E., 41 lks. dist., mkd. COR NO 2 NIR BT.  A juniper, 18 ins. diam., bears S. 62½° E., 42 lks. dist., mkd. COR NO 2 NIR BT.  A juniper, 17 ins. diam., bears S. 30° W., 21 lks. dist., mkd. COR NO 2 USNM ET (Record: S. 30¼° W., 22 lks).  A juniper, 14 ins. diam., bears N. 46° W., 52 lks. dist., mkd. COR NO 2 NIR BT (Record: N. 46¾° W.)

Dependent Resurvey of Tract 37  
 (Betatakin Section, Navajo National Monument)  
 Township 38 North, Range 17 East,  
 Gila and Salt River Meridian, Arizona

CHAINS	
	<p>At the corner point</p> <p>Set an iron post, 30 ins. long, 2<math>\frac{1}{2}</math> ins. diam., 25 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">T38N R17E                  COR 2                  TR 37   NIR                  1967</p> <p>bury the sandstone alongside the iron post and deposit glass at the base of the iron post.</p> <p>Thence,</p> <p>S. 89° 58' W., on line 2-3.</p>
5.40	Top of vertical cliff, approximately 450 ft. high.
5.56	<p>Witness Point on line 2-3 monumented at the request of the National Park Service.</p> <p>Set an iron post, 30 ins. long, 2<math>\frac{1}{2}</math> ins. diam., 25 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">T38N R17E                  NIR                  ——— WP                  USNM                  1967</p> <p>build a mound of stone, 3 ft. base, 2 ft. high, W. of the iron post.</p> <p>Ascend along E. slope.</p>
24.00	Over nearly level land.
40.36	<p>Cor. 3, monumented with an iron post, 24 ins. long, <math>\frac{1}{2}</math> diam., with brass cap mkd. NPS DI, firmly set.</p> <p>from which</p> <p>A pinon, 11 ins. diam., bears N. 35<math>\frac{1}{2}</math>° E., 21 lks. dist., mkd. COR NO 3 NIR BT.</p> <p>A juniper, 10 ins. diam., bears S. 9<math>\frac{1}{4}</math>° E., 56 lks. dist., mkd. COR NO. 3 USNM BT.</p> <p>A pinon, 9 ins. diam., bears S. 9<math>\frac{1}{2}</math>° W., 36 lks. dist., mkd. COR NO 3 NIR BT.</p> <p>A pinon, 10 ins. diam., bears N. 89<math>\frac{1}{2}</math>° W., 102 lks. dist., mkd. COR NO 3 NIR BT(Record 105 lks. dist).</p> <p>At the corner point, over the inverted post</p> <p>Set an iron post, 30 ins. long, 2<math>\frac{1}{2}</math> ins. diam., 25 ins. in the ground, with brass cap mkd.</p> <p style="text-align: center;">T38N R17E                  COR 3                  NIR   TR 37                  USNM                  1967</p> <p>Thence,</p>

Dependent Resurvey of Tract 37  
 (Betatakin Section, Navajo National Monument)  
 Township 38 North, Range 17 East,  
 Gila and Salt River Meridian, Arizona

CHAINS	
	<p>S. 0° 09' E., on line 3-4.</p>
	<p>Ascend gradually over rocky ground.</p>
6.00	<p>Top of slope; descend gradually.</p>
25.10	<p>Bladed road, bears NE. and SW.</p>
40.06	<p>Cor. 4, identical with Cor. 8 of Tract 38, monumented with a sandstone, 18x14x4 ins., mkd. COR NO 4 on N. face, NIR on S. face and USNM on E. face, firmly set.</p>
	<p>from which</p> <p style="padding-left: 40px;">A pinon, 7 ins. diam., bears N. 62<math>\frac{3}{4}</math>° E., 11 lks. dist., mkd. COR NO 4 USNM BT.</p> <p style="padding-left: 40px;">A juniper, 19 ins. diam., bears S. 52° E., 10 lks. dist., mkd. COR NO 4 NIR BT.</p> <p style="padding-left: 40px;">A juniper, 21 ins. diam., bears S. 17° W., 40 lks. dist., mkd. COR NO 4 NIR BT.</p> <p style="padding-left: 40px;">A pinon, 10 ins. diam., bears N. 20° W., 14 lks. dist., mkd. COR NO 4 NIR BT.</p>
	<p>At the corner point</p>
	<p>Set an iron post, 30 ins. long, 2<math>\frac{1}{2}</math> ins. diam., 25 ins. in the ground, with brass cap mkd.</p>
	<p style="text-align: center;">T38N R17E                    COR 4                    TR 37</p> <p style="text-align: center;">TR 38          COR 8          1967</p>
	<p>bury the sandstone alongside the iron post.</p>
	<p>Thence,</p>
	<p>S. 89° 56' E., on line 1-4.</p>
	<p>Descend E. slope.</p>
12.30	<p>Witness point on line 1-4 monumented at the request of the National Park Service.</p>
	<p>Set an iron post, 30 ins. long, 2<math>\frac{1}{2}</math> ins. diam., 5 ins. in the ground, over an X on bedrock, in a mound of stone, 3 ft. base, to top, with brass cap mkd.</p>
	<p style="text-align: center;">T38N R17E                    TR 37 WP                    TR 38                    1967</p>
	<p>build a mound of stone, 3 ft. base, 2 ft. high, E. of the iron post.</p>
12.40	<p>Descend vertical cliff, approximately 500 ft. down.</p>
40.12	<p>Cor. 1, identical with Cor. 7 of Tract 38, the point of beginning.</p>

Survey of Tract 38  
Township 38 North, Range 17 East,  
Gila and Salt River Meridian, Arizona

CHAINS

Point for Cor. 1 determined longitudinally on line 3-4 of Tract 37 and latitudinally at mid-point in latitude between Cors. 3 and 4 of Tract 37.

Set an iron post, 30 ins. long, 2½ ins. diam., 25 ins. in the ground, with brass cap mkd.

T38N R17E  
NIR | TR 37  
COR 1 |  
TR 38 |  
1967

from which

Cor. 3 of Tract 37 hereinbefore described, bears N. 0° 09' W., 20.03 chs. dist.

Deposit glass at the base of the iron post.

Thence,

WEST,

1.54 Bladed road bears N. and S., descend gentle W. slope.

20.00 Point for Cor. 2.

Set an iron post, 30 ins. long, 2½ ins. diam., 26 ins. in the ground, with brass cap mkd.

T38N R17E  
COR 2  
NIR | TR 38  
USNM |  
1967

Deposit glass at the base of the iron post and build a mound of stone, 3 ft. base, 2 ft. high, S. of the corner.

Thence,

SOUTH.

7.40 Wash, 25 lks. wide, 6 ft. deep, drains SW.

18.00 Bladed road, bears NE. and SW.

23.50 Ascend along W. slope of hill.

30.00 Witness point on line 2-3, monumented at the request of the National Park Service.

Set a copper-coated steel stake, 30 ins. long, ½ in. diam., with brass cap, 1½ ins. diam., mkd.

T38N R17E  
W P  
1980 Ft |  
NIR | TR 38  
USNM |  
1967

from which

Survey of Tract 38  
 Township 38 North, Range 17 East,  
 Gila and Salt River Meridian, Arizona

CHAINS	
	NW. cor. of residence house no. 3 bears N. 55° 49' E., 2.33 chs. dist.
	SW. cor. of residence house no. 4 bears N. 69° 16' E., 1.45 chs. dist.
	SW. cor. of residence house no. 5 bears S. 44° 22' E., 1.85 chs. dist.
32.00	Descend gentle S. slope through timber.
60.00	Point for Cor. 3.  Set an iron post, 30 ins. long, 2½ ins. diam., 25 ins. in the ground, with brass cap mkd.  <div style="text-align: center;">                     T38N R17E                      COR 3                      NIR   USNM                      TR 38                      1967                 </div> from which  NW. cor. of pump house bears N. 4° 39' E., 3.29 chs. dist.  Deposit glass at the base of the iron post.  Thence,  EAST.  Ascend gentle W. slope through timber.
27.60	Witness point on line 3-4 monumented at the request of the National Park Service.  Set a brass table in concrete into a drill hole, mkd.  <div style="text-align: center;">                     TR 38                      USNM                      1821.6 FT <sup>WP</sup>                      NIR                      T38N R17E                      1967                 </div>
28.02	Center of Park Service road, bears N. 29° 39' E., and S. 29° 39' W.
28.60	Witness point on line 3-4 monumented at the request of the National Park Service.  Set a copper-coated steel stake, 30 ins. long, ½ in. diam., 25 ins. in the ground, with brass cap, 1½ ins. diam., mkd.  <div style="text-align: center;">                     TR 38                      USNM                      1887.6 FT <sup>WP</sup>                      T38N R17E                      1967                 </div>
34.00	Descend steep E. slope into deep canyon.

Survey of Tract 38  
Township 38 North, Range 17 East,  
Gila and Salt River Meridian, Arizona

CHAINS	
40.00	<p>Point for Cor. 4, falls on side of vertical cliff.</p> <p>Thence,</p> <p>NORTH.</p> <p>Ascend along E. slope.</p> <p>4.90 N. rim of deep canyon.</p> <p>5.00 Selected point for the witness cor. of Cor. 4.</p> <p>Set an iron post, 30 ins. long, 2½ ins. diam., 25 ins. in the ground, with brass cap mkd.</p> <div style="text-align: center;"> <p>T38N R17E USNM TR 38   NIR ↓ W C COR 4 1967</p> </div> <p>build a mound of stone, 3 ft. base, 2 ft. high, N. of the iron post.</p> <p>Continue ascending along E. slope.</p>
20.00	<p>Point for Cor. 5.</p> <p>Set an iron post, 30 ins. long, 2½ ins. diam., 24 ins. in the ground, with brass cap mkd.</p> <div style="text-align: center;"> <p>T38N R17E COR 5   TR 38   NIR USNM   1967</p> </div> <p>Cor. 5 is located on gentle E. slope, 54 lks. S. of Sandal Trail leading to Betatakin Ruins overlook.</p> <p>Thence,</p> <p>EAST,</p> <p>Descend E. slope.</p>
11.20	<p>Witness point on line 5-6 monumented at the request of the National Park Service.</p> <p>Set an iron post, 30 ins. long, 2½ ins. diam., 10 ins. in the ground to bedrock, in concrete, and in a mound of stone, 2 ft. base, to top, with brass cap mkd.</p> <div style="text-align: center;"> <p>T38N R17E USNM TR 38   WP NIR 1967</p> </div> <p>build a mound of stone, 3 ft. base, 2 ft. high, W. of the iron post.</p> <p>Witness point is located on E. slope overlooking deep canyon.</p>

Survey of Tract 38  
 Township 38 North, Range 17 East,  
 Gila and Salt River Meridian, Arizona

CHAINS	
11.30	Descend vertical wall of canyon.
14.00	End major descent, descend through dense undergrowth.
20.00	Point for Cor. 6.
	Set an iron post, 30 ins. long, 2½ ins. diam., 26 ins. in the ground, with brass cap mkd.
	T38N R17E USNM COR 6   NIR TR 38 1967
	build a mound of stone, 2 ft. base, 2 ft. high, W. of the iron post.
	Cor. 6 falls on E. slope 74 lks. W. of a 15 lks. wide wash draining NE. and 48 lks. S. of a 10 lks. wide ravine draining NE.
	Thence,
	N. 0° 29' E.
	Along W. side of canyon, through undergrowth.
19.94	Cor. 7, identical with Cor. 1 of Tract 37, hereinbefore described.
	Thence,
	N. 89° 56' W., on line 1-4 of Tract 37.
40.12	Cor. 8, identical with Cor. 4 of Tract 37, hereinbefore described.
	Thence,
	N. 0° 09' W., on line 3-4 of Tract 37.
20.03	Cor. 1, the point of beginning.
	Tract 38 contains 240 acres.



BOOK 4795

CERTIFICATE OF SURVEY

I, Leonard W. Murphy, HEREBY CERTIFY upon honor that, in pursuance of special instructions bearing date of the 24th day of February, 1967,

I have dependently resurveyed Tract 37 (Betatakin Section, Navajo National Monument) and surveyed Tract 38 in Township 38 North, Range 17 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 said survey has been made in strict conformity with said special instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, and in specific manner described in the foregoing field notes.

May 24, 1967 (Date)

Leonard W. Murphy (Cadastral Surveyor)

(Date)

(Cadastral Surveyor)

CERTIFICATE OF APPROVAL

SUBMITTED FOR APPROVAL JUN 5 1967 Date

BUREAU OF LAND MANAGEMENT, Washington, D. C.

The foregoing field notes of the dependent resurvey of Tract 37 (Betatakin Section, Navajo National Monument) and surveyed Tract 38 in Township 38 North, Range 17 East, Gila and Salt River Meridian, Arizona

executed by Leonard W. Murphy

having been critically examined and found correct, are hereby approved.

NOV 8 1967 (Date)

R. E. Brown Acting (Chief, Division of Engineering)

CERTIFICATE OF TRANSCRIPT

I CERTIFY That the foregoing transcript of the field notes of the above-described surveys in is a true copy of the original field notes.

(Date)

(Chief, Division of Engineering)