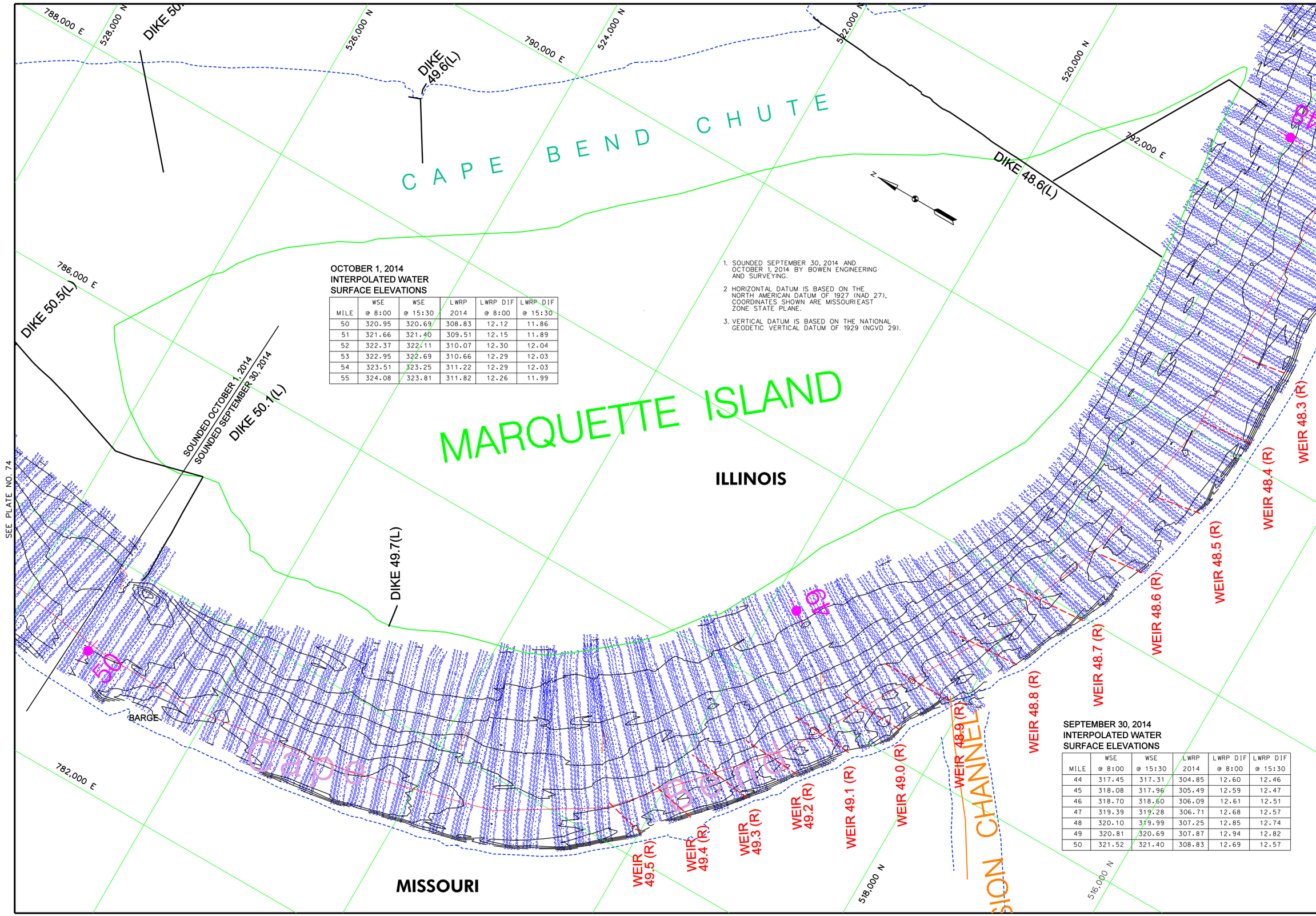


OCTOBER 1, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:30	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:30
50	320.95	320.69	308.83	12.12	11.86
51	321.66	321.40	309.51	12.15	11.89
52	322.37	322.11	310.07	12.30	12.04
53	322.95	322.69	310.66	12.29	12.03
54	323.51	323.25	311.22	12.29	12.03
55	324.08	323.81	311.82	12.26	11.99

1. SOUNDED SEPTEMBER 30, 2014 AND OCTOBER 1, 2014 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).

SEPTEMBER 30, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:30	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:30
44	317.45	317.31	304.85	12.60	12.46
45	318.08	317.96	305.49	12.59	12.47
46	318.70	318.60	306.09	12.61	12.51
47	319.39	319.28	306.71	12.68	12.57
48	320.10	319.99	307.25	12.85	12.74
49	320.81	320.69	307.87	12.94	12.82
50	321.52	321.40	308.83	12.69	12.57

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	THEBES, IL	GRAYS POINT, MO	CAPE GIRARDEAU, MO	WOODSON SPRINGS, MO
ZERO N.G.V.D.	300.00	301.18	304.65	313.89
MILE	43.7	46.3	52.1	66.3
LWRP 2014	304.90	306.20	310.01	317.54
30 SEP 2014	17.26(8:00) 17.12(15:30)	17.71(8:00) 17.61(15:30)	18.36(8:00) 18.23(15:30)	x
01 OCT 2014	x	17.14(8:00) 16.88(15:30)	17.79(8:00) 17.53(15:30)	16.56(8:00) 16.26(15:30)

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

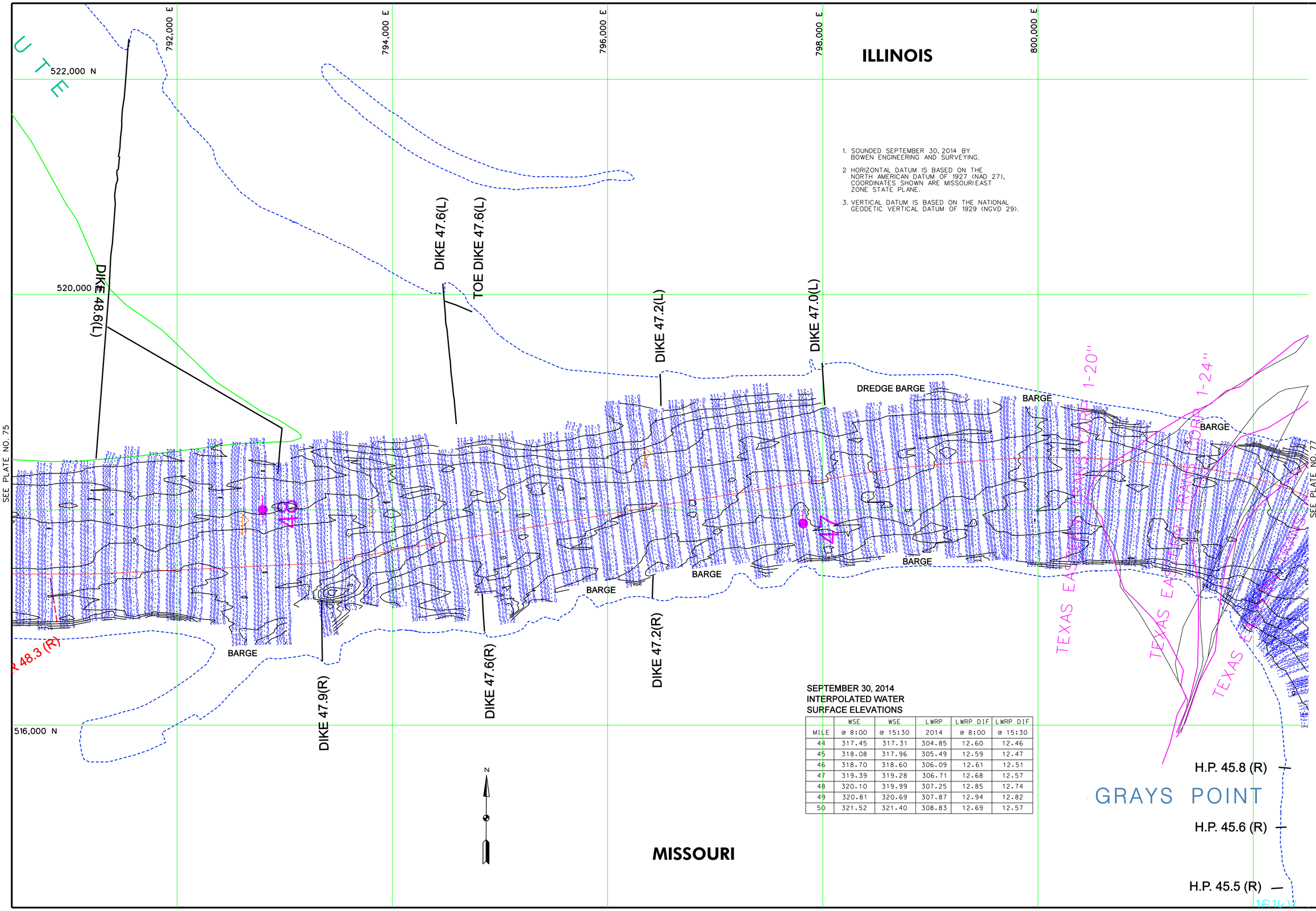
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

Surveyed by: BOWEN ENGINEERING
Survey Date: SEPT. 30 & OCTOBER 1, 2014
Drawn by: X
Ckd by: X
Reviewed by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE:TIME####
File name: ####DESIGNFILEBASEPLOTCATCH####

240 METERS
800 FEET
120 0 120 400 0 400
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE BY BOWEN ENGINEERING AT THE TIME SHOWN AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

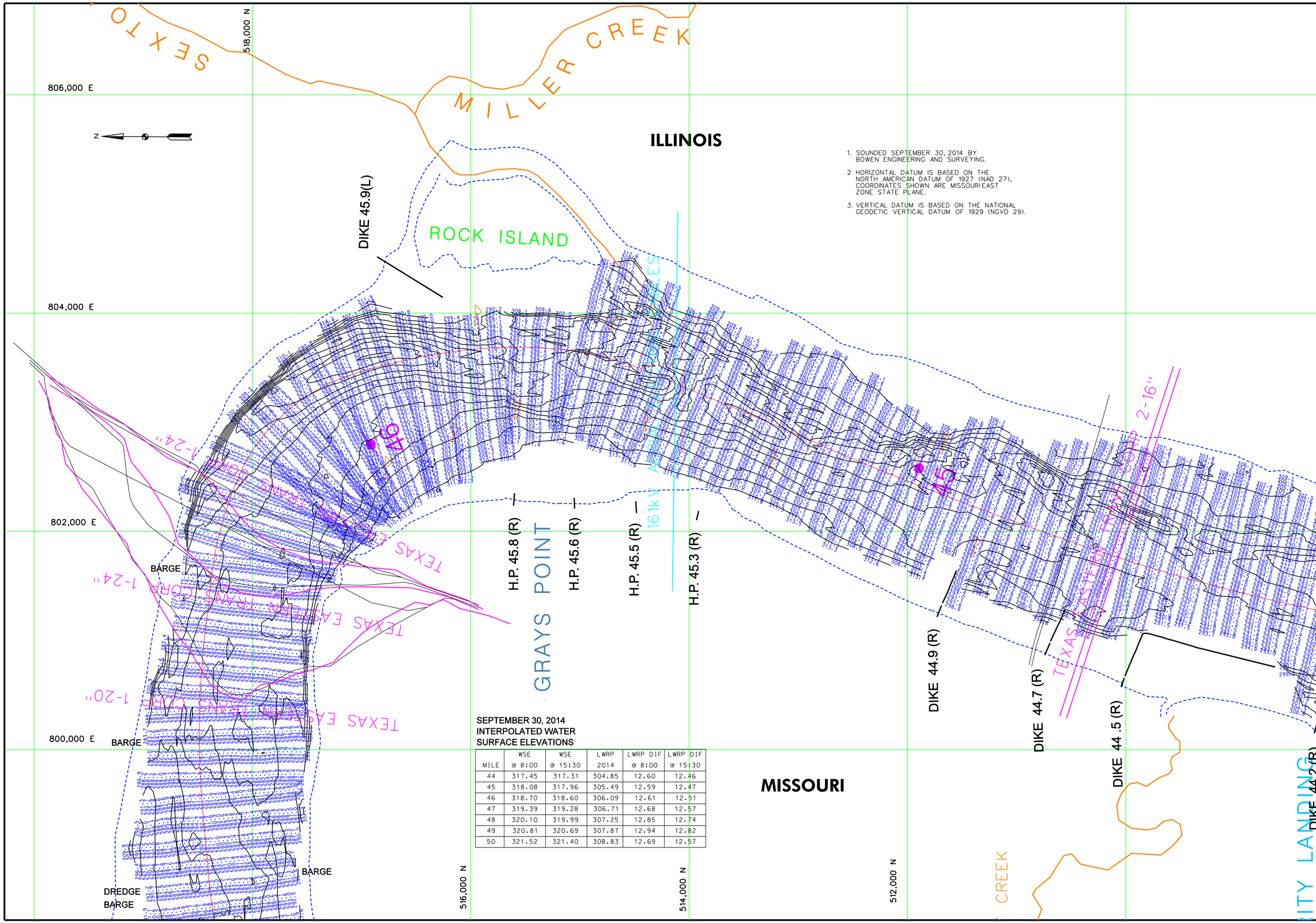
HYDROGRAPHIC SURVEYS
RIVER MILES 48.3 – 50.0

PLATE NUMBER
75



SEPTEMBER 30, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:30	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:30
44	317.45	317.31	304.85	12.60	12.46
45	318.08	317.96	305.49	12.59	12.47
46	318.70	318.60	306.09	12.61	12.51
47	319.39	319.28	306.71	12.68	12.57
48	320.10	319.99	307.25	12.85	12.74
49	320.81	320.69	307.87	12.94	12.82
50	321.52	321.40	308.83	12.69	12.57



1. SOUNDED SEPTEMBER 30, 2014 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).

SEPTEMBER 30, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:30	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:30
44	317.45	317.31	304.85	12.60	12.46
45	318.08	317.96	305.49	12.59	12.47
46	318.70	318.60	306.09	12.61	12.51
47	319.39	319.28	306.71	12.68	12.57
48	320.10	319.99	307.25	12.85	12.74
49	320.81	320.69	307.87	12.94	12.82
50	321.52	321.40	308.83	12.69	12.57

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	COMMERCE, MO	THEBES, IL	GRAYS POINT, MO	CAPE GIRARDEAU, MO
ZERO N.G.V.D.	301.83	300.00	301.18	304.65
MILE	39.5	43.7	46.3	52.1
LWRP 2014	301.48	304.90	306.20	310.01
30 SEP 2014	x	17.2868-00) 17.12(15-30)	17.7118-00) 17.61(15-30)	18.3618-00) 18.23(15-30)

Survey Date: SEPTEMBER 30, 2014
Surveyed by: BOWEN ENGINEERING
Reviewed by: X
Drawn by: X
Ckd by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE-TIME####
File name: ####DESIGN#FILE#SPECIFICATION####

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

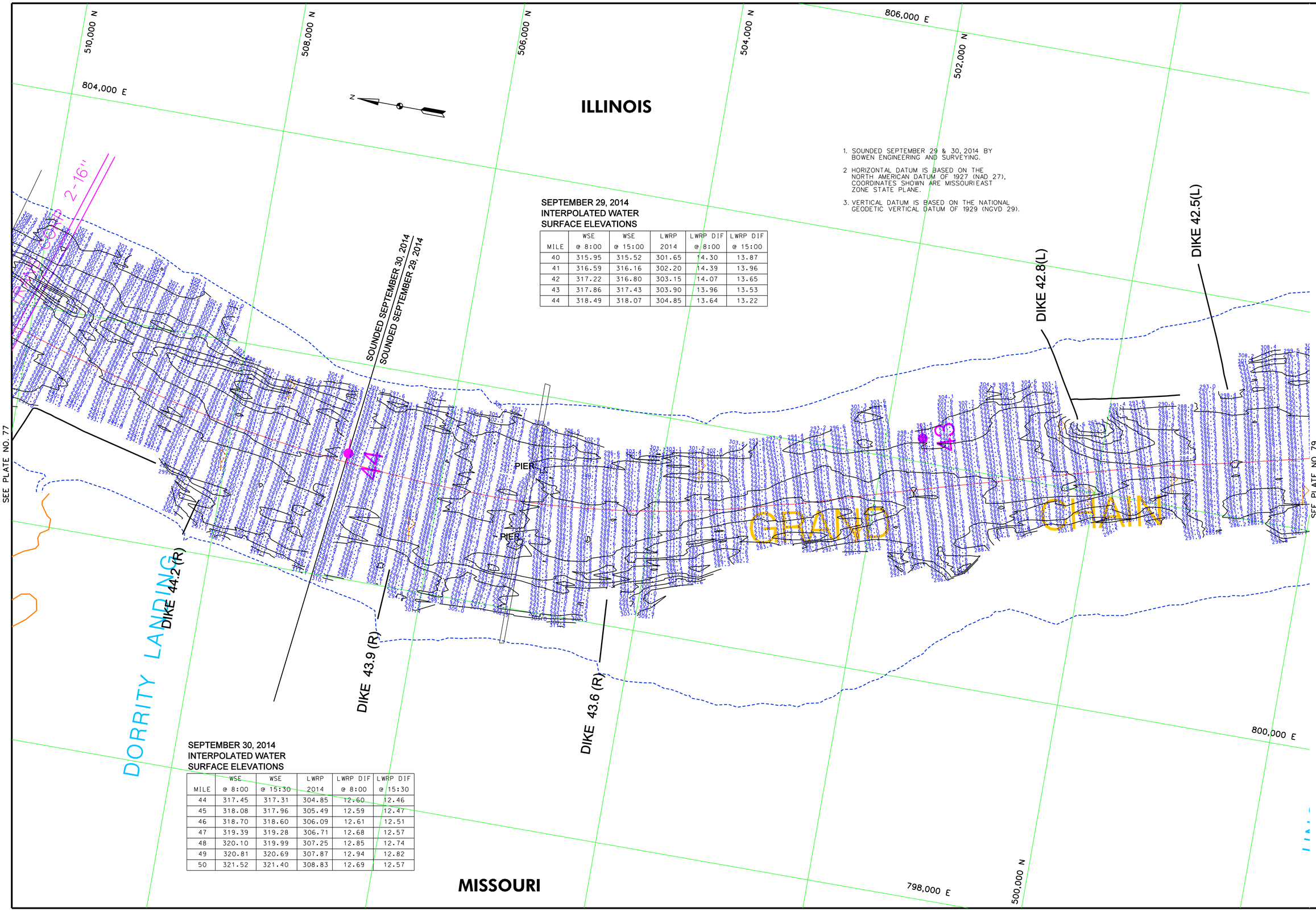
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

240 METERS 120 0 120 240
800 FEET 400 0 400 800

THE INFORMATION REPORTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE SHOWN AND IS INTENDED ONLY AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

HYDROGRAPHIC SURVEYS
RIVER MILES 44.4 – 46.3

PLATE NUMBER
77



1. SOUNDED SEPTEMBER 29 & 30, 2014 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).

SEPTEMBER 29, 2014
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
40	315.95	315.52	301.65	14.30	13.87
41	316.59	316.16	302.20	14.39	13.96
42	317.22	316.80	303.15	14.07	13.65
43	317.86	317.43	303.90	13.96	13.53
44	318.49	318.07	304.85	13.64	13.22

SEPTEMBER 30, 2014
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:30	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:30
44	317.45	317.31	304.85	12.60	12.46
45	318.08	317.96	305.49	12.59	12.47
46	318.70	318.60	306.09	12.61	12.51
47	319.39	319.28	306.71	12.68	12.57
48	320.10	319.99	307.25	12.85	12.74
49	320.81	320.69	307.87	12.94	12.82
50	321.52	321.40	308.83	12.69	12.57

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	COMMERCE, MO	THEBES, IL	GRAYS POINT, MO	CAPE GIRARDEAU, MO
ZERO N.G.V.D.	301.83	300.00	301.18	304.65
MILE	39.5	43.7	46.3	52.1
LWRP 2014	301.48	304.90	306.20	310.01
29 SEP 2014	GAGE NOT WORKING	18.318(-00) 17.881(5-00)	18.73(8-00) 18.33(15-00)	x
30 SEP 2014	x	17.26(8-00) 17.12(15-30)	17.71(8-00) 17.61(15-30)	18.36(8-00) 18.23(15-30)

Survey Date: SEPTEMBER 29 & 30, 2014
Reviewed by: X
Surveyed by: BOWEN ENGINEERING
Drawn by: X
Ckd by: X
APPROVED: X
SUBMITTED: JAMES L. KEIM
Chief, Engr. Data Mngt. Sect.
Plot date: ########
File name: ########

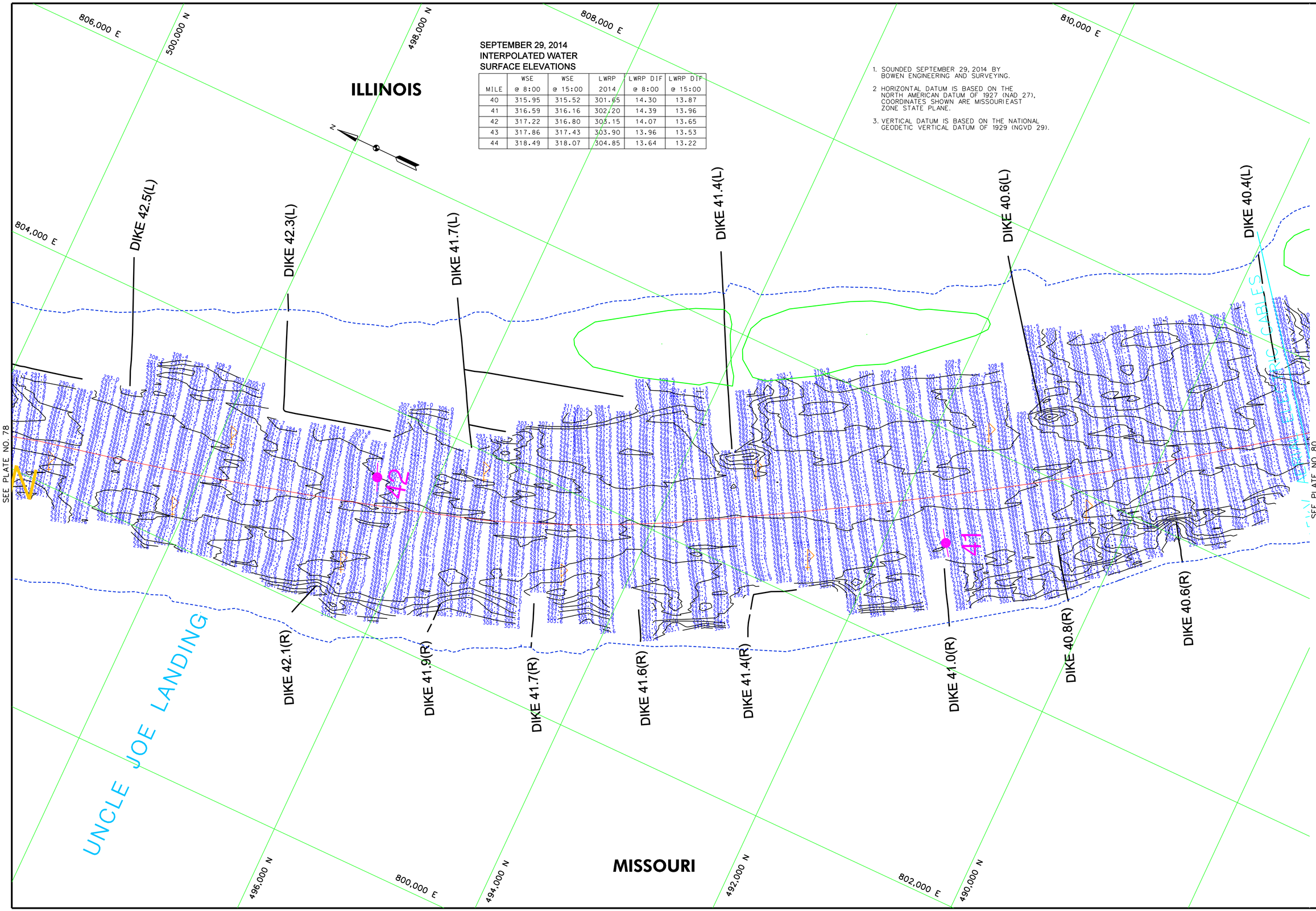
U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

HYDROGRAPHIC SURVEYS
RIVER MILES 42.5 – 44.4

240 METERS
800 FEET
THE INFORMATION REPORTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND IS ACCURATE AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

PLATE NUMBER
78



SEE PLATE NO. 78

SEE PLATE NO. 80

SEPTEMBER 29, 2014
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
40	315.95	315.52	301.65	14.30	13.87
41	316.59	316.16	302.20	14.39	13.96
42	317.22	316.80	303.15	14.07	13.65
43	317.86	317.43	303.90	13.96	13.53
44	318.49	318.07	304.85	13.64	13.22

1. SOUNDED SEPTEMBER 29, 2014 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

GAGE RECORD

	COMMERCE, MO	THEBES, IL	GRAYS POINT, MO	CAPE GIRARDEAU, MO
ZERO N.G.V.D.	301.83	300.00	301.18	304.65
MILE	39.5	43.7	46.3	52.1
LWRP 2014	301.48	304.90	306.20	310.01
29 SEP 2014	GAGE NOT WORKING	18.318(00) 17.881(-00)	18.738(-00) 18.351(-00)	X

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

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

Surveyed by: BOWEN ENGINEERING
Drawn by: X
Ckd by: X
Survey Date: SEPTEMBER 29, 2014
Reviewed by: X
SUBMITTED: JAMES L. KEM
Chief, Engr. Data Mngt. Sect.
APPROVED: X Chief, Geospatial Branch
Plot date: ######DATE/TIME######
File name: ######DESIGNFILE\DESCRIPTION######

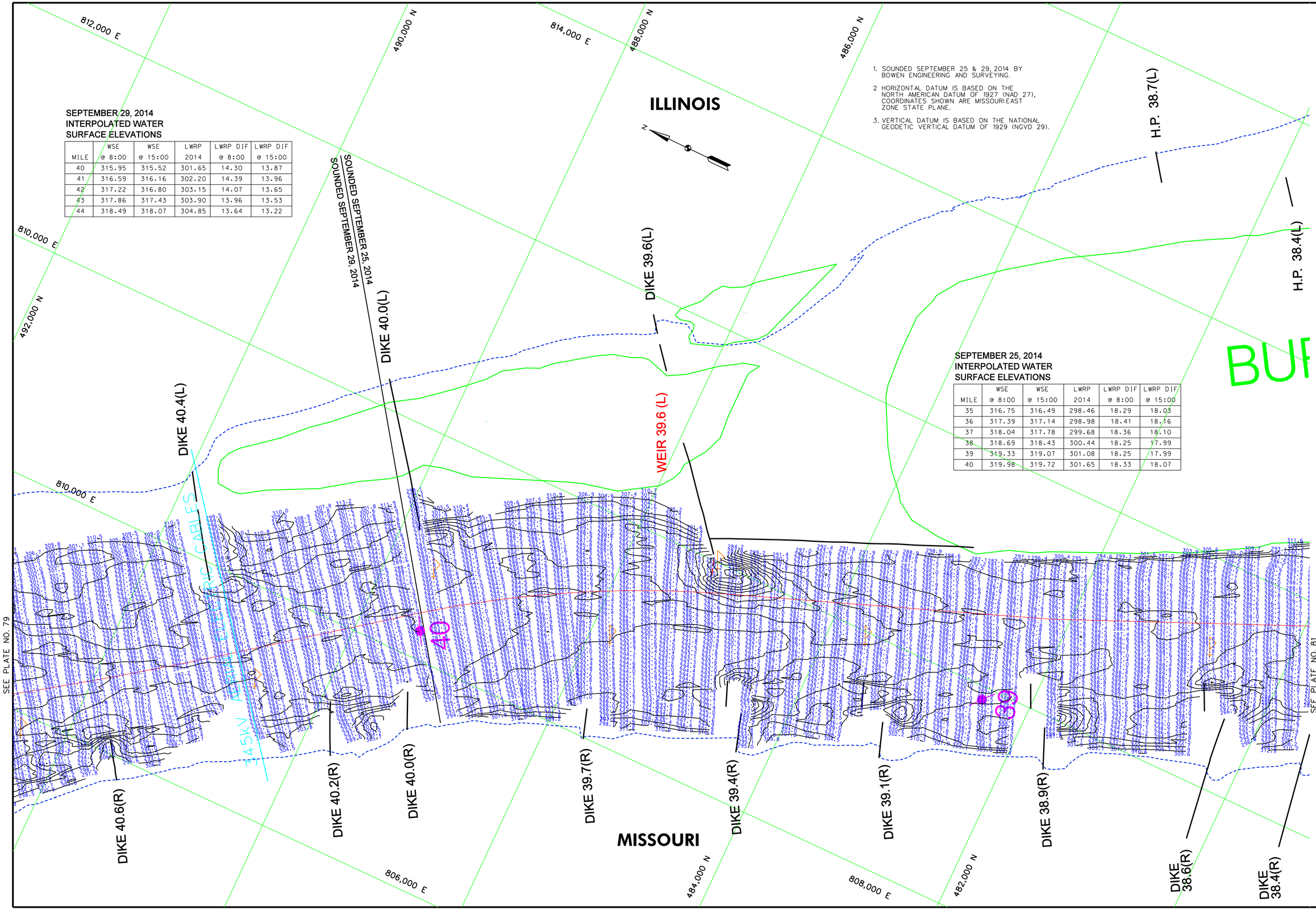
120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE TIME INDICATED AND MAY NOT BE CORRECT AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

HYDROGRAPHIC SURVEYS

RIVER MILES 40.5 – 42.5

PLATE NUMBER
79



1. SOUNDED SEPTEMBER 25 & 29, 2014 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).

SEPTEMBER 29, 2014
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
40	315.95	315.52	301.65	14.30	13.87
41	316.59	316.16	302.20	14.39	13.96
42	317.22	316.80	303.15	14.07	13.65
43	317.86	317.43	303.90	13.96	13.53
44	318.49	318.07	304.85	13.64	13.22

SEPTEMBER 25, 2014
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
35	316.75	316.49	298.46	18.29	18.03
36	317.39	317.14	298.98	18.41	18.16
37	318.04	317.78	299.68	18.36	18.10
38	318.69	318.43	300.44	18.25	17.99
39	319.33	319.07	301.08	18.25	17.99
40	319.98	319.72	301.65	18.33	18.07

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO	THEBES, IL
ZERO N.G.V.D.	280.00	299.75	301.83	300.00
MILE	20.2	28.2	39.5	43.7
LWRP 2014	289.90	294.74	301.48	304.90
25 SEP 2014	x	12.60(8:00) 12.35(15:00)	GAGE NOT WORKING	22.37(8:00) 22.10(15:00)
29 SEP 2014	x	8.66(8:00) 8.26(15:00)	GAGE NOT WORKING	18.31(8:00) 17.88(15:00)

Surveyed by: BOWEN ENGINEERING
Survey Date: SEPTEMBER 25 & 29, 2014
Drawn by: X
Ckd by: X
Reviewed by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE-TIME####
File name: ####DESIGNFILEPATH\FCNAME####

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

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

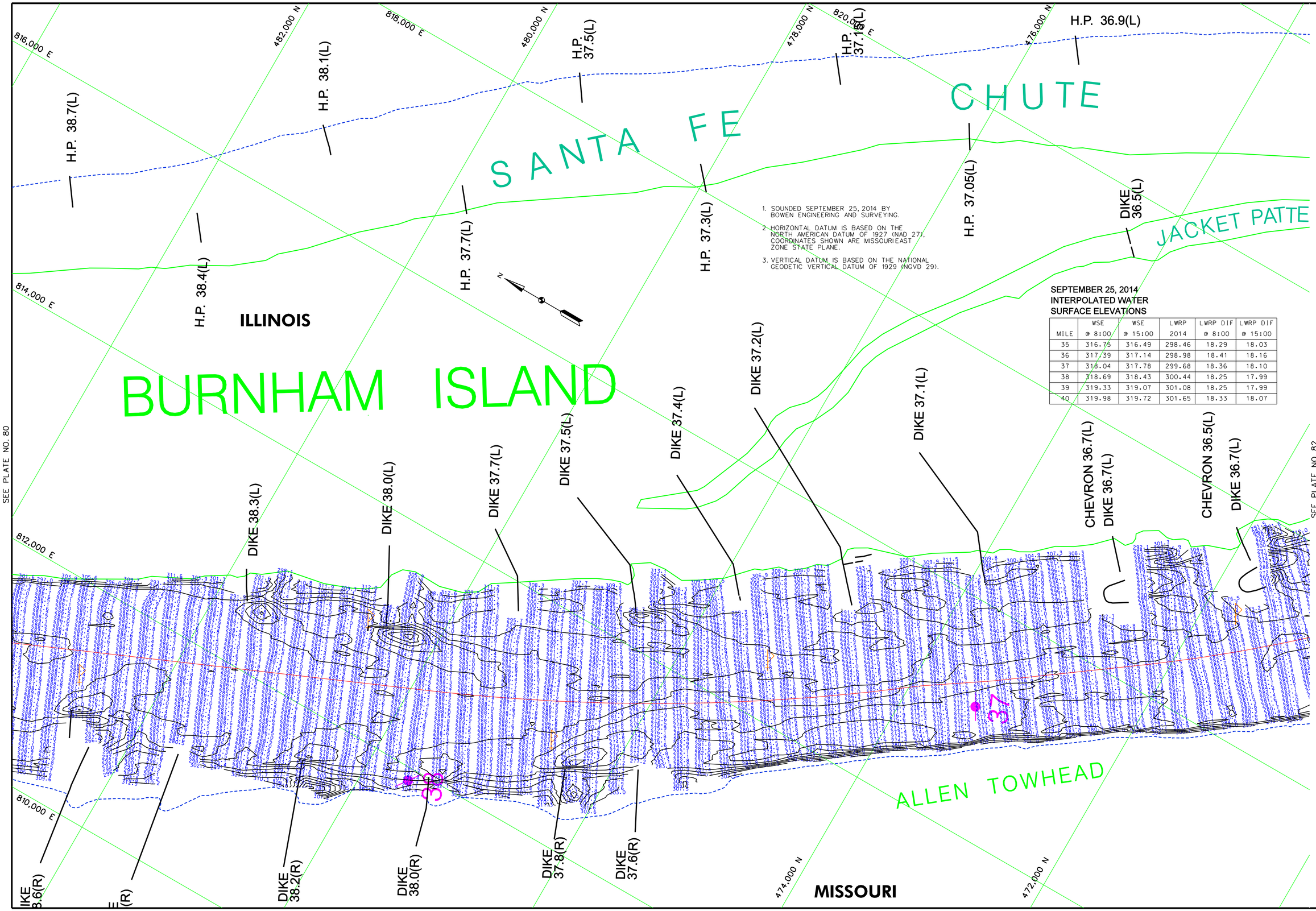
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE TIME INDICATED AND MAY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

120 400 0 0 240 METERS 800 FEET

HYDROGRAPHIC SURVEYS

RIVER MILES 38.5 – 40.5

PLATE NUMBER
80



1. SOUNDED SEPTEMBER 25, 2014 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).

SEPTEMBER 25, 2014 INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
35	316.75	316.49	298.46	18.29	18.03
36	317.39	317.14	298.98	18.41	18.16
37	318.04	317.78	299.68	18.36	18.10
38	318.69	318.43	300.44	18.25	17.99
39	319.33	319.07	301.08	18.25	17.99
40	319.98	319.72	301.65	18.33	18.07

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO	THEBES, IL
ZERO N.G.V.D.	280.00	299.75	301.83	300.00
MILE	20.2	28.2	39.5	43.7
LWRP 2014	289.90	294.74	301.48	304.90
25 SEP 2014	x	12.6(08:00) 12.36(15:00)	GAGE NOT WORKING	22.37(8:00) 22.10(15:00)

Survey Date: SEPTEMBER 25, 2014
Surveyed by: BOWEN ENGINEERING
Reviewed by: X
Drawn by: X
Ckd by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE-TIME####
File name: ####DESIGNFILE\SURFACE\FOA\####

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

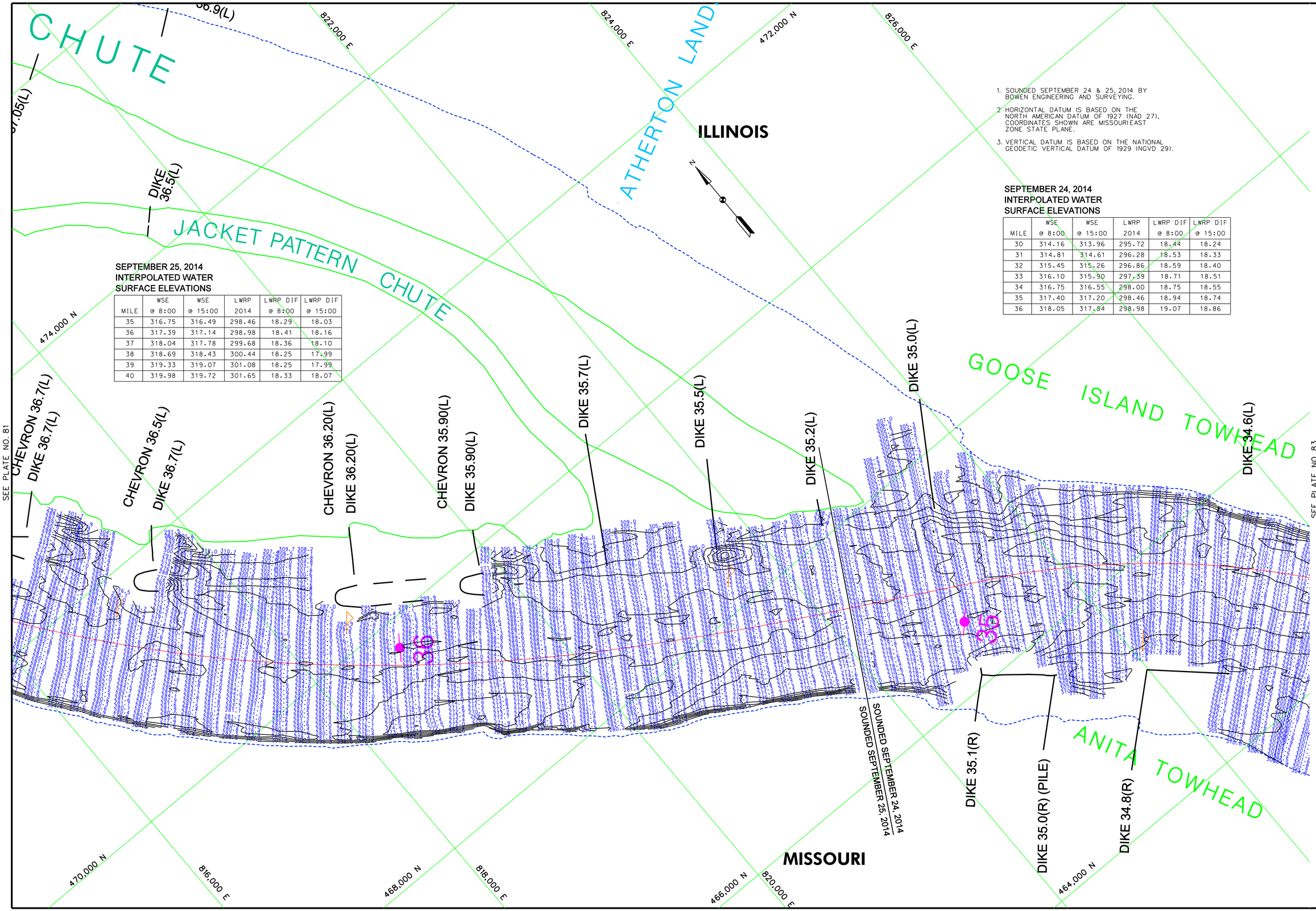
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

HYDROGRAPHIC SURVEYS
RIVER MILES 36.5 - 38.5

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION REPORTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE TIME INDICATED AND MAY NOT BE CORRECT AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

PLATE NUMBER
81



1. SOUNDED SEPTEMBER 24 & 25, 2014 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).

SEPTEMBER 24, 2014 INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
30	314.16	313.96	295.72	18.44	18.24
31	314.81	314.61	296.28	18.53	18.33
32	315.45	315.26	296.86	18.59	18.40
33	316.10	315.90	297.39	18.71	18.51
34	316.75	316.55	298.00	18.75	18.55
35	317.40	317.20	298.46	18.94	18.74
36	318.05	317.84	298.98	19.07	18.86

SEPTEMBER 25, 2014 INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
35	316.75	316.49	298.46	18.29	18.03
36	317.39	317.14	298.98	18.41	18.16
37	318.04	317.78	299.68	18.36	18.10
38	318.69	318.43	300.44	18.25	17.99
39	319.33	319.07	301.08	18.25	17.99
40	319.98	319.72	301.65	18.33	18.07

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO	THEBES, IL
ZERO N.G.V.D.	280.00	299.75	301.83	300.00
MILE	20.2	28.2	39.5	43.7
LWRP 2014	289.90	294.74	301.48	304.90
24 SEP 2014	x	13.2418:00) 13.0515:00)	GAGE NOT WORKING	23.0418:00) 22.8215:00)
25 SEP 2014	x	12.6018:00) 12.3615:00)	GAGE NOT WORKING	22.3718:00) 22.1015:00)

Surveyed by: BOWEN ENGINEERING
Survey Date: SEPTEMBER 24 & 25, 2014
Drawn by: X
Ckd by: X
Reviewed by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE-TIME####
File name: ####DESIGN#FILE#SPECIFICATION####

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

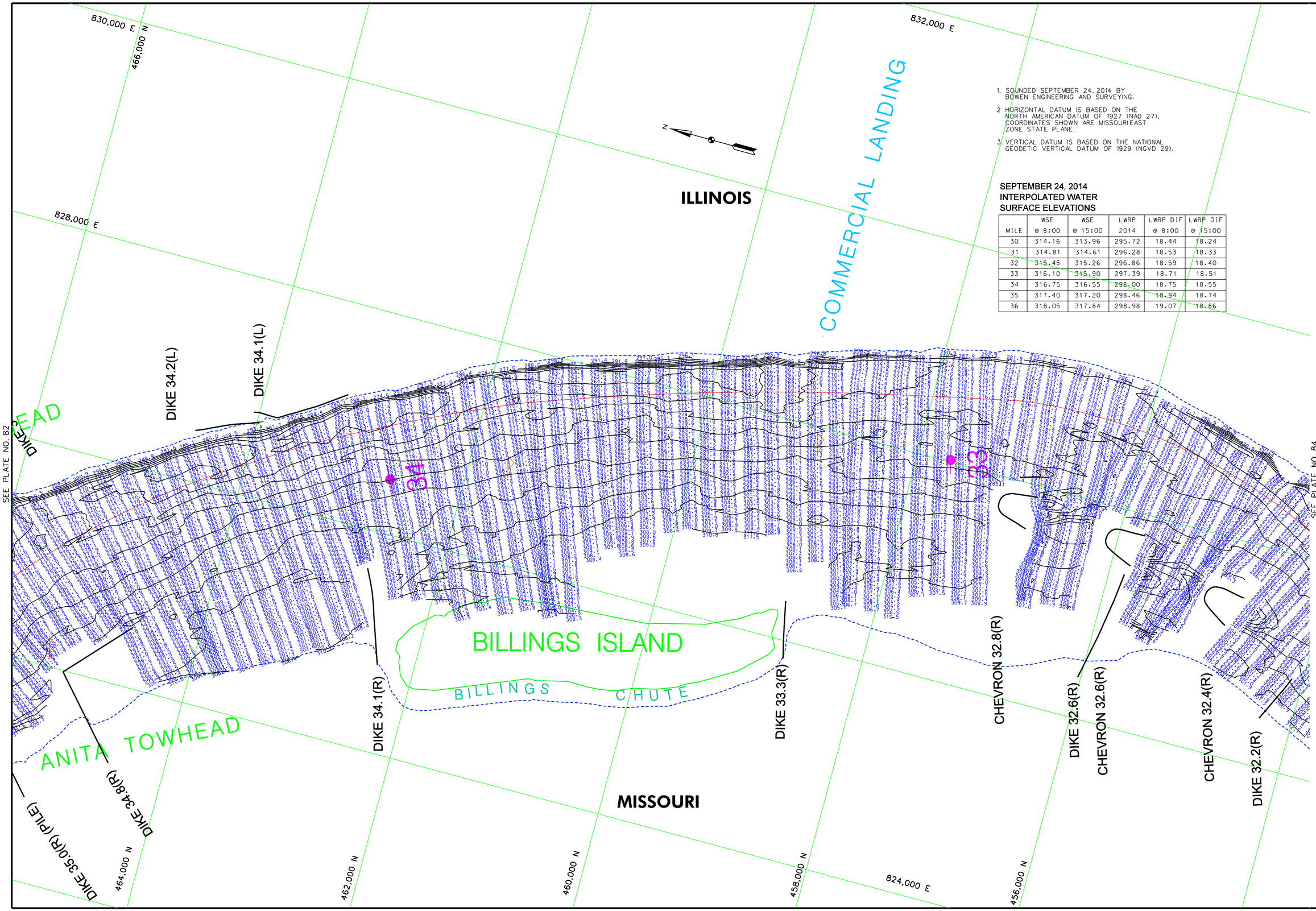
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION REPORTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND IS PRESENTED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

HYDROGRAPHIC SURVEYS
RIVER MILES 34.5 - 36.5

PLATE NUMBER
82



1. SOUNDED SEPTEMBER 24, 2014 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).

SEPTEMBER 24, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
30	314.16	313.96	295.72	18.44	18.24
31	314.81	314.61	296.28	18.53	18.33
32	315.45	315.26	296.86	18.59	18.40
33	316.10	315.90	297.39	18.71	18.51
34	316.75	316.55	298.00	18.75	18.55
35	317.40	317.20	298.46	18.94	18.74
36	318.05	317.84	298.98	19.07	18.86

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO	THEBES, IL
ZERO N.G.V.D.	280.00	299.75	301.83	300.00
MILE	20.2	28.2	39.5	43.7
LWRP 2014	289.90	294.74	301.48	304.90
24 SEP 2014	X	13.2418(00) 13.0515(-00)	GAGE NOT WORKING	23.0418(-00) 22.8215(-00)

Survey Date: SEPTEMBER 24, 2014
Surveyed by: BOWEN ENGINEERING
Reviewed by: X
Drawn by: X
Ckd by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE/TIME####
File name: ####DESIGNGRAPHIC\EXPECTATION####

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

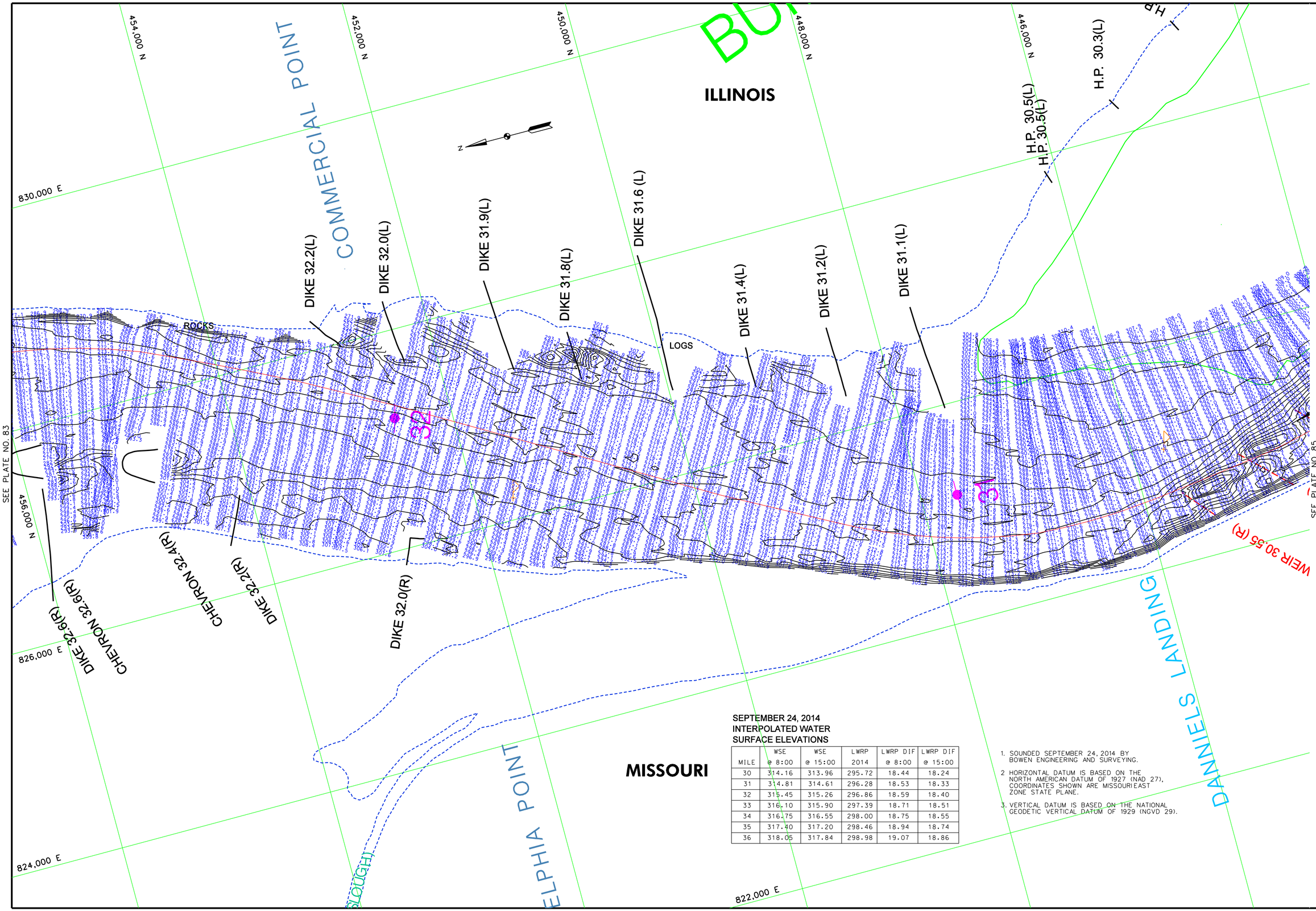
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

120 400 0 0 120 240 METERS
400 800 FEET

THE INFORMATION REPORTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE TIME INDICATED AND MAY NOT BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

HYDROGRAPHIC SURVEYS
RIVER MILES 32.5 - 34.5

PLATE NUMBER
83



SEPTEMBER 24, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
30	314.16	313.96	295.72	18.44	18.24
31	314.81	314.61	296.28	18.53	18.33
32	315.45	315.26	296.86	18.59	18.40
33	316.10	315.90	297.39	18.71	18.51
34	316.75	316.55	298.00	18.75	18.55
35	317.40	317.20	298.46	18.94	18.74
36	318.05	317.84	298.98	19.07	18.86

1. SOUNDED SEPTEMBER 24, 2014 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

GAGE RECORD

	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO	THEBES, IL
ZERO N.G.V.D.	280.00	299.75	301.83	300.00
MILE	20.2	28.2	39.5	43.7
LWRP 2014	289.90	294.74	301.48	304.90
24 SEP 2014	x	13.2418(-001) 13.0515(-001)	GAGE NOT WORKING	23.0418(-001) 22.8215(-001)

Surveyed by: BOWEN ENGINEERING
Survey Date: SEPTEMBER 24, 2014
Drawn by: X
Ckd by: X
Reviewed by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE:TIME####
File name: ####DESIGNFILE:DESIGNFILE:CATCH####

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

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

120 400 0 0 120 400 240 METERS 800 FEET

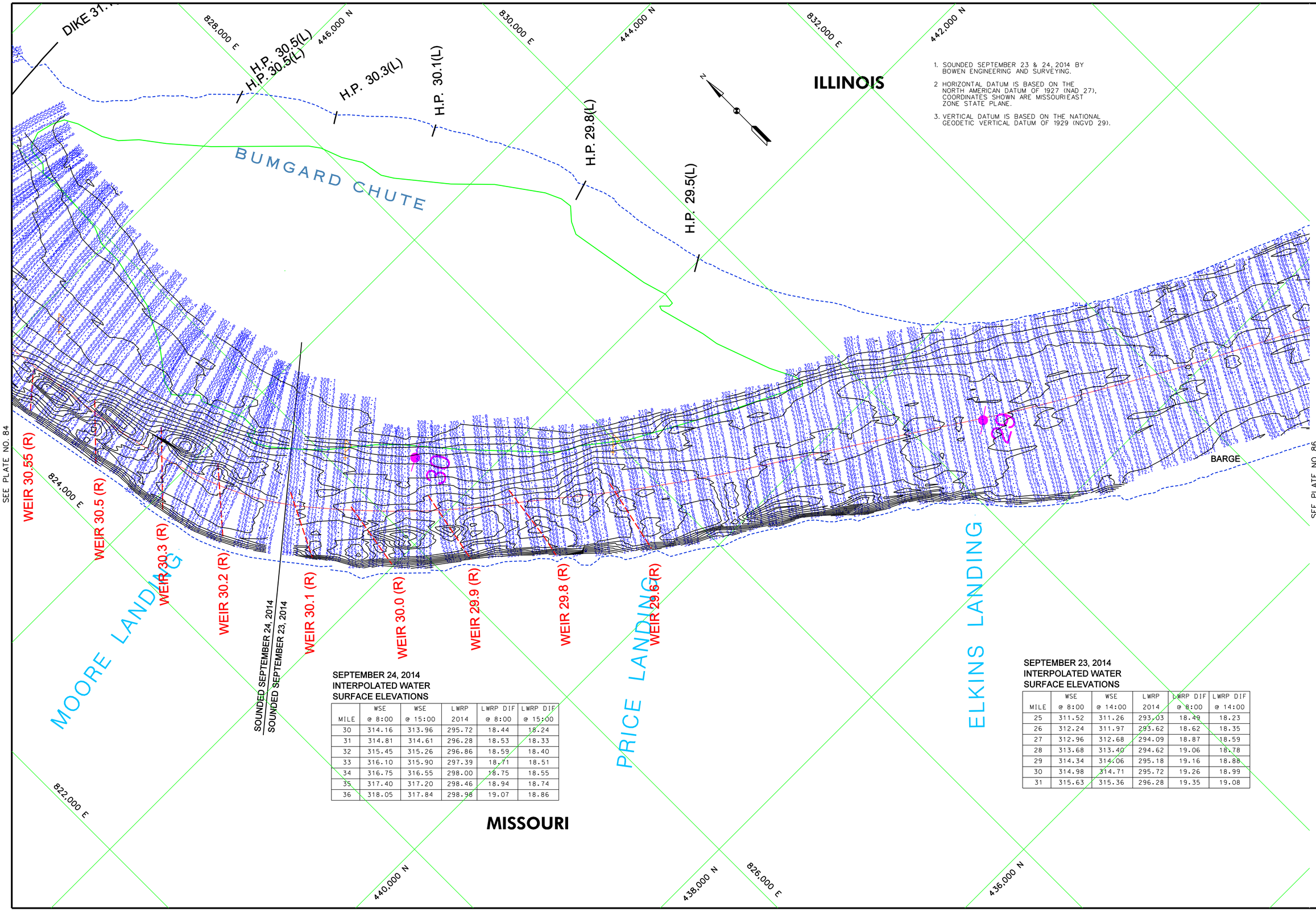
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE INDICATED AND SHOULD BE INTERPRETED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

HYDROGRAPHIC SURVEYS

RIVER MILES 30.5 – 32.5

PLATE NUMBER

84



1. SOUNDED SEPTEMBER 23 & 24, 2014 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).

SEPTEMBER 24, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
30	314.16	313.96	295.72	18.44	18.24
31	314.81	314.61	296.28	18.53	18.33
32	315.45	315.26	296.86	18.59	18.40
33	316.10	315.90	297.39	18.71	18.51
34	316.75	316.55	298.00	18.75	18.55
35	317.40	317.20	298.46	18.94	18.74
36	318.05	317.84	298.98	19.07	18.86

SEPTEMBER 23, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 14:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 14:00
25	311.52	311.26	293.03	18.49	18.23
26	312.24	311.97	293.62	18.62	18.35
27	312.96	312.68	294.09	18.87	18.59
28	313.68	313.40	294.62	19.06	18.78
29	314.34	314.06	295.18	19.16	18.88
30	314.98	314.71	295.72	19.26	18.99
31	315.63	315.36	296.28	19.35	19.08

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO	THEBES, IL
ZERO N.G.V.D.	280.00	299.75	301.83	300.00
MILE	20.2	28.2	39.5	43.7
LWRP 2014	289.90	294.74	301.48	304.90
23 SEP 2014	28.08(8:00) 27.83(14:00)	14.07(8:00) 13.79(14:00)	GAGE NOT WORKING	23.84(8:00) 23.59(14:00)
24 SEP 2014	x	13.24(8:00) 13.05(15:00)	GAGE NOT WORKING	23.04(8:00) 22.82(15:00)

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

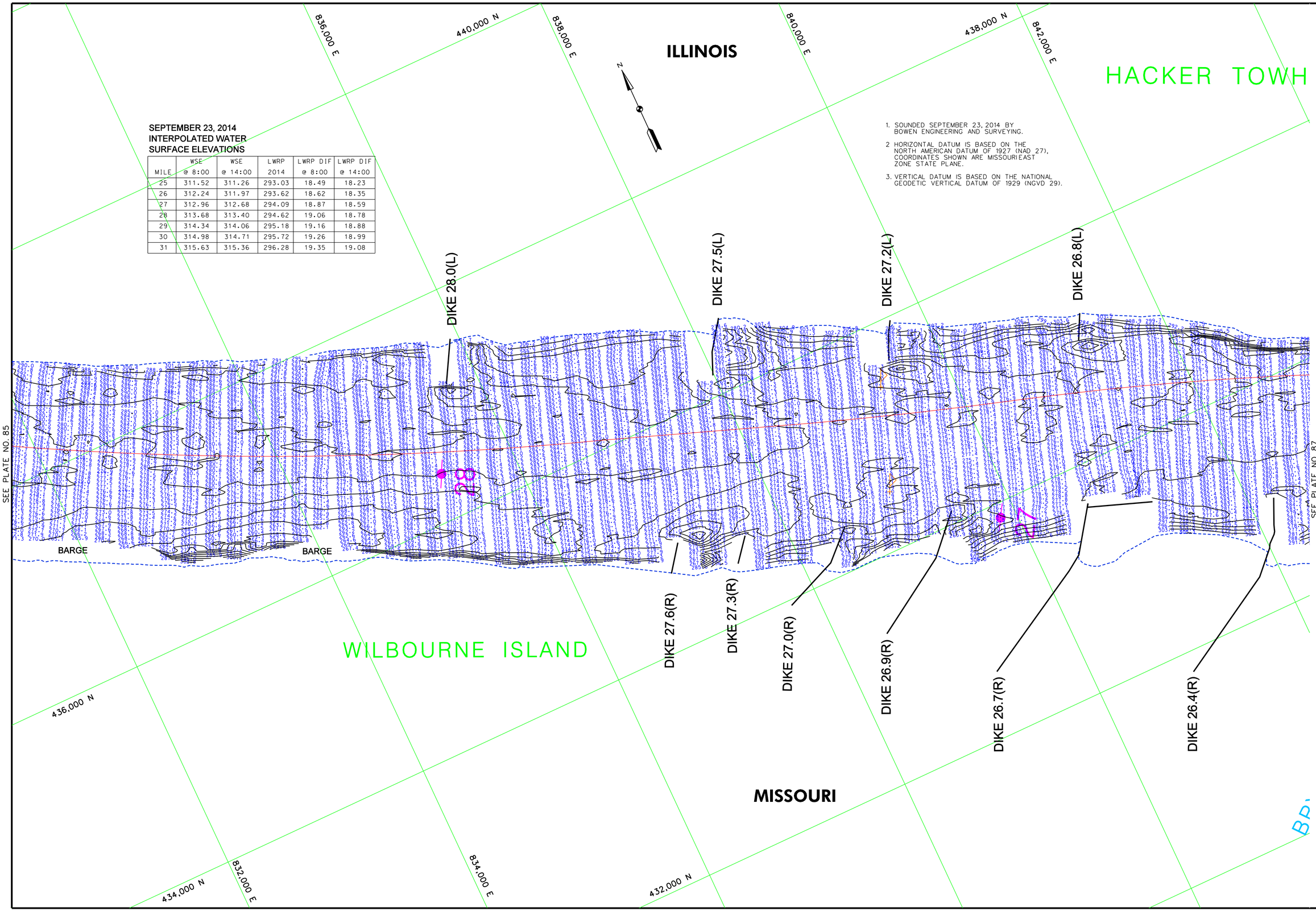
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

Surveyed by: BOWEN ENGINEERING
Survey Date: SEPTEMBER 23 & 24, 2014
Drawn by: X
Ckd by: X
Reviewed by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE-TIME####
File name: ####DESIGNFILEBRTCFICATION####

240 METERS 120 0 120 240
800 FEET 400 0 400 800
THE INFORMATION REPORTED ON THIS MAP REPRESENTS THE ROUGHNESS OF THE RIVER BOTTOM AND WATER SURFACE AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

HYDROGRAPHIC SURVEYS
RIVER MILES 28.6 - 30.5

PLATE NUMBER
85



SEPTEMBER 23, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 14:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 14:00
25	311.52	311.26	293.03	18.49	18.23
26	312.24	311.97	293.62	18.62	18.35
27	312.96	312.68	294.09	18.87	18.59
28	313.68	313.40	294.62	19.06	18.78
29	314.34	314.06	295.18	19.16	18.88
30	314.98	314.71	295.72	19.26	18.99
31	315.63	315.36	296.28	19.35	19.08

1. SOUNDED SEPTEMBER 23, 2014 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

GAGE RECORD

	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO	THEBES, IL
ZERO N.G.V.D.	280.00	299.75	301.83	300.00
MILE	20.2	28.2	39.5	43.7
LWRP 2014	289.90	294.74	301.48	304.90
23 SEP 2014	28.08(8:00) 27.83(14:00)	14.07(8:00) 13.79(14:00)	GAGE NOT WORKING	23.84(8:00) 23.59(14:00)

Surveyed by: BOWEN ENGINEERING
Survey Date: SEPTEMBER 23, 2014
Drawn by: X
Ckd by: X
Reviewed by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE-TIME####
File name: ####DESIGNFILEBRTCFCATCH####

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

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

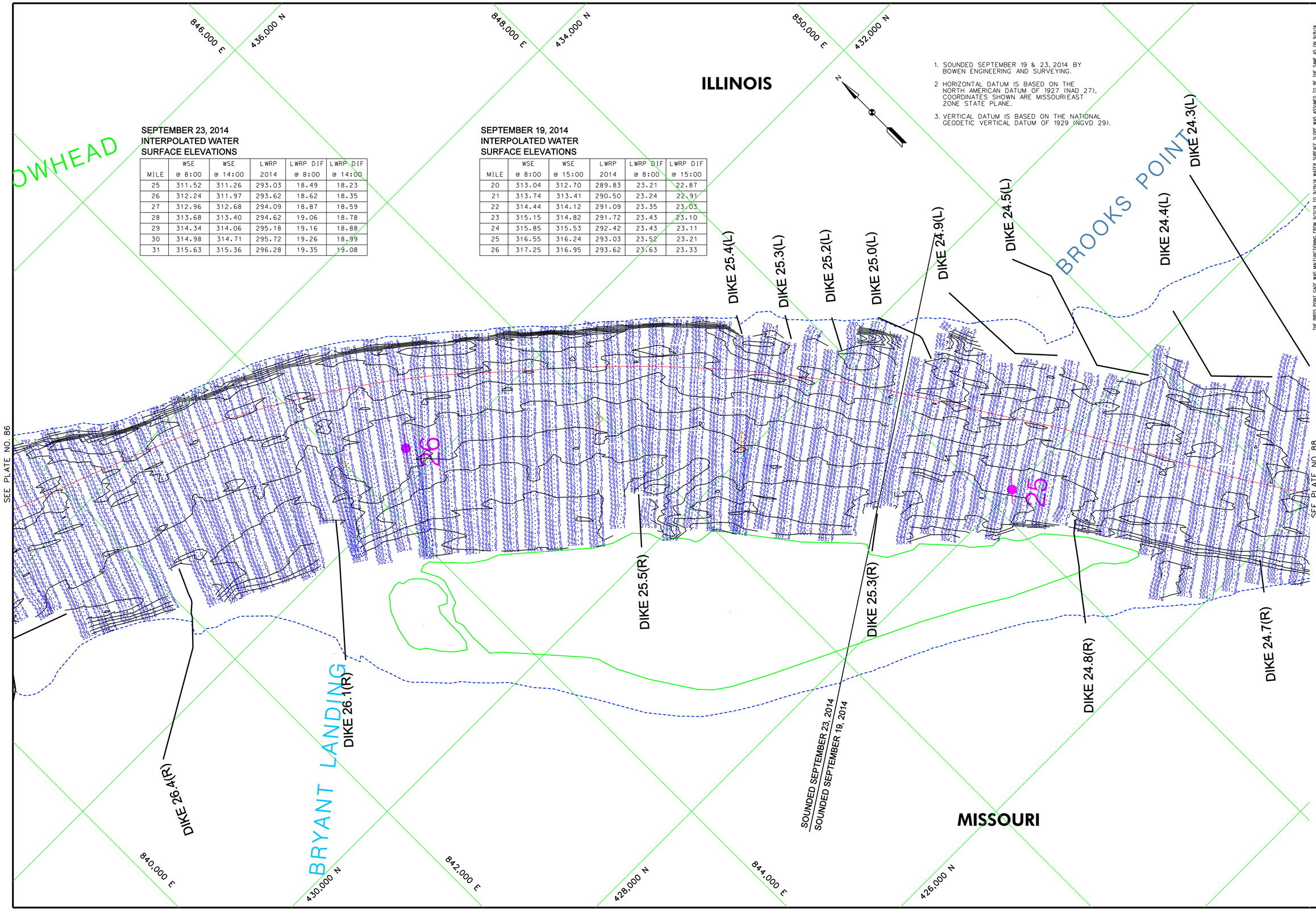
240 METERS 120 0 120 240
800 FEET 400 0 400 800

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE TIME INDICATED AND IS PRESENTED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

HYDROGRAPHIC SURVEYS

RIVER MILES 26.6 – 28.6

PLATE NUMBER
86



SEPTEMBER 23, 2014 INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 14:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 14:00
25	311.52	311.26	293.03	18.49	18.23
26	312.24	311.97	293.62	18.62	18.35
27	312.96	312.68	294.09	18.87	18.59
28	313.68	313.40	294.62	19.06	18.78
29	314.34	314.06	295.18	19.16	18.88
30	314.98	314.71	295.72	19.26	18.99
31	315.63	315.36	296.28	19.35	19.08

SEPTEMBER 19, 2014 INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
20	313.04	312.70	289.83	23.21	22.87
21	313.74	313.41	290.50	23.24	22.91
22	314.44	314.12	291.09	23.35	23.03
23	315.15	314.82	291.72	23.43	23.10
24	315.85	315.53	292.42	23.43	23.11
25	316.55	316.24	293.03	23.52	23.21
26	317.25	316.95	293.62	23.63	23.33

1. SOUNDED SEPTEMBER 19 & 23, 2014 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).

THE BIRDS POINT GAGE WAS MALFUNCTIONING FROM 9/1/14 TO 9/19/14. WATER SURFACE SLOPE WAS ASSUMED TO BE THE SAME AS ON 9/8/14.

GAGE RECORD	BIRD'S POINT	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO
ZERO N.G.V.D.	274.53	280.00	299.75	301.83
MILE	2.0	20.2	28.2	39.5
LWRP 2014	280.06	289.90	294.74	301.48
19 SEP 2014	x	33.18(8:00) 32.84(15:00)	19.05(8:00) 18.76(15:00)	x
23 SEP 2014	x	28.08(8:00) 27.83(14:00)	14.07(8:00) 13.79(14:00)	x

US Army Corps of Engineers
St. Louis District

Surveyed by: BOWEN ENGINEERING
Drawn by: X
Ckd by: X
Survey Date: SEPTEMBER 19 & 23, 2014
Reviewed by: X
SUBMITTED: X
APPROVED: X
Plot date: ####DATE/TIME####
File name: ####DESIGNFILEDESCRIPTION####

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

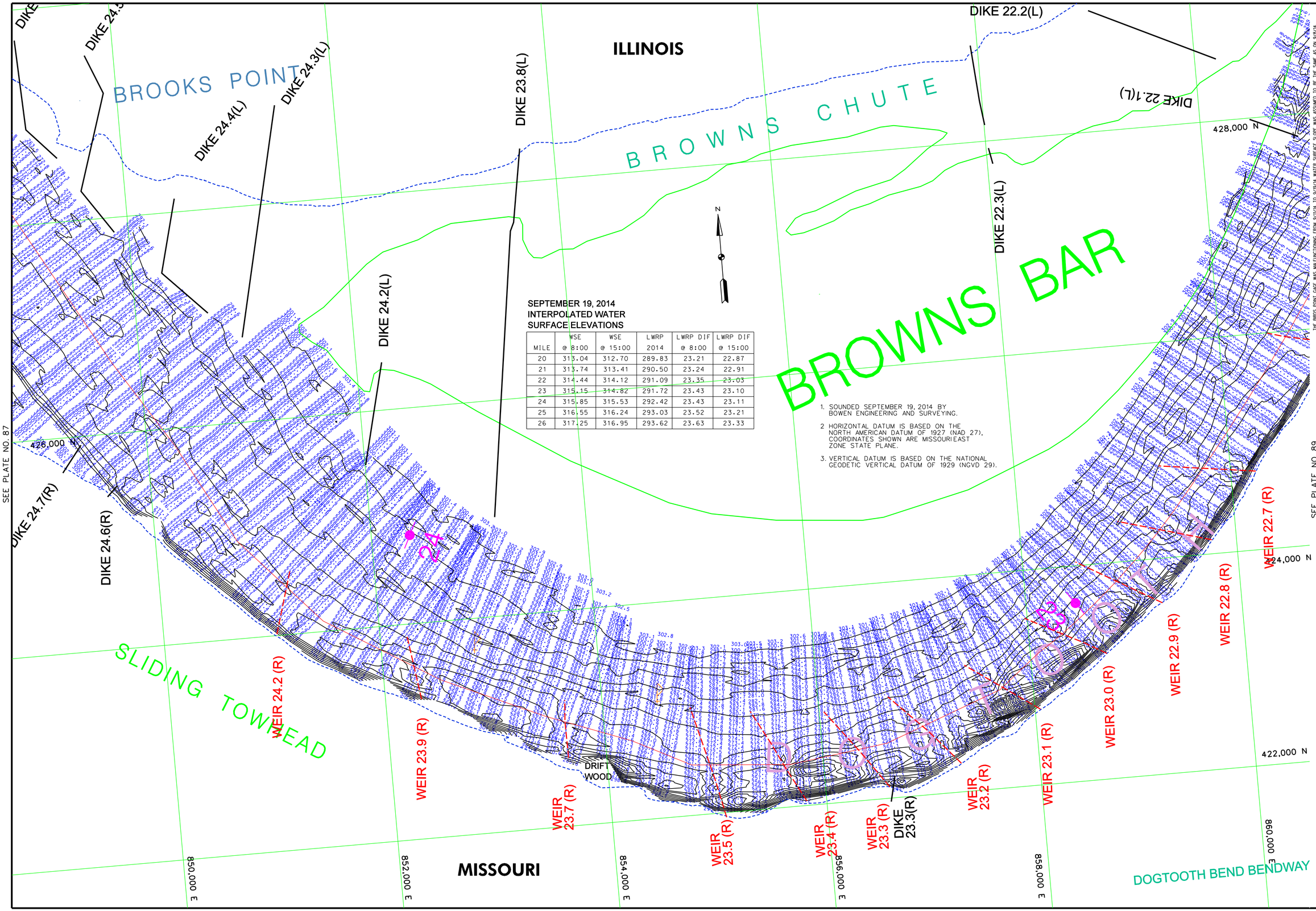
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER

HYDROGRAPHIC SURVEYS
RIVER MILES 24.6 – 26.6

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED. IT IS PRESENTED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

PLATE NUMBER
87



SEPTEMBER 19, 2014
INTERPOLATED WATER
SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 15:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 15:00
20	313.04	312.70	289.83	23.21	22.87
21	313.74	313.41	290.50	23.24	22.91
22	314.44	314.12	291.09	23.35	23.03
23	315.15	314.82	291.72	23.43	23.10
24	315.85	315.53	292.42	23.43	23.11
25	316.55	316.24	293.03	23.52	23.21
26	317.25	316.95	293.62	23.63	23.33

1. SOUNDED SEPTEMBER 19, 2014 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

GAGE RECORD

	BIRD'S POINT	THOMPSON LANDING	PRICE'S LANDING	COMMERCE, MO
ZERO N.G.V.D.	274.53	280.00	299.75	301.83
MILE	2.0	20.2	28.2	39.5
LWRP 2014	280.06	289.90	294.74	301.48
19 SEP 2014	x	33.9(8/00) 32.84(5/00)	19.05(8/00) 18.76(5/00)	x

THE BIRDS POINT GAGE WAS MALFUNCTIONING FROM 9/10/14 TO 9/19/14. WATER SURFACE SLOPE WAS ASSUMED TO BE THE SAME AS ON 9/8/14.

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

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
RIVER MILES 22.5 – 24.6

Surveyed by: BOWEN ENGINEERING
Survey Date: SEPTEMBER 19, 2014
Drawn by: X
Cad by: X
Reviewed by: X
SUBMITTED: X
APPROVED: X
Plot date: ##########DATE-TIME##########
File name: ##########DESIGN-FILE-DESCRIPTION##########

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS PERFORMED ON THE DATES INDICATED. THE CONTOURS ARE AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

HYDROGRAPHIC SURVEYS
RIVER MILES 22.5 – 24.6

PLATE NUMBER
88