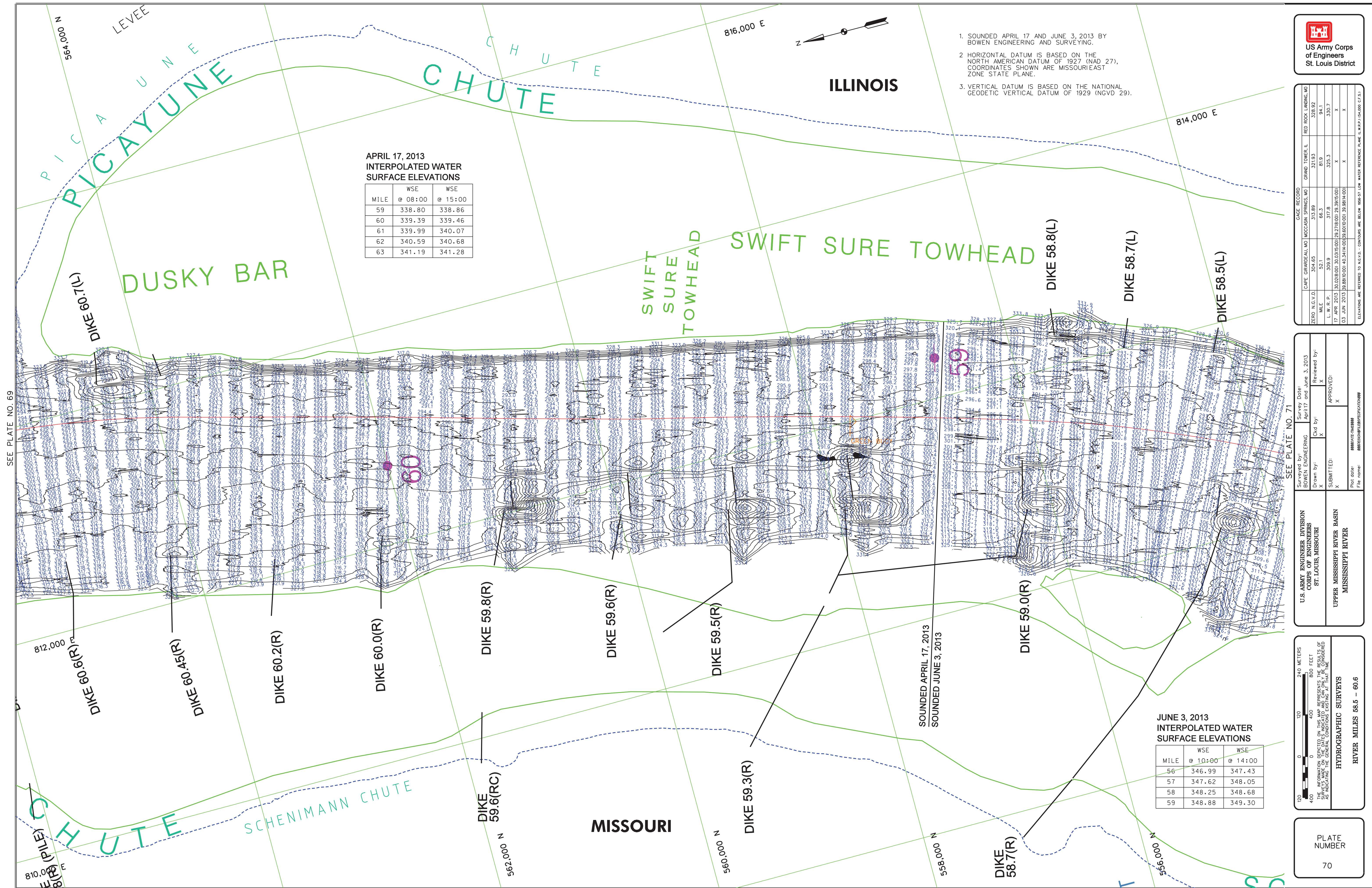
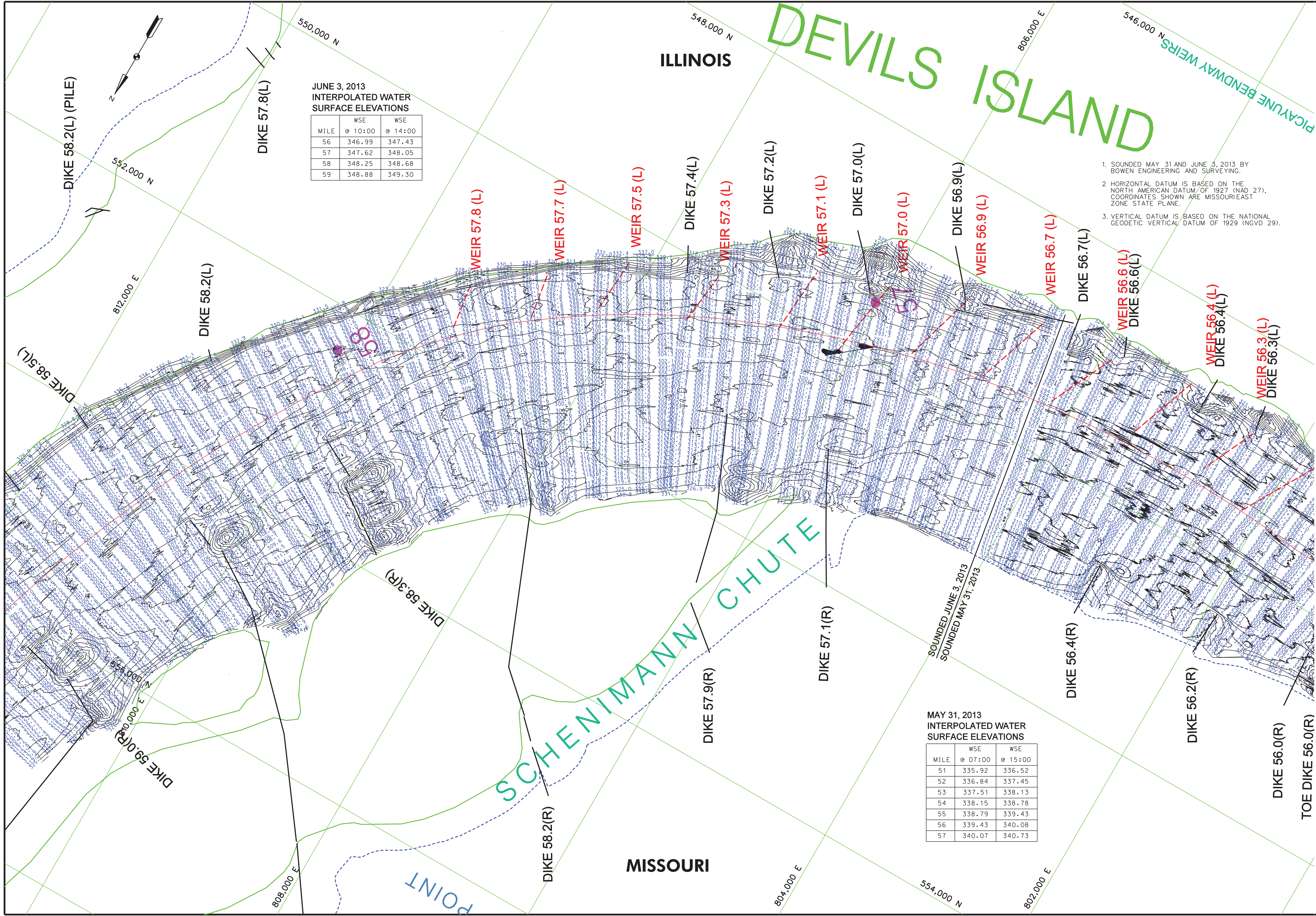




SEE PLATE NO. 70



JUNE 3, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE	
	@ 10:00	@ 14:00
56	346.99	347.43
57	347.62	348.05
58	348.25	348.68
59	348.88	349.30

MAY 31, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE	
	@ 07:00	@ 15:00
51	335.92	336.52
52	336.84	337.45
53	337.51	338.13
54	338.15	338.78
55	338.79	339.43
56	339.43	340.08
57	340.07	340.73

1. SOUNDED MAY 31 AND JUNE 3, 2013 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURIEAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).



GAGE RECORD		CAPE GIRARDEAU, MO		MOCCASH SPRINGS, MO	
THERES, IL	GRAY'S POINT, MO	CAPE GIRARDEAU, MO	MOCCASH SPRINGS, MO	THERES, IL	GRAY'S POINT, MO
ZERO N.G.V.D.	300.00	301.18	304.65	313.59	313.59
MILE	33.7	46.3	52.1	56.9	56.9
L.W.R.D.	304.8	306.3	309.9	317.8	317.8
31 MAY 2013	x	30.427300 30.981500 32.281700 32.891500 32.151700 32.891500	30.427300 30.981500 32.281700 32.891500 32.151700 32.891500	30.427300 30.981500 32.281700 32.891500 32.151700 32.891500	30.427300 30.981500 32.281700 32.891500 32.151700 32.891500
03 JUN 2013	x	30.427300 30.981500 32.281700 32.891500 32.151700 32.891500	30.427300 30.981500 32.281700 32.891500 32.151700 32.891500	30.427300 30.981500 32.281700 32.891500 32.151700 32.891500	30.427300 30.981500 32.281700 32.891500 32.151700 32.891500

Survey Date: May 31 and June 3, 2013

Reviewed by: X

Drawn by: X

Submitted: X

Approved: X

Plot Date: File Name: ##PROJECT/##DATE/##

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

HYDROGRAPHIC SURVEYS

RIVER MILES 56.1 - 58.5

PLATE NUMBER

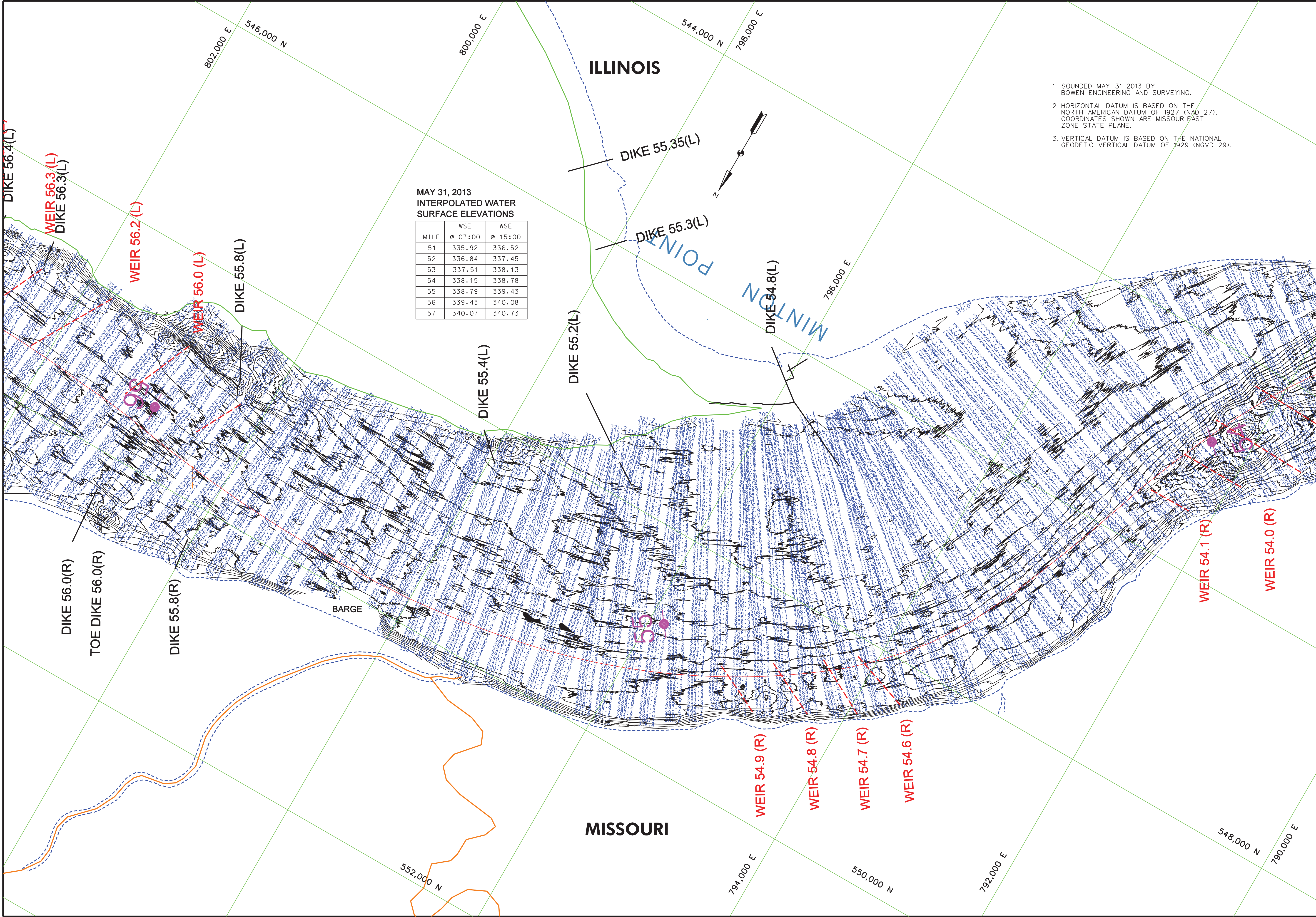
71



1. SOUNDED MAY 31, 2013, BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI/EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

MAY 31, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE	
	@ 07:00	@ 15:00
51	335.92	336.52
52	336.84	337.45
53	337.51	338.13
54	338.15	338.78
55	338.79	339.43
56	339.43	340.08
57	340.07	340.73

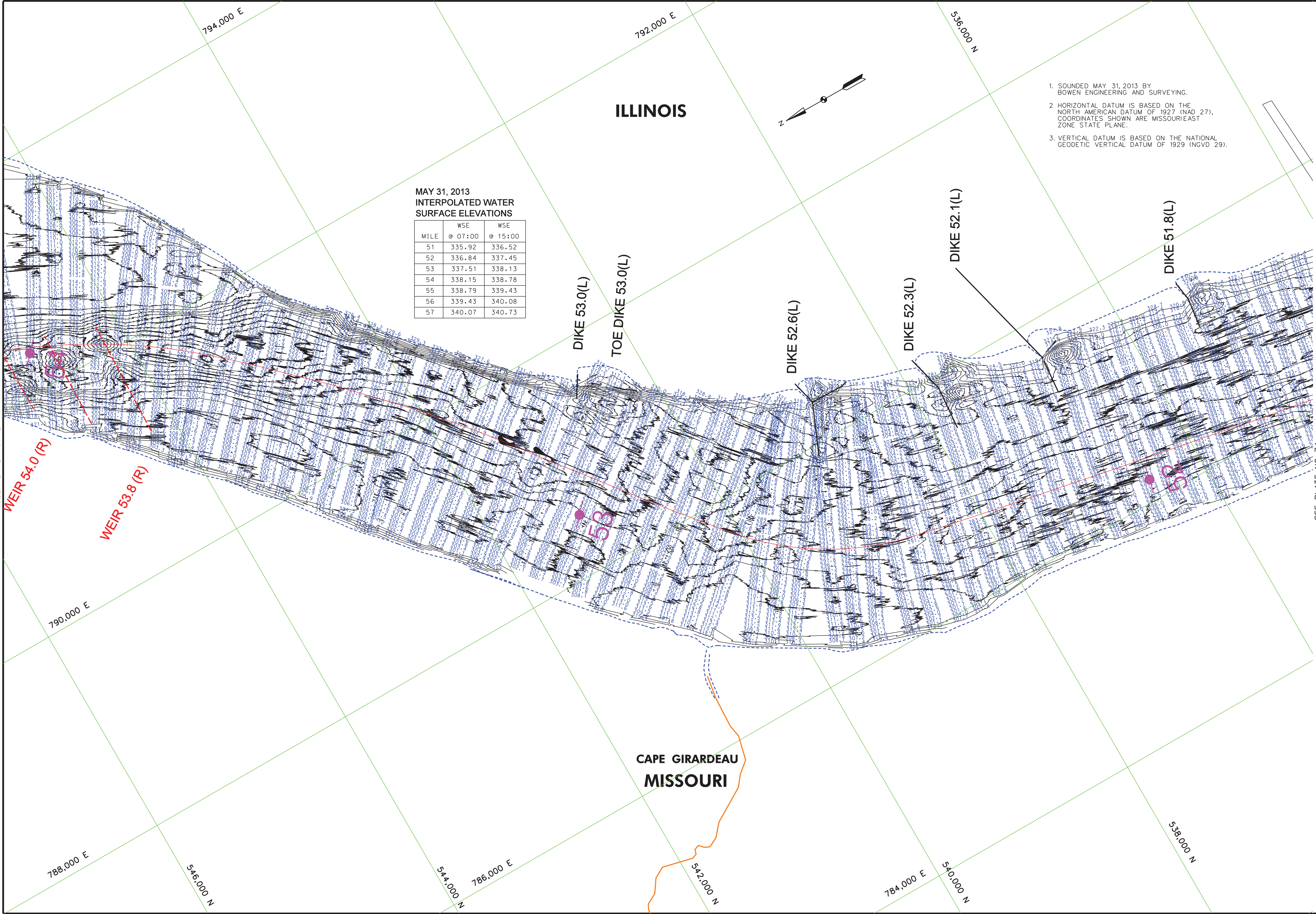


SEE PLATE NO. 73

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI	Surveyed by: BOWEN ENGINEERING	Survey Date: May 31, 2013
	Drawn by: X	Reviewed by: X
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER	Submitted: X	Approved: X
	Plot Date: File Name:	##REVDATE### ##PROJECT/DESCRIPTION##

120 400 800 1200 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900 10000	THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONTOUR OF THE TERRAIN.
HYDROGRAPHIC SURVEYS	RIVER MILES 63.9 - 56.1

PLATE NUMBER
72



MAY 31, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE	
	@ 07:00	@ 15:00
51	335.92	336.52
52	336.84	337.45
53	337.51	338.13
54	338.15	338.78
55	338.79	339.43
56	339.43	340.08
57	340.07	340.73

1. SOUNDED MAY 31, 2013, BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

US Army Corps
of Engineers
St. Louis District

CAGE RECORD			
THERES, IL	GRAY'S POINT, MO	CAPE GIRARDEAU, MO	MOCCASIN SPRINGS, MO
ZERO N.G.V.D.	330.00	304.65	313.59
MILE	23.27	52.1	66.59
L.W.R.D.	304.8	306.3	309.9
31 MAY 2013	30.427(20) 30.981(5.00)	32.287(20) 32.891(5.00)	32.151(20) 32.891(5.00)

ELEVATIONS ARE REFERRED TO N.G.V.D. - CONTOURS ARE BELOW 1996-97 LOW WATER REFERENCE PLANE (LWRP) 14,000 G.T.S.

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

Surveyed by: BOWEN ENGINEERING	Survey Date: May 31, 2013
Drawn by: X	Reviewed by: X
Submitted: X	APPROVED: X
Plot Date: File Name:	##REVDATE#### ##DESIGN/REVISION/DATE##

120 0 100 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL LOCATIONS OF SURVEY DATA.

HYDROGRAPHIC SURVEYS
RIVER MILES 51.8 - 53.9

SEE PLATE NO. 72

SEE PLATE NO. 74

PLATE
NUMBER

73

SEE PLATE NO. 73

	WSE	WSE
MILE	@ 07:00	@ 15:00
51	335.92	336.52
52	336.84	337.45
53	337.51	338.13
54	338.15	338.78
55	338.79	339.43
56	339.43	340.08
57	340.07	340.73

	WSE	WSE
MILE	@ 07:00	@ 15:00
51	335.92	336.52
52	336.84	337.45
53	337.51	338.13
54	338.15	338.78
55	338.79	339.43
56	339.43	340.08
57	340.07	340.73

1. SOUNDED MAY 30 AND 31, 2013 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27), COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

GIBONEY DIKE ISLAND

MISSOURI

The logo for IX CREEK, featuring the text "IX CREEK" in a stylized, orange, sans-serif font, slanted upwards to the right. The letters are outlined in a darker orange color. The logo is positioned in the bottom right corner of the page.

CAPE B

MAY 30, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

	WSE @ 07:00	WSE @ 14:00
46	329.84	330.28
47	330.54	330.98
48	331.45	331.89
49	332.37	332.80
50	333.28	333.71
51	334.19	334.63
52	335.11	335.54



US Army Corps
of Engineers
St. Louis District

		GAGE RECORD				
		THEBES I/L	GRAVS POINT	CAPE GIRARD AU	MOCCASIN SPRINGS, MO	
		300.00	301.18	304.65	313.89	
			46.3	52.1	66.3	
				306.3	309.9	317.8
		304.8		305.55(7.00)	303.84(4.00)	
		29.417(3.00)	29.781(4.00)			x
				30.427(6.00)	30.981(5.00)	
		x		32.287(4.00)	32.694(5.00)	32.157(4.00)
						32.881(5.00)
ELEVATIONS ARE REFERRED TO NGVD. CONTOURS ARE BELOW 956+37 LOW WATER REFERENCE PLANE (LWRP) 15.04000 C.T.S.						

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI	Surveyed by: BOWEN ENGINEERING	Survey Date: May 30 and 31, 2013
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER	Drawn by: X	Reviewed by: X
	SUBMITTED: X	
	APPROVED: X	
Plot date: File name: 000004167.DWG #DISCOMPLICATION#		

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF
AERIAL PHOTOGRAPHY CONDUCTED IN 1994. IT IS NOT TO BE CONSIDERED
AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

HYDROGRAPHIC SURVEYS

RIVER MILES 50.0 - 51.8

PLATE
NUMBER

74



		CASE RECORD				
		THEBES, IL	GRAY'S POINT	CAPE GARDNEAU, MO	MOCCASIN SPRINGS, MO	
PERIOD	NO. D.	300.00	301.18	304.65	304.65	
MILE		43.7	46.3	52.1	56.3	
L.W. R.D.		304.65	306.3	309.9	317.8	
NO. MAY	20	29,417,029,278,140,00	28,721,029,278,140,00	30,551,029,278,140,00	31,700,029,278,140,00	
ELEVATIONS ARE REFERRED TO N.E.V.A. - CONTIGUES ARE BELOW 1956-57 LOW WATER REFERENCE PLANE W.F.P. 154,000 C.F.S.						

Surveyed by: BOWEN ENGINEERING	Survey Date: May 30, 2013
Drawn by: X	Checked by: X
Reviewed by:	
SUBMITTED: X	
APPROVED: X	
Plot date: #####DATE##### File name: #####FILENAME#####	

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

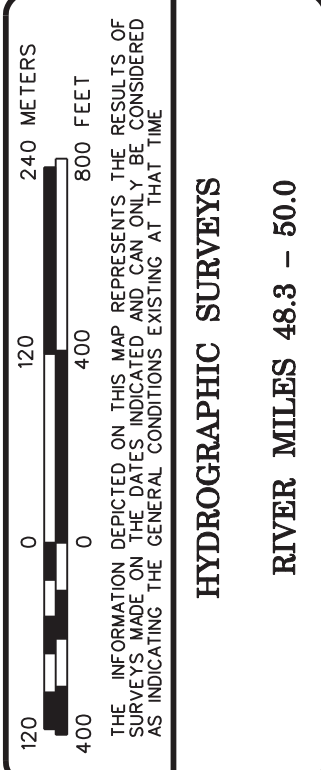
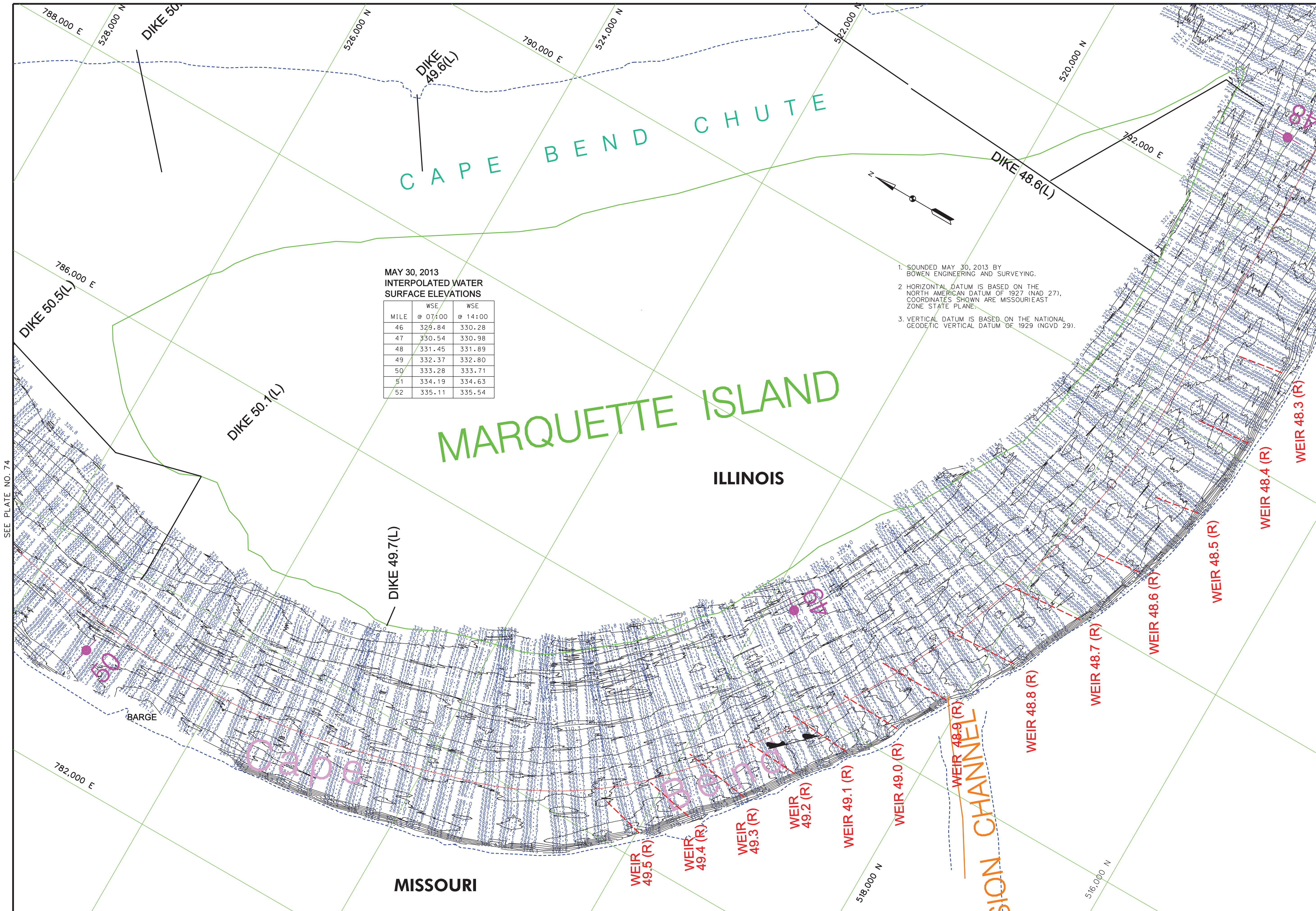
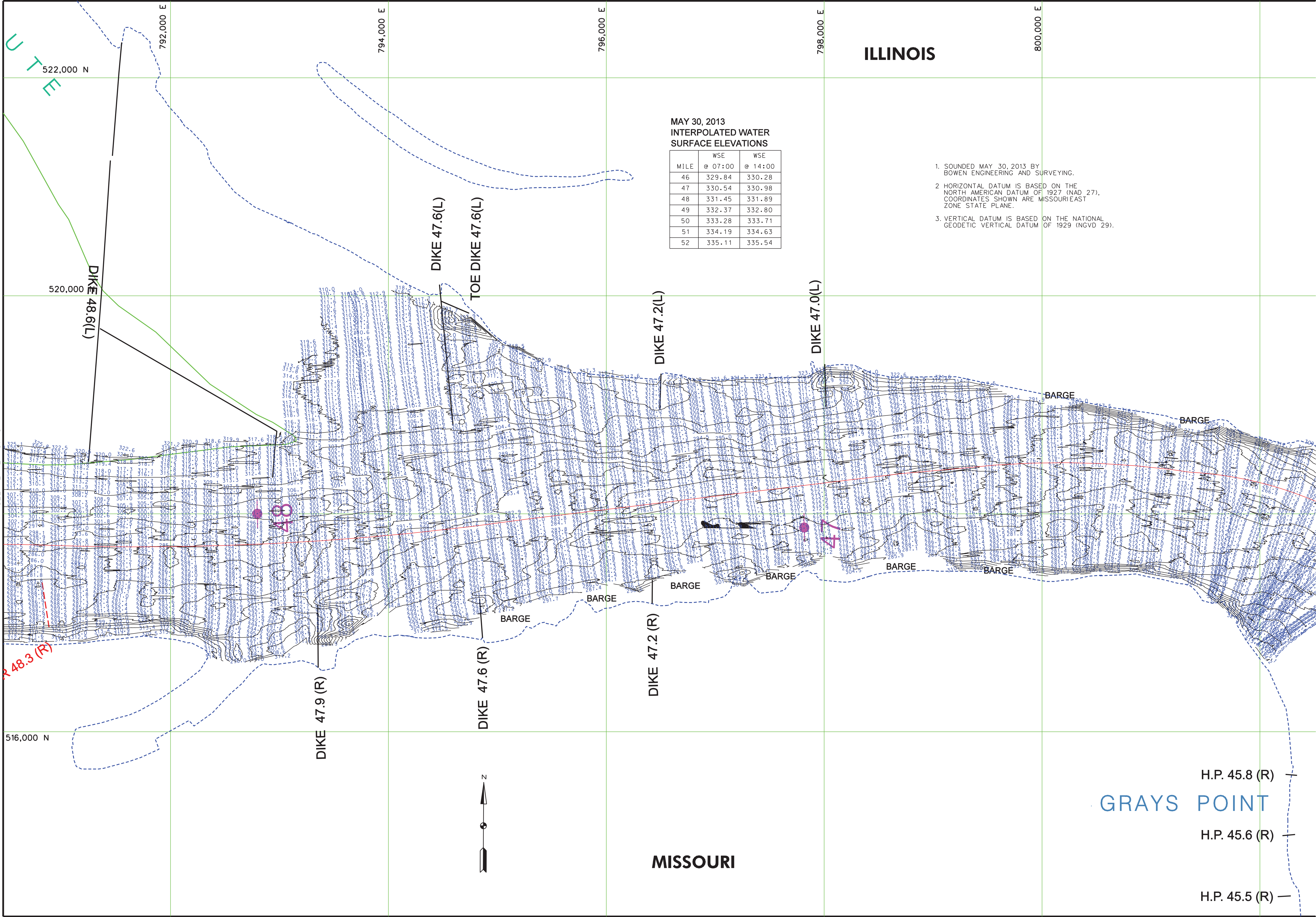


PLATE
NUMBER

75





MAY 30, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE	
	@ 07:00	@ 14:00
46	329.84	330.28
47	330.54	330.98
48	331.45	331.89
49	332.37	332.80
50	333.28	333.71
51	334.19	334.63
52	335.11	335.54

1. SOUNDED MAY 30, 2013 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

US Army Corps
of Engineers
St. Louis District

CAGE RECORD		THERES, IL		GRAY'S POINT, MO		CAPE GIRARDEAU, MO		MOCCASH SPRINGS, MO	
ZERO N.G.V.D.		300.00		301.18		304.65		313.59	
MILE		33.7		34.3		35.1		36.3	
L.W.R.D.		304.8		306.3		309.9		317.8	
30 MAY 2013		29.41(760) 29.78(14.00)		28.72(760) 29.16(14.00)		30.55(760) 30.98(14.00)		X	

ELEVATIONS ARE REFERRED TO N.G.V.D. - CONTOURS ARE BELOW 1994-97 LOW WATER REFERENCE PLANE (L.W.R.P.) 14,000 G.T.S.

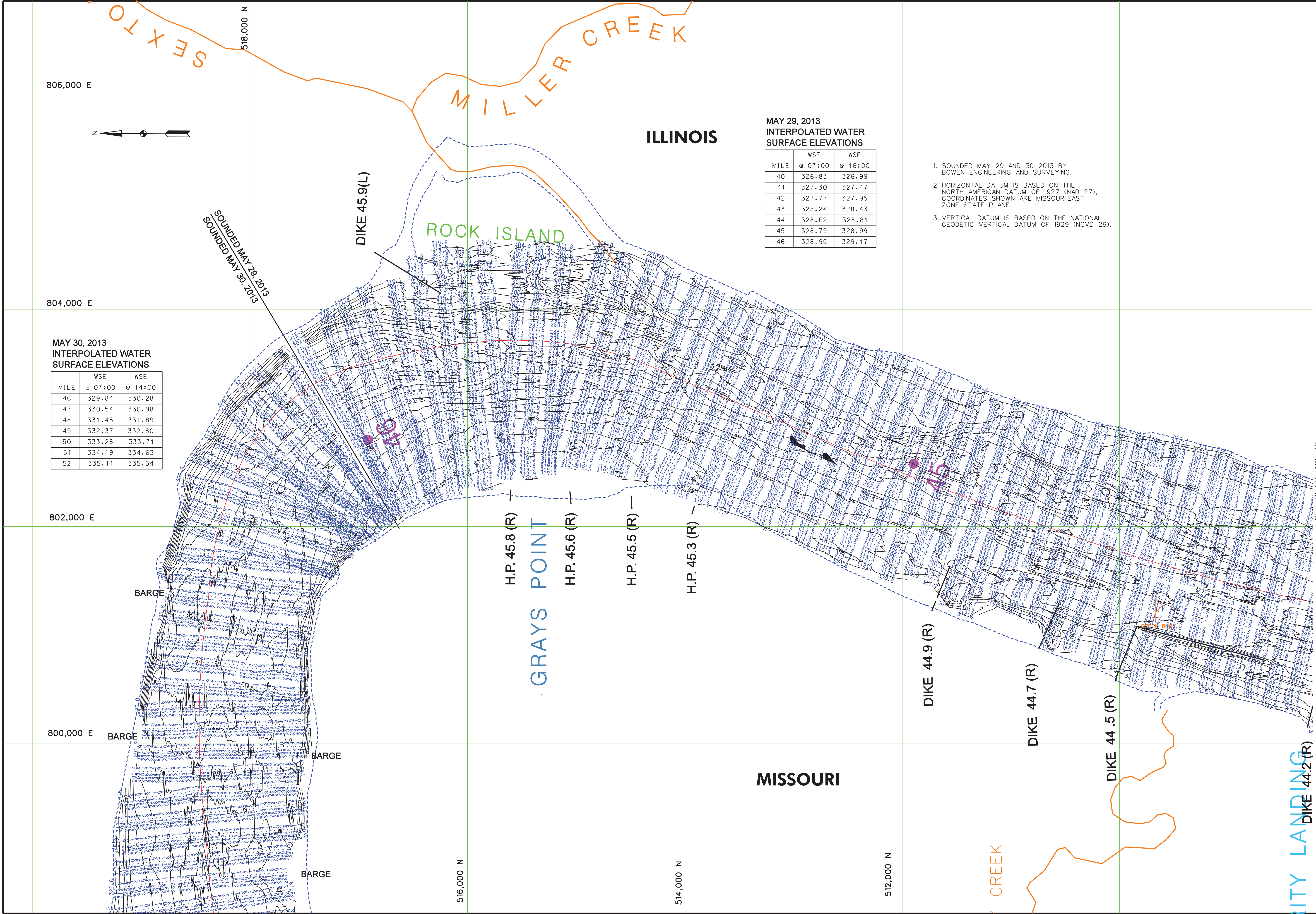
U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI	Survey Date: May 30, 2013	Reviewed by: X	
	Drawn by: X	Ctd by: X	
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER	SUBMITTED: X		APPROVED: X
	Plot Date: File Name: ##REV#DATE### ##DESIGN#L#PER#DATE#		

HYDROGRAPHIC SURVEYS

RIVER MILES 46.3 - 48.3

PLATE NUMBER

76



MAY 30, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 07:00	WSE @ 14:00
46	329.84	330.28
47	330.54	330.98
48	331.45	331.89
49	332.37	332.80
50	333.28	333.71
51	334.19	334.63
52	335.11	335.54

MAY 29, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 07:00	WSE @ 16:00
40	326.83	326.99
41	327.30	327.47
42	327.77	327.95
43	328.24	328.43
44	328.62	328.81
45	328.79	328.99
46	328.95	329.17

1. SOUNDED MAY 29 AND 30, 2013 BY:
BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE
NORTH AMERICAN DATUM OF 1927 (NAD 27).
COORDINATES SHOWN ARE MISSOURI EAST
ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL
GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

US Army Corps
of Engineers
St. Louis District

SEE PLATE NO. 78

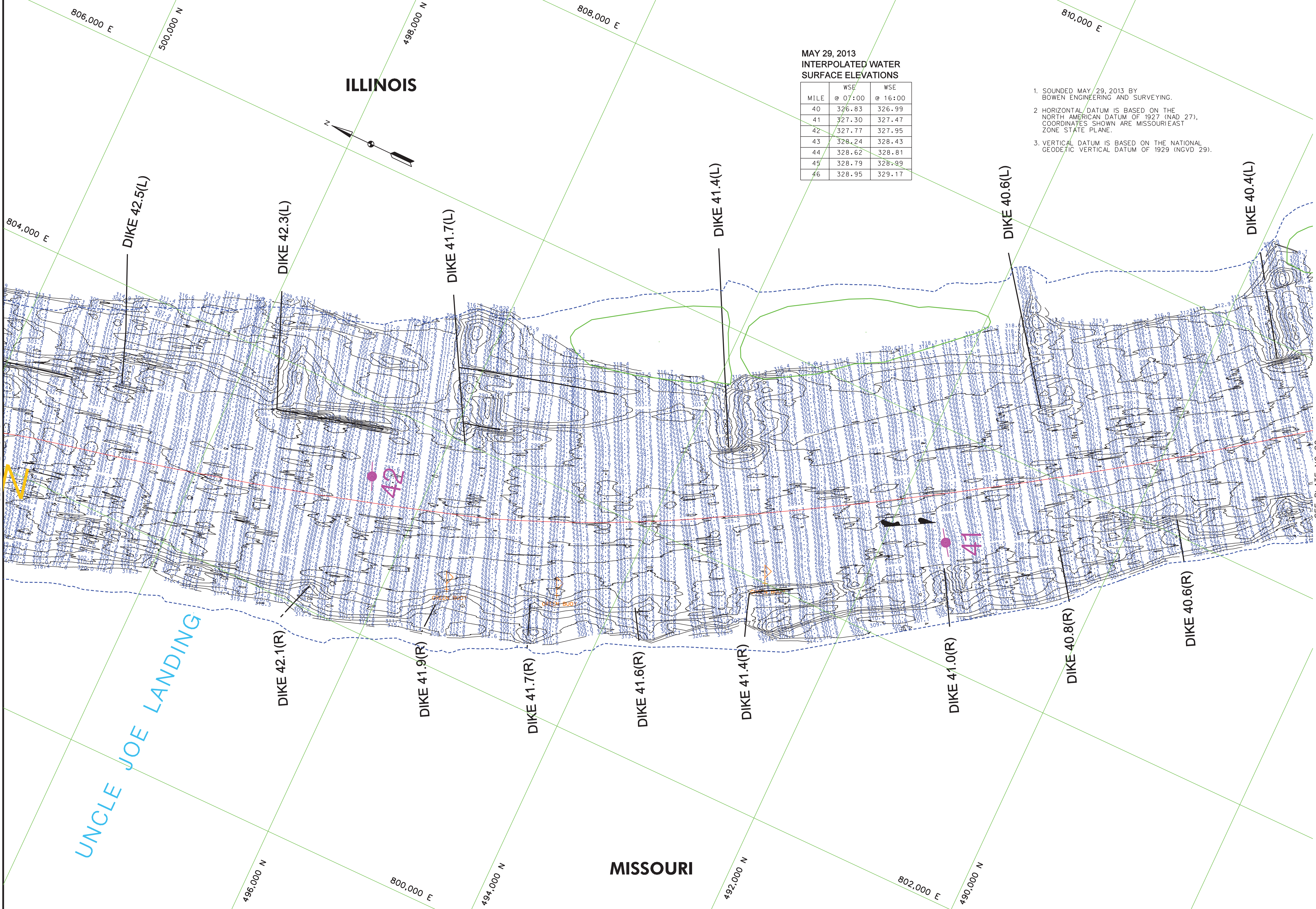
U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI	Survey Date: May 29 and 30, 2013
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER	Drawn by: X
	Checked by: X
	Reviewed by: X
	APPROVED: X
	SUBMITTED: X
Plot Date: File Name:	##PROJECT## ##DESIGN/REVISION##

HYDROGRAPHIC SURVEYS
RIVER MILES 44.4 - 46.3

PLATE
NUMBER
77

1" = 240 METERS
400' 800' 1600' 2400' 3200' 4000' 4800' 5600' 6400' 7200' 8000' 8800' 9600' 10400' 11200' 12000' 12800' 13600' 14400' 15200' 16000' 16800' 17600' 18400' 19200' 20000'

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF
SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED
AS INDICATING THE GENERAL CONTOUR OF THE TERRAIN.



SEE PLATE NO. 78

SEE PLATE NO. 80

MAY 29, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE	
	@ 07:00	@ 16:00
40	326.83	326.99
41	327.30	327.47
42	327.77	327.95
43	328.24	328.43
44	328.62	328.81
45	328.79	328.99
46	328.95	329.17

1. SOUNDED MAY 29, 2013 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURIEAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).



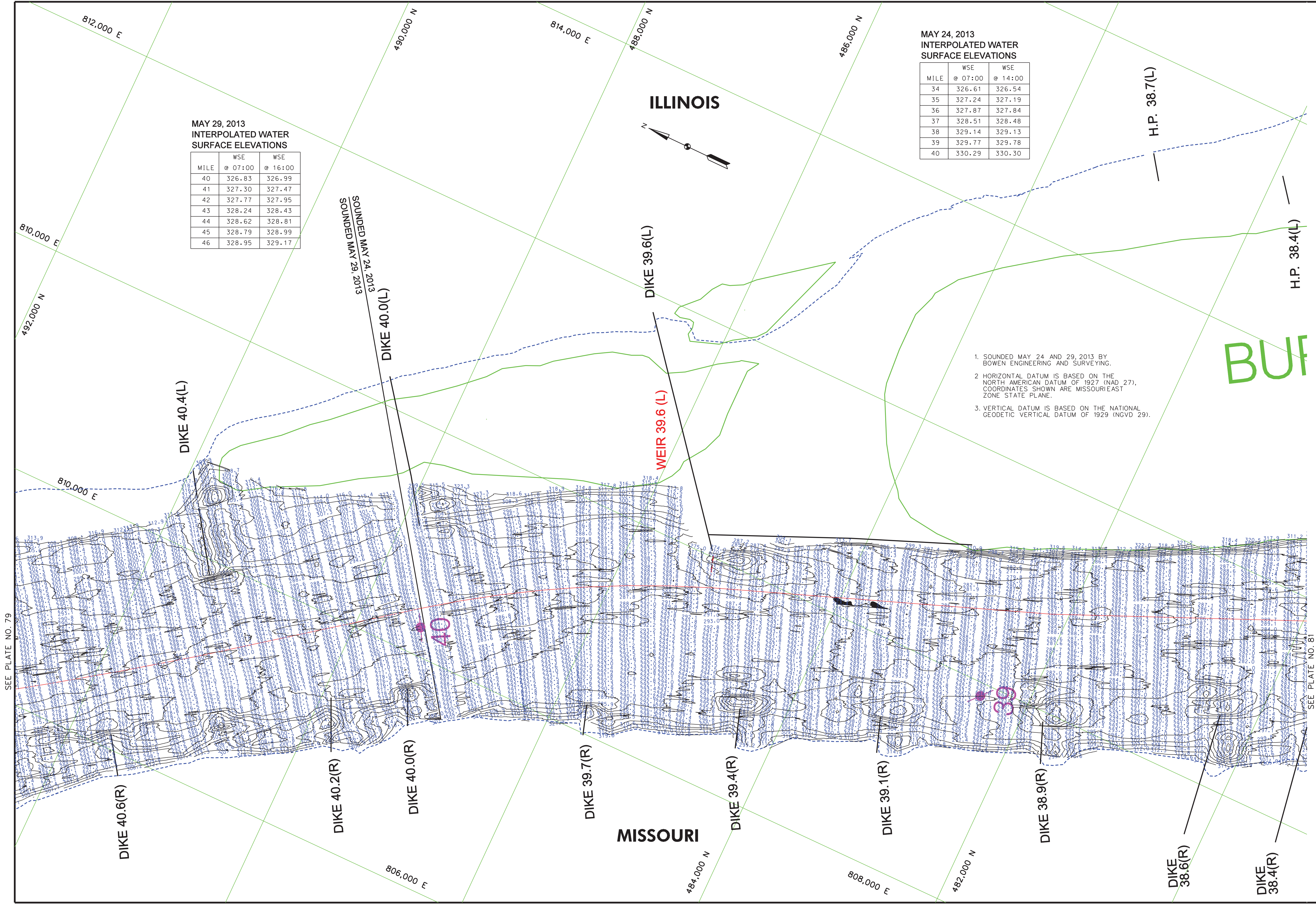
CAGE RECORD		GRAVEY POINT NO		CAPE GIRARDAL NO	
COMMERCE NO	THEBES IL	301.83	300.00	301.18	304.65
ZERO NGVD	301.83	300.00	301.18	304.65	304.65
MILE	39.5	33.7	34.3	32.3	32.3
L.W.R.D.	302.1	304.8	306.3	309.9	309.9
29 MAY 2013	24.777300 24.921600	28.317300 28.161600	27.827300 28.041600	X	X

Surveyed by: BOWEN ENGINEERING		Survey Date: May 29, 2013	
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER	SUBMITTED: JAMES L. KEIM Chief, Engr. Data Mngt. Sect.	Drawn by:	Reviewed by:
		X	X
		APPROVED: X Chief, Geospatial Branch	
Plot date:		File name:	

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI	
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER	

HYDROGRAPHIC SURVEYS	
RIVER MILES 40.5 - 42.5	

PLATE NUMBER
79



MAY 29, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 07:00	WSE @ 16:00
40	326.83	326.99
41	327.30	327.47
42	327.77	327.95
43	328.24	328.43
44	328.62	328.81
45	328.79	328.99
46	328.95	329.17

MAY 24, 2013
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 07:00	WSE @ 14:00
34	326.61	326.54
35	327.24	327.19
36	327.87	327.84
37	328.51	328.48
38	329.14	329.13
39	329.77	329.78
40	330.29	330.30

1. SOUNDED MAY 24 AND 29, 2013 BY
BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE
NORTH AMERICAN DATUM OF 1927 (NAD 27),
COORDINATES SHOWN ARE MISSOURI EAST
ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL
GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

US Army Corps
of Engineers
St. Louis District

CAGE RECORD		COMMERCE NO.		THEBES, IL	
THOMPSON LANDING	PRICE'S LANDING	280.00	289.75	301.83	300.00
ZERO N.G.V.D.	PRICE'S LANDING	280.00	289.75	301.83	300.00
MILE	PRICE'S LANDING	280.00	289.75	301.83	300.00
L.W.R.D.	PRICE'S LANDING	280.00	289.75	301.83	300.00
24 MAY 2013	CAGE NOT WORKING	23.817(300) 23.014(14.00)	28.267(300) 28.271(14.00)	31.817(300) 31.791(14.00)	34.817(300) 34.791(14.00)
29 MAY 2013	CAGE NOT WORKING	24.777(300) 24.921(16.00)	28.577(300) 28.577(16.00)	31.817(300) 31.791(14.00)	34.817(300) 34.791(14.00)

ELEVATIONS ARE REFERRED TO N.G.V.D. - CONTOURS ARE BELOW 1996-97 LOW WATER REFERENCE PLANE (L.W.R.P.) 14.000 OF 5

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI		Survey Date May 24 and 29, 2013	
Drawn by:	Reviewed by:	Checked by:	Approved by:
Submitted:	Submitted:	Submitted:	Submitted:
Plot Date:	Plot Date:	Plot Date:	Plot Date:
File Name:	File Name:	File Name:	File Name:

HYDROGRAPHIC SURVEYS

RIVER MILES 38.5 - 40.5

PLATE
NUMBER

80