



1A

BOOK 5080

# INDEX DIAGRAM

Township 31 NORTH, Range 2 WEST,

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6

CHAINS

The following field notes are those of the dependent resurvey of a portion of the south and west boundaries, and the survey of a portion of the subdivisional lines, Township 31 North, Range 2 West, Gila and Salt River Meridian, Arizona.

The south boundary of the township and a portion of the subdivisional lines were surveyed by W. O. Secor, in 1900. A portion of the west boundary of the township was surveyed by J. C. Dobbins, in 1900.

This survey was executed in accordance with the specifications as set forth in the Manual of Surveying Instructions, 1973, and the Special Instructions dated May 23, 1975, for Group No. 576, Arizona.

Preliminary to the resurvey the lines of the original survey were retraced and search was made for all corners and other calls of record. Identified corners were remonumented in their original positions. Lost corners were restored and monumented at proportionate positions based on the official record. The retracement data were thoroughly verified and only the true line field notes are given herein.

The directions of the lines were determined by polaris and solar observations. They refer to the true meridian.

The geographic position of the southeast corner of the township, as scaled from U. S. Geological Survey quadrangle map, "HAVASUPAI POINT," 1962, is as follows:

Latitude 36° 01.3' N. Longitude 112° 26.4' W.

The mean magnetic declination is 14½° E.

Dependent Resurvey of a Portion of the South Boundary  
T. 31 N., R. 2 W., Gila and Salt River Meridian, Arizona

Restoring the survey executed by W. O. Secor, in 1900

Beginning at the cor. of Tps. 30 and 31 N., Rs. 1 and 2 W., monumented with an iron post, 2½ ins. diam., firmly set, in a mound of stone, 3 ft. base, to top, as described in the field notes of the dependent resurvey of a portion of the S. bdy. in T. 31 N., R. 1 W., executed concurrently under this same group.

N. 89° 43' W., bet. secs. 1 and 36.

Over gently rolling land, through moderate timber and light undergrowth, along a fence, bearing E. and W.

40.14

The 1/4 sec. cor. of secs. 1 and 36, monumented with a limestone, 22 x 12 x 6 ins., firmly set in a mound of stone, 2 ft. base, 1½ ft. high, mkd. 1/4 on N., and 1 on S. faces, from which the remains of the original bearing trees:

A juniper, 10 ins. diam., bears S. 80° E., 10 lks. dist., with scribe marks 1/4 S1 BT visible on open blaze. (Record, S. 30° W.)

Dependent Resurvey, Portion of South Boundary  
T. 31 N., R. 2 W., G&SR Mer., Arizona

CHAINS	
	<p>At the corner point</p> <p>Set an iron post, 28 ins. long, 2½ ins. diam., over an "X" chiseled in bedrock, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p> <p style="text-align: center;">T31N R2W 1/4 <u>S 36</u> S 1 T30N  1975</p> <p>Deposit the original cor. stone in the mound alongside iron post.</p> <p>Cor. is located in a fence, bears E. and W.</p> <hr/> <p>S. 89° 42' W., beginning new measurement.</p> <p>Over rolling land, continue along fence, bears E. and W.</p>
40.18	<p>The cor. of secs. 1, 2, 35, and 36, monumented with a limestone, 18 x 12 x 10 ins., firmly set in a mound of stone, 2 ft. base, 1 ft. high, mkd. with 1 groove on E. and 5 grooves on W. faces.</p> <p>At the corner point</p> <p>Set an iron post, 28 ins. long, 2½ ins. diam., over an "X" chiseled in bedrock, supported with a mound of stone, 4 ft. base, to top, with brass cap mkd.</p> <p style="text-align: center;">T31N R2W <u>S 35   S 36</u> S 2   S 1 T30N  1975</p> <p>Deposit the original cor. stone in the mound alongside iron post.</p> <p>Cor. is located in a fence, bears E. and W.</p> <hr/> <p>S. 89° 47' W., bet. secs. 2 and 35.</p> <p>Over rolling land, through scattered timber and light undergrowth, along a fence bearing E. and W.</p>
4.10	Draw, drains SW.
32.00	Draw, drains S.
40.28	<p>The 1/4 sec. cor. of secs. 2 and 35, monumented with a limestone, 14 x 12 x 6 ins., firmly set in a mound of stone, 2 ft. base, 1 ft. high, mkd. 1/4 on N. and 2 on S. faces.</p> <p>At the corner point</p> <p>Set an iron post, 28 ins. long, 2½ ins. diam., 4 ins. in the ground, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p>

Dependent Resurvey, Portion of South Boundary  
T. 31 N., R. 2 W., G&SR Mer., Arizona

CHAINS	
	<p style="text-align: center;">T31N R2W 1/4 <math>\frac{S\ 35}{S\ 2}</math> T30N  1975</p> <p>Deposit the original cor. stone in the mound alongside the iron post.</p> <p>Cor. is located in fence, bears E. and W.</p> <hr/> <p>S. 89° 56' W., beginning new measurement.</p> <p>Over broken land, along a fence bearing E. and W.</p>
11.90	Ridge, bears N. and S.
25.20	Deep draw, drains NW.
30.50	Same draw, drains S.
39.84	<p>The cor. of secs. 2, 3, 34, and 35, monumented with a limestone, 26 x 20 x 18 ins., firmly set, in a mound of stone, 2 ft. base, 1 ft. high, mkd. with 2 grooves on E. and 4 grooves on W. faces.</p> <p>At the corner point</p> <p>Set an iron post, 28 ins. long, 2½ ins. diam., 4 ins. in the ground, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p>
	<p style="text-align: center;">T31N R2W S 34   S 35 S 3   S 2 T30N  1975</p> <p>Deposit the original cor. stone in the mound alongside iron post.</p> <p>Cor. is located in a fence, bears E. and W.</p> <hr/> <p>S. 89° 47' W., bet. secs. 3 and 34.</p> <p>Over broken land, through scattered timber and light undergrowth, along a fence bearing E. and W.</p>
24.00	Leave fence, bears NW and E.; begin steep descent over rocky SW slope into small canyon.
29.80	Heather Wash, drains NW; asc. steep rocky NE slope.
38.10	Top of steep ascent and W. rim of canyon, bears NW and SE; thence over rolling land.
40.17	<p>The 1/4 sec. cor. of secs. 3 and 34, monumented with a limestone, 18 x 16 x 15 ins., firmly set, in a mound of stone, 2 ft. base, 1 ft. high, mkd. 1/4 on N. and 3 on S. faces.</p> <p>At the corner point</p>

Dependent Resurvey, Portion of South Boundary  
T. 31 N., R. 2 W., G&SR Mer., Arizona

CHAINS	
	<p>Set an iron post, 28 ins. long, 2½ ins. diam., 4 ins. in the ground, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p> <p style="text-align: center;">T31N R2W 1/4 <math>\frac{S\ 34}{S\ 3}</math> T30N</p> <p style="text-align: center;">1975</p> <p>Deposit original cor. stone in the mound alongside iron post.</p> <hr/> <p>S. 89° 48' W., beginning new measurement.</p> <p>Over rolling land, through sparse grass.</p>
7.80	<p>Draw, drains N.</p>
40.07	<p>The cor. of secs. 3, 4, 33, and 34, monumented with a limestone, 18 x 15 x 8 ins., firmly set in a mound of stone, 2 ft. base, 1 ft. high, mkd. with 3 grooves on the E. and W. faces, with mounds of stone, 2½ ft. base, 2 ft. high, in the SE, SW, and NW quadrants, each 15 ft. dist.</p> <p>AT the corner point</p> <p>Set an iron post, 28 ins. long, 2½ ins. diam., 6 ins. in the ground, supported by a mound of stone, 3 ft. base, to top, with brass cap mkd.</p> <p style="text-align: center;">T31N R2W <math>\frac{S\ 33\  S\ 34}{S\ 4\  S\ 3}</math> T30N</p> <p style="text-align: center;">1975</p> <p>Deposit original cor. stone in the mound alongside iron post.</p> <hr/> <p>S. 89° 37' W., bet. secs. 4 and 33.</p> <p>Over gently rolling land, across plateau.</p>
38.40	<p>Draw, drains N.</p>
40.12	<p>The 1/4 sec. cor. of secs. 4 and 33, monumented with a limestone, 16 x 14 x 8 ins., loosely set in a mound of stone, 2 ft. base, 1 ft. high, mkd. 1/4 on N. face, with mounds of stone, 2 ft. base, 1 ft. high, in the SE and NW quadrants, each 8 ft. dist.</p> <p>At the corner point</p> <p>Set an iron post, 28 ins. long, 2½ ins. diam., 6 ins. in the ground, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p> <p style="text-align: center;">T31N R2W 1/4 <math>\frac{S\ 33}{S\ 4}</math> T30N</p> <p style="text-align: center;">1975</p>

Dependent Resurvey, Portion of South Boundary  
T. 31 N., R. 2 W., G&SR Mer., Arizona

CHAINS	
	<p>Deposit original cor. stone in the mound alongside iron post, and rebuild the witness mounds, 3 ft. base, 2 ft. high.</p>
	<p>N. 89° 57' W., beginning new measurement.</p>
	<p>Over gently rolling land, across plateau.</p>
<p>38.21</p>	<p>The witness cor. to secs. 4, 5, 32, and 33, monumented with a limestone, 24 x 14 x 9 ins., firmly set on a limestone ledge, in a mound of stone, 2 ft. base, 1 ft. high, mkd. with 4 grooves on E., 2 grooves and WC on W. faces.</p>
	<p>At the corner point</p>
	<p>Set an iron post, 28 ins. long, 2½ ins. diam., over an "X" chiseled in bedrock, supported with a mound of stone, 3 ft. base, to top, 26 ins. in the ground, with brass cap mkd.</p>
	<p style="text-align: center;">                     W.C.                      T31N R2W                      S 32   S 33                      ← S 5   S 4                      T30N                 </p>
	<p style="text-align: center;">1975</p>
	<p>Deposit original witness cor. stone in the mound alongside iron post.</p>
	<p>S. 89° 56' W., beginning new measurement.</p>
<p>0.80</p>	<p>East rim of Cataract Canyon, bears N. and S; desc. steep W. slope of canyon wall.</p>
<p>1.31</p>	<p>Point for the true cor. of secs. 4, 5, 32, and 33, at proportionate dist., falls on steep E. wall of Cataract Canyon where it is impracticable to establish a permanent monument.</p>
	<p>S. 89° 56' W., bet. secs. 5 and 32.</p>
	<p>Descend 1,700 ft. over a series of vertical limestone and sandstone ledges.</p>
<p>23.00</p>	<p>Bottom of steep descent, slopes N.; enter level canyon bottom.</p>
<p>29.20</p>	<p>Wash in bottom of Cataract Canyon, drains N.</p>
<p>31.90</p>	<p>Begin ascent over E. slope.</p>
<p>38.54</p>	<p>Point selected for the witness 1/4 sec. cor. to secs. 5 and 32.</p>
	<p>Set an iron post, 28 ins. long, 2½ ins. diam., 4 ins. in the ground, supported with a mound of stone, 4 ft. base, to top, with brass cap mkd.</p>

Dependent Resurvey, Portion of South Boundary  
T. 31 N., R. 2 W., G&SR Mer., Arizona

CHAINS	
	<p style="text-align: center;">W.C. T31N R2W 1/4 ← <math>\frac{S\ 32}{S\ 5}</math> T30N 1975</p>
40.24	<p>True point for the 1/4 sec. cor. of secs. 5 and 32, at proportionate dist., falls in large sandstone boulders at foot of vertical cliff, where it is impracticable to establish a permanent monument.</p> <p>Ascend 1,700 ft. over a series of vertical limestone and sandstone cliffs and ledges.</p>
64.00	<p>Top of ascent and W. rim of Cataract Canyon, bears N. and S.; thence over gently rolling land, across plateau.</p>
80.48	<p>The cor. of secs. 5, 6, 31 and 32, monumented with a limestone, 24 x 16 x 6 ins., firmly set in a mound of stone, 2 ft. base, 1 ft. high, mkd. with 5 notches on E. and 1 notch on W. edges, with a mound of stone, 2 ft. base, 1 ft. high, W. of the cor., and mound of stone, 2 ft. base, 1 ft. high, in the NE, SE, and NW quadrants, each 6 ft. dist.</p> <p>At the corner point</p> <p>Set an iron post, 28 ins. long, 2½ ins. diam., 2 ins. in weathered, broken bedrock, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p>
	<p style="text-align: center;">T31N R2W <math>\frac{S\ 31\  S\ 32}{S\ 6\  S\ 5}</math> T30N 1975</p>
	<p>Deposit original cor. stone in the mound alongside iron post, and rebuild all witness mounds, 2 ft. base, 2 ft. high.</p>
	<p style="text-align: center;">Dependent Resurvey of a Portion of the West Boundary T 31 N., R. 2 W., Gila and Salt River Meridian, Arizona</p>
	<p style="text-align: center;">Restoring the survey executed by J. C. Dobbins, in 1900</p>
	<p>From the witness cor. to secs. 25, 30, 31 and 36, monumented with a limestone, 20 x 8 x 6 ins., firmly set on a limestone ledge, supported with a mound of stone, 2 ft. base, 1 ft. high, mkd. with 5 grooves on N., 1 groove and WC on S. faces.</p>
	<p>At the corner point</p>
	<p>Set an iron post, 28 ins. long, 2½ ins. diam., over an "X" chiseled on the limestone ledge, and supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p>

Dependent Resurvey, Portion of West Boundary  
T. 31 N., R. 2 W., G&SR Mer., Arizona

CHAINS	
11.06	<p style="text-align: center;">W.C. T31N R3W R2W</p> <p style="text-align: center;"> <math display="block">\begin{array}{c} \uparrow \\ \hline S\ 25\   S\ 30 \\ \hline S\ 36\   S\ 31 \end{array}</math> </p> <p style="text-align: center;">1975</p> <p>Deposit original witness cor. stone in the mound alongside iron post.</p> <p>Cor. is located on S. rim of Cataract Canyon, bears E. and W.</p> <p>N. 0° 04' W., bet. secs. 25 and 30.</p> <p>Descend 1,600 ft. over series of vertical limestone and sandstone cliffs.</p> <p>True point for the cor. of secs. 25, 30, 31, and 36, at proportionate dist., falls on steep S. wall of Cataract Canyon, where it is impracticable to establish a permanent monument.</p>
26.00	<p>N. 0° 04' W., bet. secs. 25 and 30.</p> <p>Descend over vertical cliffs.</p> <p>Bottom of descent, slopes W.; thence over nearly level canyon bottom.</p>
30.40	<p>Wash in bottom of Cataract Canyon, drains W.</p>
35.00	<p>Begin ascent over SW slope.</p>
40.22	<p>Point for the 1/4 sec. cor. of secs. 25 and 30, at proportionate dist.</p>
	<p>Set an iron post, 28 ins. long, 2½ ins. diam., 15 ins. in the ground, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p>
	<p style="text-align: center;">T31N R3W R2W 1/4</p> <p style="text-align: center;"> <math display="block">S\ 25\   S\ 30</math> </p> <p style="text-align: center;">1975</p>
62.00	<p>Ascend 1,400 ft. over series of vertical limestone and sandstone cliffs.</p>
80.44	<p>True point for the cor. of secs. 19, 24, 25, and 30, at proportionate dist., falls on steep inaccessible cliffs on the N. wall of Cataract Canyon, where it is impracticable to establish a permanent monument.</p>

Dependent Resurvey, Portion of West Boundary  
T. 31 N., R. 2 W., G&SR Mer., Arizona

CHAINS	
	<p>N. 0° 04' W., bet. secs. 19 and 24.</p>
	<p>Continue ascent over steep cliffs.</p>
8.60	<p>Top of ascent and N. rim of Cataract Canyon, bears WNW and SE; thence over gently rolling land, across plateau.</p>
8.86	<p>The witness cor. to secs. 19, 24, 25, and 30, monumented with a limestone, 15 x 12 x 8 ins., firmly set in a mound of stone, 2 ft. base, 1 ft. high, no marks visible on stone.</p>
	<p>At the corner point</p>
	<p>Set an iron post, 28 ins. long, 2½ ins. diam., 8 ins. in the ground, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p>
	<p style="text-align: center;">W.C. T31N R3W R2W S 24   S 19 S 25   S 30 ↓</p>
	<p style="text-align: center;">1975</p>
	<p>Deposit limestone in the mound alongside iron post.</p>
	<p style="text-align: center;">Survey of a Portion of the Subdivisional Lines T 31 N., R. 2 W., Gila and Salt River Meridian, Arizona</p>
	<p>From the cor. of secs. 5, 6, 31, and 32 on the S. bdy. of the Tp.</p>
	<p>N. 0° 03' W., bet. secs. 31 and 32.</p>
	<p>Over gently rolling land, through dense undergrowth.</p>
14.60	<p>S. rim of Cataract Canyon, bears NW and SE; desc. 1,400 ft. over series of vertical limestone and sandstone ledges.</p>
40.00	<p>Point for the 1/4 sec. cor. of secs. 31 and 32.</p>
	<p>Set an iron post, 28 ins. long, 2½ ins. diam., 6 ins. in the ground, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p>
	<p style="text-align: center;">T31N R2W 1/4 S 31   S 32</p>
	<p style="text-align: center;">1975</p>
	<p>Cor. is located on steep NW slope.</p>
49.00	<p>Bottom of descent, slopes NW; thence over nearly level canyon bottom.</p>

Survey of a Portion of the Subdivisional Lines  
T 31 N., R. 2 W., Gila and Salt River Meridian, Arizona

CHAINS	
54.50	Wash in bottom of Cataract Canyon, drains NW; begin gradual ascent over rocky SW slope.
80.00	Point for the cor. of secs. 29, 30, 31, and 32.  Set an iron post, 28 ins. long, 2½ ins. diam., 10 ins. in the ground, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.  <div style="text-align: center;"> <p>T31N R2W S 30   S 29 S 31   S 32</p> <p>1975</p> </div> <p>From this point, the original witness 1/4 sec. cor. to secs. 29 and 30, bears N. 2° 19' W., 52.96 chs. dist., monumented with a limestone, 24 x 14 x 8 ins., firmly set in a mound of stone, 3 ft. base, 1½ ft. high, mkd. 1/4 WC on W. face.</p> <p>At this corner point</p> <p>Set an iron post, 28 ins. long, 2½ ins. diam., over an "X" chiseled on bedrock, supported with a mound of stone, 3 ft. base, to top, with brass cap mkd.</p> <div style="text-align: center;"> <p>W C T31N R2W 1/4 S 30   S 29 ↓</p> <p>1975</p> </div> <p>Deposit original cor. stone in the mound alongside iron post.</p> <p>This cor. is located on the N. rim of Cataract Canyon, bears E. and W.</p>
	S. 89° 50' W., bet. secs. 30 and 31.  Descend over boulder strewn SW slope.
5.00	Bottom of descent, slopes N.; thence across nearly level canyon bottom.
7.30	Wash in bottom of Cataract Canyon, drains N.
12.00	Begin ascent over boulder strewn NE slope.
26.50	Spur, slopes N.; desc. over a series of limestone ledges.
40.00	Point for the 1/4 sec. cor. of secs. 30 and 31, falls in an inaccessible location and is not monumented.
57.00	Begin ascent over a series of vertical cliffs.
77.99	True point for the cor. of secs. 25, 30, 31, and 36, on the W. bdy. of the Tp., from which its witness cor., bears S. 0° 04' E., 11.06 chs. dist., heretofore described.

T 31 N., R. 2 W., Gila and Salt River Meridian, Arizona

CHAINS

## General Description

The lands included in the notes of the foregoing survey are located about 25 miles west of the town of Grand Canyon, Arizona. The terrain is gently rolling on the plateau with vertical ledges and cliffs in the canyons. The area is drained by the Cataract Canyon, Heather Wash, and a number of their tributaries.

Elevations range from 4000 feet above sea level in the bottom of the canyons to about 5800 feet above sea level near the cor. of Townships 30 and 31 North, Ranges 1 and 2 West.

Access into the area is limited to two unimproved trail roads. Soil in the area is composed of sandy loam on the plateau and rocky and sandy in the canyons.

Timber consists of juniper and pinon along the edges of the canyons; with undergrowth of light to dense sagebrush on the plateau.

There is no natural water in the area, but several impoundments for watering livestock were noted. No mineral deposits were noted during the course of the survey.

The average of a number of readings along the lines surveyed gives a value of  $14\frac{1}{2}$  E. for the mean magnetic declination. There was no noticeable difference due to local attraction.



CERTIFICATE OF SURVEY

(I) ~~(We)~~ Gilbert V. Olson, HEREBY CERTIFY upon honor that, in pursuance of special instructions bearing date of the 23rd day of May, 19 75, (I) ~~(We)~~ have dependently resurveyed a portion of the south and west boundaries, and surveyed a portion of the subdivisional lines in Township 31 North, Range 2 West

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), ~~(us)~~ and under (my) ~~(our)~~ 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.

March 4, 1977  
(Date)

*Gilbert V. Olson*  
(Cadastral Surveyor)  
Gilbert V. Olson

(Date)

(Cadastral Surveyor)

CERTIFICATE OF APPROVAL

BUREAU OF LAND MANAGEMENT  
Washington, D.C.

The foregoing field notes of the dependent resurvey of a portion of the south and west boundaries, and survey of a portion of the subdivisional lines in Township 31 North, Range 2 West, Gila and Salt River Meridian, Arizona

executed by Gilbert V. Olson, Supervisory Cadastral Surveyor having been critically examined and found correct, are hereby approved.

FEB 14 1979  
(Date)

*Demond M. [Signature]*  
(Chief, Division of Cadastral Survey)

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 Cadastral Survey) GPO 849-626