

ORIGINAL

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

FIELD NOTES

OF THE DEPENDENT RESURVEY

OF A PORTION OF THE SUBDIVISIONAL LINES AND THE 1883

MEANDERS OF THE RIGHT BANK OF THE COLORADO RIVER,

THE SUBDIVISION OF SECTION 4,

THE SURVEY OF AN INFORMATIVE TRAVERSE AND METES-AND-BOUNDS

SURVEY OF THE RIGHT BANK OF THE ABANDONED CHANNEL OF THE COLORADO RIVER

AND THE DIVISION OF ACCRETION LINE IN THE NE 1/4 OF SECTION 4,

TOWNSHIP 8 NORTH, RANGE 23 EAST,

OF THE SAN BERNARDINO MERIDIAN,

IN THE STATES OF CALIFORNIA AND ARIZONA.

EXECUTED BY

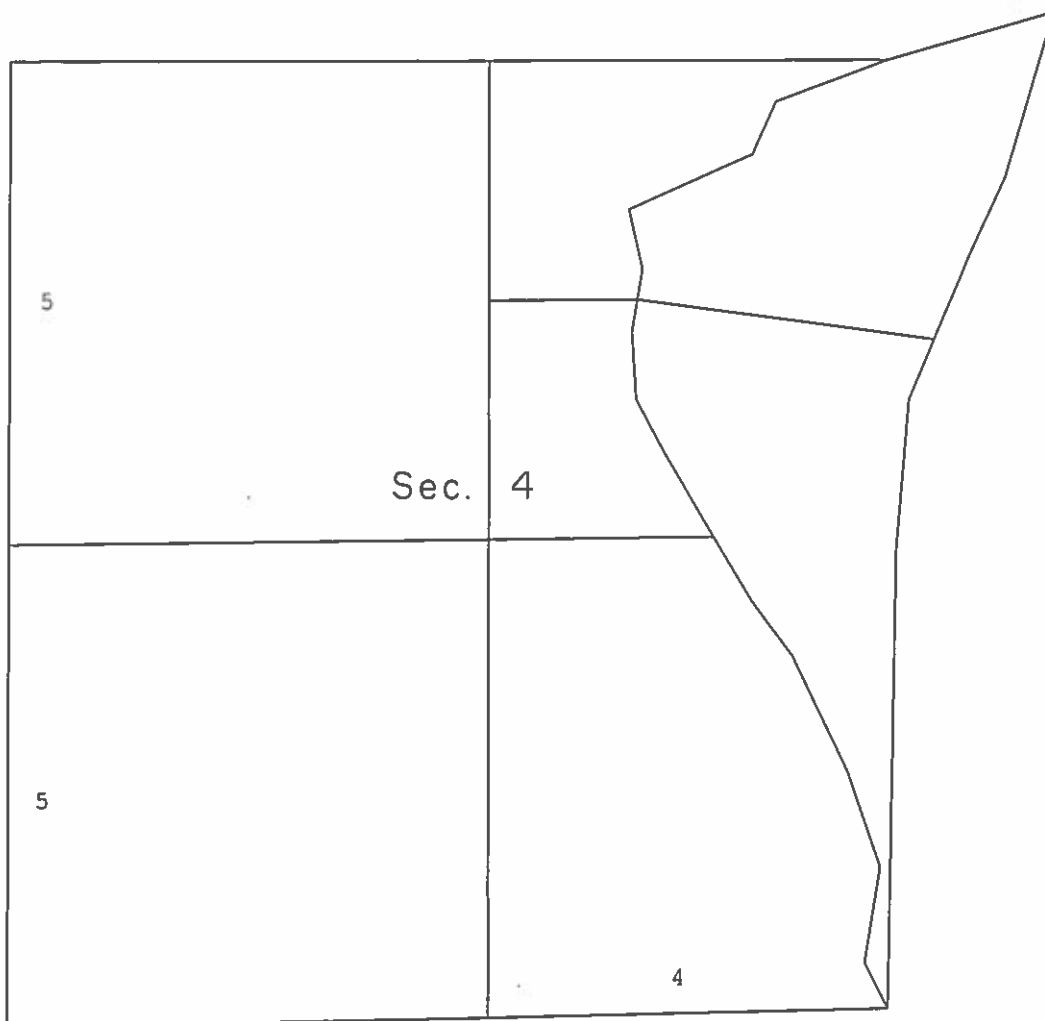
Gordon R. Bubel, Cadastral Surveyor

Under Special Instructions dated April 28, 2016, approved April 28, 2016, which provided for the surveys included under Group No. 1154, and assignment instructions dated April 28, 2016.

Survey commenced August 10, 2016

Survey completed September 29, 2016

INDEX DIAGRAM
TOWNSHIP 8 NORTH RANGE 23 EAST
SAN BERNARDINO MERIDIAN, CALIFORNIA



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T. 8 N., R. 23 E., San Bernardino Meridian, Arizona

CHAINS

The following field notes describe the dependent resurvey of a portion of the subdivisional lines and the 1883 meanders of the right bank of the Colorado River, the subdivision of section 4, the survey of an informative traverse and metes-and-bounds survey of the right bank of the abandoned channel of the Colorado River prior to channelization, and the division of accretion line in the NE 1/4 of section 4, Township 8 North, Range 23 East, San Bernardino Meridian, in the States of California and Arizona.

The history of surveys pertaining to this survey is as follows: G.W. Baker in 1883, surveyed section 4 in its entirety. Donald A. Cannon in 1961 resurveyed the north, south, and west boundaries of section 4. The resurvey of the north boundary of section 4, on the north boundary of the township, is recorded in the dependent resurvey in Township 9 North, Range 23 East, executed concurrently under the same group.

Section 4 is fractional, its east boundary, fronts on the last natural position of Colorado River, prior to the 1950's channelization. Since the 1883 survey, the right bank of the Colorado River in section 4 has migrated easterly, resulting in the addition of over 100 acres of accreted lands in the section. The 1950's channelization and subsequent 1965 Boundary Compact between the States of Arizona and California, fixed the boundary between the States based on the location of the channelized Colorado River. The accretions to section 4 are divided nearly equal to lands east of the channelized river in Arizona and west of the channelized river in California.

The survey was executed in accordance with the specifications as set forth in the Manual of Instructions for the Survey of the Public Lands of the United States, 2009, and the Special Instructions dated April 28, 2016 for Group Number 1154, Arizona.

The true meridian direction and length of all lines were determined by real time kinematic global positioning system observations using Trimble Navigation R8 model receivers.

Preliminary to the resurvey, the lines of the prior surveys 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 reestablished and remonumented at proportionate positions based on the official record. The retracement data were thoroughly verified and only the true line field notes are given herein.

Geodetic control was derived from Global Positioning System (GPS) static observations post processed by National Geodetic Survey, Online Positioning User Service (OPUS), utilizing Continuously Operating Reference Stations (CORS) NLVA LAUGHLIN CORS ARP, AZYC YUCCA CORS ARP and AZLH LAKE HAVASU CITY CORS ARP.

T. 8 N., R. 23 E., San Bernardino Meridian, Arizona

CHAINS

The NAD 83(2011)(EPOCH:2010.0000), geographic position of the meander corner on the right bank of the Colorado River in 1883, between sections 4 and 9 is as follows:

Latitude: 34°48'28.795" N. Longitude: 114°34'33.277" W.

The NAD 83(2011)(EPOCH:2010.0000), geographic position of the corner of sections 4, 5, 8 and 9 is as follows:

Latitude: 34°49'20.122" N. Longitude: 114°35'31.048" W.

The mean magnetic declination is 11 1/2° E.

**Dependent Resurvey of a Portion of the Subdivisional Lines,
T. 8 N., R. 23 E., San Bernardino Meridian, California**

Restoring the resurvey executed by
Donald A. Cannon, in 1961

Beginning at the 1/4 sec. cor. of secs. 4 and 9, monumented with an iron post, 2 1/2 ins. diam., firmly set, projecting 5 ins. above ground, with brass cap mkd. T8N R23E 1/4 S4 S9 1961.

An iron pipe, 1/2 in. diam., projecting 4 ins. above ground, is set alongside and S. of the iron post.

Encircle the iron post with a collar of stones.

N. 88°41' E., bet. secs. 4 and 9.

Over rolling bench lands, through creosote.

12.05 Barbed wire fence, bears S 20° E. and N. 20° W.

12.80 Power line, bears S. 20° E. and N. 20° W.

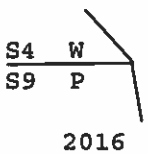
13.20 Graded and graveled railroad access road, bears S. 20° E. and N. 20° W., thence across set of 4 railroad tracks.

14.50 Graded and graveled railroad access road, bears S. 20° E. and N. 20° W.

19.99 The E. 1/16 sec. cor. of secs. 4 and 9, monumented with an iron post, 2 1/2 ins. diam., firmly set, projecting 8 ins. above ground, with brass cap mkd. T8N R23E E 1/16 S4 S9 1961.

N. 88°41' E., beginning new measurement.

Dependent Resurvey of a Portion of the Subdivisional Lines,
T. 8 N., R. 23 E., San Bernardino Meridian, Arizona

CHAINS	
6.34	<p>Point for the witness meander corner, established in the 1961 BLM survey, at record dist., there is no remaining evidence of the cor., not monumented.</p>
	<p>Cor. point is located on the easterly edge of abandoned railroad bed, 15 ft. wide, bears S. 20° E. and N. 20° W., thence descend into bottomlands.</p>
13.30	<p>Point for the record meander cor., at record distance, as established in 1883, there is no remaining evidence of the original monument. This cor. position in the 1961 survey was not monumented and found to be coincident with the right bank of the abandoned Colorado River prior to the 1950's channelization. Identical with a zero accretion point.</p>
	<p>Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.</p>
	<div style="text-align: center;"> <p>T 8 N R 23 E</p>  <p>2016</p> </div>
	<p>Deposit a magnet, in a white plastic case, at the base of the stainless steel post.</p>
	<p>Cor. is located 80 lks. W of the right bank of the Colorado River, bears S. 14° E. and N. 14° W.</p>
	<hr/> <p>From the cor. of secs. 4, 5, 8 and 9, monumented with an iron post, 2 1/2 ins. diam., firmly set, projecting 6 ins. above ground, with brass cap mkd. T8N R23E S5 S4 S8 S9 1961.</p>
	<p>Cor. is located 11 lks. E. of the westerly right of way fence to Interstate Highway No. 40, bears S. 15° E. and N. 15° W.</p>
	<p>N. 0°19' E., bet. secs. 4 and 5.</p>
	<p>Over rolling bench lands, through creosote.</p>
39.46	<p>The witness cor. to the 1/4 sec. cor. of secs. 4 and 5. Monumented with an iron post, 1 in. diam., firmly set, projecting 9 ins. above ground, in a mound of stone 3 ft. base, to top, with brass cap mkd. T8N R23E 1/4 S4 S5 WC 1961.</p>
	<hr/> <p>N. 0°18' E., beginning new measurement.</p>

Dependent Resurvey of a Portion of the Subdivisional Lines,
T. 8 N., R. 23 E., San Bernardino Meridian, Arizona

CHAINS		
0.60	Point for the true point for the 1/4 sec. cor. of secs. 4 and 5, at record and proportionate dist., falls within a drainage ditch, where a permanent monument would be impracticable.	
40.74	The corner of secs, 4, 5, 32 and 33, on the N. bdy. of the Tp., as described in the field notes for T. 9 N., R. 23 E., executed concurrently under this same group.	
<hr/> <p>Dependent Resurvey of the Meander Line of the 1883 Right Bank of the Colorado River, T. 8 N., R. 23 E., San Bernardino Meridian, California</p> <hr/>		
<p>Restoring the survey executed by G.W. Baker, in 1883</p> <hr/>		
<p>From the perpetuated original meander cor. on the right bank of the Colorado River, between sec. 4 T. 8 N., R. 23 E., and sec. 33, T. 9 N., R. 23 E., as described in the field notes for T. 9 N., R. 23 E., executed concurrently under this same group.</p>		
<p>Thence downstream with the adjusted 1883 meanders of the right bank of the Colorado River, in sec. 4.</p>		
<p>Over bottomlands, through dense arrow weed and salt cedar.</p>		
S. 69°35' W.,	9.91 chs.	At 5.3 chs. on this course, Road atop levee, bears S. 18° E. and N. 18° W.
S. 24°24' W.,	4.80 chs.	At 2.7 chs. on this course, left bank channelized Colorado River, course S. 20° W.,
S. 66°03' W.,	11.28 chs.	At 4.90 chs. on this course, right bank channelized Colorado River, course S. 20° E.
S. 12°52' E.,	5.10 chs.	
S. 9°51' W.,	5.29 chs.	At 2.53 chs. on this course, W.P. at intersection with the E. and W. center line of the NE 1/4 of sec. 4, hereinafter described.
S. 3°41' E.,	5.58 chs.	
S. 28°10' E.,	5.30 chs.	

**Dependent Resurvey of the Meander Line of the 1883
Right Bank of the Colorado River,
T. 8 N., R. 23 E., San Bernardino Meridian, Arizona**

CHAINS			
	S. 30°27' E.,	14.06 chs.	At 7.86 chs. on this course, intersect the E. and W. center line of sec. 4.
	S. 36°33' E.,	5.51 chs.	
	S. 25°37' E.,	10.70 chs.	
	S. 19°00' E.,	8.44 chs.	
	S. 9°35' W.,	8.03 chs.	
	S. 27°09' E.,	4.27 chs.	At the end of this course, the W.P., identical with the 1883 M.C. bet. secs. 4 and 9, hereinbefore described.
<hr/> <p>Subdivision of Section 4, T. 8 N., R. 23 E., San Bernardino Meridian, California</p> <hr/>			
	From the 1/4 sec. cor. of secs. 4 and 9, hereinbefore described.		
	N. 0°11' E., on the N. and S. center line of sec. 4.		
	Over heavily rolling bench lands, through creosote.		
39.68	Point accepted as the center 1/4 sec. cor. of sec. 4, at intersection with the E. and W. center line of sec. 4. Monumented with an iron post, 2 ins. diam., firmly set, projecting 2 ins. above ground, with attached 2 1/8 ins. diam., aluminum cap stamped LS 5280 C 1/4 S4 T8N R23E.		
	<hr/>		
	N. 0°11' E., beginning new measurement.		
6.40	Power line, bears S. 20° E. and N. 20° W., thence across set of 4 railroad tracks.		
10.90	Graded and graveled RAILROAD access road, bears S. 20° E. and N. 20° W., thence descend into bottomlands.		
19.86	Point for the center N. 1/16 sec. cor. of sec. 4.		
	Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, with brass cap mkd.		

Subdivision of Section 4,
T. 8 N., R. 23 E., San Bernardino Meridian, Arizona

CHAINS	
	<p>T 8 N R 23 E</p> <p style="margin-left: 100px;">C</p> <p style="margin-left: 80px;">N 1/16 S 4</p> <p style="margin-left: 100px;">C</p> <p>2017</p>
	<p>Deposit a magnet, in a white plastic case, at the base of the stainless steel post.</p> <p>From this cor. point, a galvanized iron pipe, 1 3/4 ins. diam., firmly set, projecting 4 ins. above ground, bears N. 8°06' W., 19.5 lks. dist. An iron pipe, 1 1/2 in. diam., 15 ft. long, was found lying loose alongside the galvanized iron pipe.</p>
39.76	<p>The 1/4 sec. cor. of secs. 4 and 33, on the N. bdy. of the Tp., as described in the field notes for T. 9 N., R. 23 E., executed concurrently under this same group.</p> <hr/> <p>From the true point for the 1/4 sec. cor. of secs. 4 and 5, hereinbefore described.</p> <p>N. 89°23' E., on the E. and W. center line of sec. 4.</p> <p>Over heavily rolling land, through creosote.</p>
40.05	<p>The center 1/4 sec. cor. of sec. 4.</p>
42.15	<p>Power line, bears S. 15° E. and N. 15° W., identical with westerly edge of railroad service road, thence across set of 4 railroad tracks.</p>
44.05	<p>Graded and graveled railroad access road, bears S. 15° E. and N. 15° W., thence descend into bottomlands.</p>
58.79	<p>Intersect the adjusted meander line of the right bank of the Colorado River in 1883, course S. 30°27' E., hereinbefore described.</p> <hr/> <p style="text-align: center;">NE 1/4, Sec. 4</p> <hr/> <p>From the center N. 1/16 sec. cor. of sec. 4.</p> <p>N. 89°39' E., on the E. and W. center line of the NE 1/4 of sec. 4.</p> <p>On the mean bearing between the east and west center line of section 4, (N. 89°23' E.) and the north boundary of sec. 4, east of the 1/4 sec. cor. of secs. 4 and 33 (N. 89°55' E.)</p>

Subdivision of Section 4,
T. 8 N., R. 23 E., San Bernardino Meridian, Arizona

CHAINS

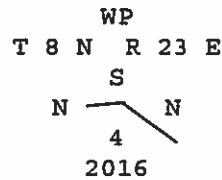
Over bottomlands, with dense arrow weed and salt cedar.

12.31

Point for a witness point, identical with a special meander cor., at intersection with the adjusted meander line, on the 1883 right bank of the Colorado River, course S. 9°51' W.

The adjusted meander line is hereinbefore described.

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, with brass cap mkd.



Deposit a magnet, in a white plastic case, at the base of the stainless steel post.

**Informative Traverse and Metes-and-Bounds Survey of the
Right Bank of the Abandoned Channel of the
Colorado River in section 4,
T. 8 N., R. 23 E., San Bernardino Meridian, California**

Via grant deed, dated 13 March 1939, and recorded in the official records of San Bernardino County at Book 1327, Page 227, on March 30, 1939. The United States acquired title to lots 1 and 2, section 4, T. 8 N., R. 23 E., and the accretions thereof. A metes-and-bounds survey was conducted on the portion of the abandoned right bank fronting the accretions of lot 1. The remaining abandoned right bank fronting sec. 4 was traversed.

Due to the passage of time and man-made factors, the right bank of the abandoned Colorado River in sec. 4, is not readily discernable. The best available evidence of the bank was deemed to be an aerial photograph, dated 12-23-1949, obtained from California State University, San Bernardino.

From the witness point, on the division of accretion line bet. sec. 33, T. 9 N., R. 23 E. and sec. 4, T. 8 N., R. 23 E., described in the field notes of T. 9 N., R. 23 E., executed concurrently under this same group.

S. 22°56' W., 1.27 chs.

S. 16°34' W., 13.13 chs.

S. 24°23' W., 7.21 chs.

**Informative Traverse and Metes-and-Bounds Survey of the
Right Bank of the Abandoned Channel of the Colorado River in section 4,
T. 8 N., R. 23 E., San Bernardino Meridian, Arizona**

CHAINS			
	S. 22°57' W.,	7.50 chs.	Point for a witness point, identical with a S.M.C., at intersection with division of accretion line of the NE 1/4 of sec. 4, hereinafter described.
<hr/>			
Continuing along the right bank of the abandoned channel of the Colorado River, on an informative traverse.			
	S. 22°57' W.,	5.44 chs.	At 2.85 chs. on this course, Road atop levee, bears S. 17° E. and N. 17° W.
	S. 5°02' W.,	12.52 chs.	
	S. 1°09' W.,	38.03 chs.	At 1.50 chs. on this course, left bank channelized Colorado River, course S. 11° W.
			At 34.15 chs. on this course, right bank channelized Colorado River, course S. 11° W.
			At the end of this course, the perpetuated 1883 rec. M.C., bet. secs. 4 and 9, identical with the zero accretion point, hereinbefore described.
<hr/>			
Division of Accretion Line in the NE 1/4 of section 4			
<hr/>			
From the special meander cor. at the intersection of the east and west center line of the NE 1/4 of sec. 4 with the 1883 adjusted meander line of the right bank of the Colorado River, hereinbefore described.			
S. 82°18' E., on the division of accretion line, identical with the extension of the E. and W. center line of the NE 1/4 of sec. 4.			
8.75	Right bank of the channelized Colorado River, course S. 20° E.		
16.70	Left bank of the channelized Colorado River, course S. 20° E.		
17.05	Graded and graveled road, 15 ft. wide, bears S. 20° E. and N. 20° W.		
23.00	Road atop levee, graded and graveled, bears S. 17° E. and N. 17° W.		

Division of Accretion Line in the NE 1/4 of section 4,
T. 8 N., R. 23 E., San Bernardino Meridian, Arizona

CHAINS

24.99

Point for a special meander cor., at intersection with the abandoned right bank of the Colorado River prior to channelization, utilizing the proportionate shoreline method.

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, anchored in a 2 1/2 gallon plastic bucket, half filled with concrete, with brass cap mkd.

T 9 N R 23 E
S
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2016

Deposit a magnet, in a white plastic case, beneath the plastic bucket.

GENERAL DESCRIPTION

The area surveyed and resurveyed in section 4, Township 8 North, Range 23 East is of two distinct classes. The westerly two thirds of the section is rolling desert, dominated by creosote and rocky soils. The easterly one third of the section is bottomlands, with sandy soils and dense stands of arrow weed and salt cedar, and prior to the taming of the Colorado River was classified as swamp and overflow.

Section 4, is located about 2 miles SSE of the City of Needles, California. The channelized Colorado River enters the section near the E. 1/16 section corner of sections 4 and 33, and exits near the meander corner of section 4 and 9. The BNSF railroad traverses the section in a NNE/SSW direction. The majority of the section is within the State of California. A small portion in the NE 1/4 of the section and some of the accreted lands are in Arizona. The average elevation is 500 ft. above sea level.

Access is by way of a road atop a levee, which runs more or less parallel to the channelized Colorado River within the State of Arizona. Secondary access is provided by railroad service roads on the California side.

The mean magnetic declination of 11 1/2° E. was derived from the United States National Oceanic and Atmospheric Administration, National Centers for Environmental Information, Geomagnetic Calculator, utilizing the most recent World Magnetic Model for the dates of survey.

CERTIFICATE OF SURVEY

I, Gordon R. Bubel, Cadastral Surveyor, HEREBY CERTIFY upon honor, that in pursuance of special instructions bearing date of the 28th day of April, 2016, I have dependently resurveyed a portion of the subdivisional lines and the 1883 meanders of the right bank of the Colorado River, subdivided section 4, and surveyed an informative traverse and metes-and-bounds survey of the right bank of the abandoned channel of the Colorado River prior to channelization and the division of accretion line in the NE 1/4 of section 4, Township 8 North, Range 23 East, of the San Bernardino Meridian, in the States of California and Arizona, which are represented in the foregoing field notes as having been executed by me and under my direction. 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, 2009, and in specific manner described in the foregoing field notes.

JULY 28, 2017
(Date)

Gordon R. Bubel
(Cadastral Surveyor)

CERTIFICATE OF APPROVAL

BUREAU OF LAND MANAGEMENT
Phoenix, Arizona

The foregoing field notes of the dependent resurvey of a portion of the subdivisional lines and the 1883 meanders of the right bank of the Colorado River, the subdivision of section 4, and the survey of an informative traverse and metes-and-bounds survey of the right bank of the abandoned channel of the Colorado River prior to channelization and the division of accretion line in the NE 1/4 of section 4, Township 8 North, Range 23 East, San Bernardino Meridian, in the States of California and Arizona, executed by Gordon R. Bubel, Cadastral Surveyor, having been critically examined and found correct, are hereby approved.

8/2/2017
(Date)

[Signature]
(Chief Cadastral Surveyor of Arizona)

~~CERTIFICATE OF TRANSCRIPT~~

~~I CERTIFY That the foregoing transcript of the field notes of the above described surveys in T. 9 N., R. 23 E., San Bernardino Meridian, California, is a true copy of the original field notes.~~

~~_____~~
(Date)

~~_____~~
(Chief Cadastral Surveyor of Arizona)