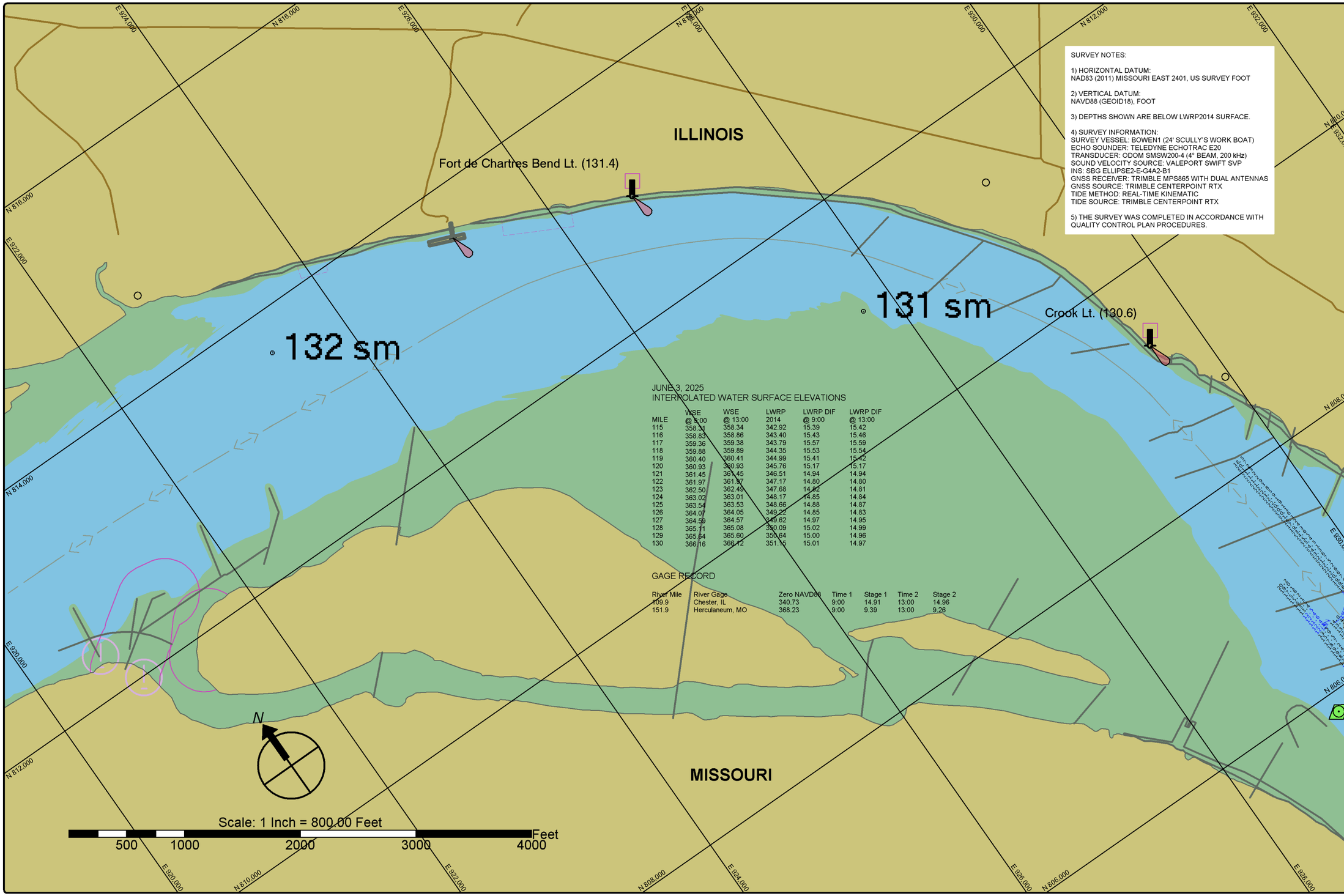

SURVEY NOTES:

1) HORIZONTAL DATUM:
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT

2) VERTICAL DATUM:
NAVD88 (GEOID18), FOOT

3) DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.

4) SURVEY INFORMATION:
SURVEY VESSEL: BOWEN1 (24' SCULLY'S WORK BOAT)
ECHO SOUNDER: TELEDYNE ECHOTRAC E20
TRANSDUCER: ODOM SMSW200-4 (4° BEAM, 200 kHz)
SOUND VELOCITY SOURCE: VALEPORT SWIFT SVP
INS: SBG ELLIPSE2-E-G4A2-B1
GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS
GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
TIDE SOURCE: TRIMBLE CENTERPOINT RTX

5) THE SURVEY WAS COMPLETED IN ACCORDANCE WITH QUALITY CONTROL PLAN PROCEDURES.

JUNE 3, 2025
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 9:00	WSE @ 13:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 13:00
115	358.31	358.34	342.92	15.39	15.42
116	358.83	358.86	343.40	15.43	15.46
117	359.36	359.38	343.79	15.57	15.59
118	359.88	359.89	344.35	15.53	15.54
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120	360.93	360.93	345.76	15.17	15.17
121	361.45	361.45	346.51	14.94	14.94
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129	365.64	365.60	350.64	15.00	14.96
130	366.16	366.12	351.15	15.01	14.97

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
109.9	Chester, IL	340.73	9:00	14.91	13:00	14.96
151.9	Herculaneum, MO	368.23	9:00	9.39	13:00	9.26

St. Louis District

DATES OF SURVEY:
JUNE 3, 2025

FILE NO.: 130_110F0325
REQUEST NO.: W912P925F0006

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

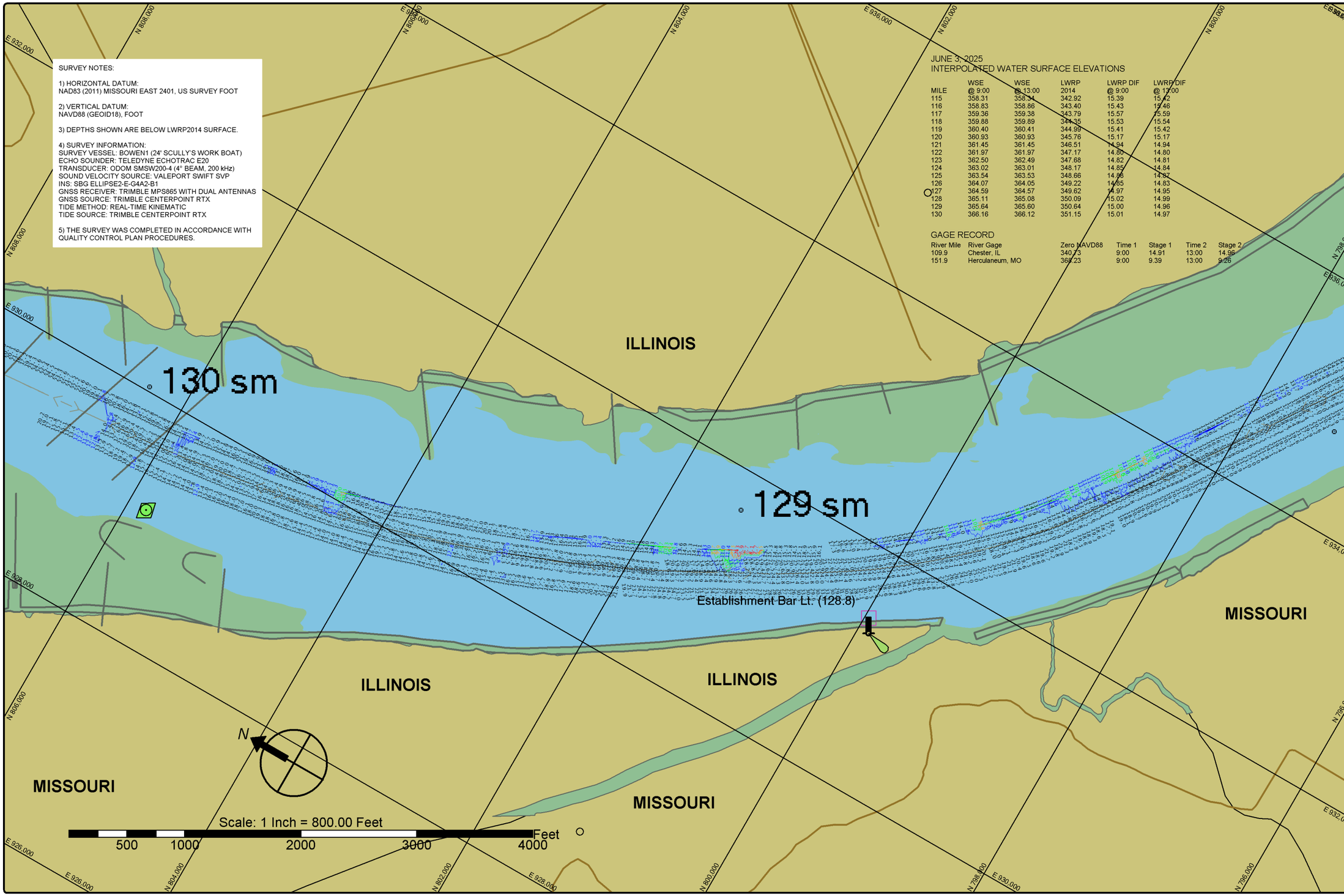
Approved: FIELD CARTOGRAPHER
Approved: CIVIL ENGINEERING TECHNICIAN
Approved: ASST CHIEF OF SURVEY
Approved: CHIEF OF SURVEY
Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 130.1 - 132.2

SHEET NO.
1 OF 1



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JUNE 3, 2025
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St. Louis District

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1" = 800' (ANSI B)

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Approved: CIVIL ENGINEERING TECHNICIAN
Approved: ASST CHIEF OF SURVEY
Approved: CHIEF OF SURVEY
Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 128.1 - 130.1

SHEET NO.
1 OF 1

SURVEY NOTES:

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GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS
GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
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JUNE 3, 2025
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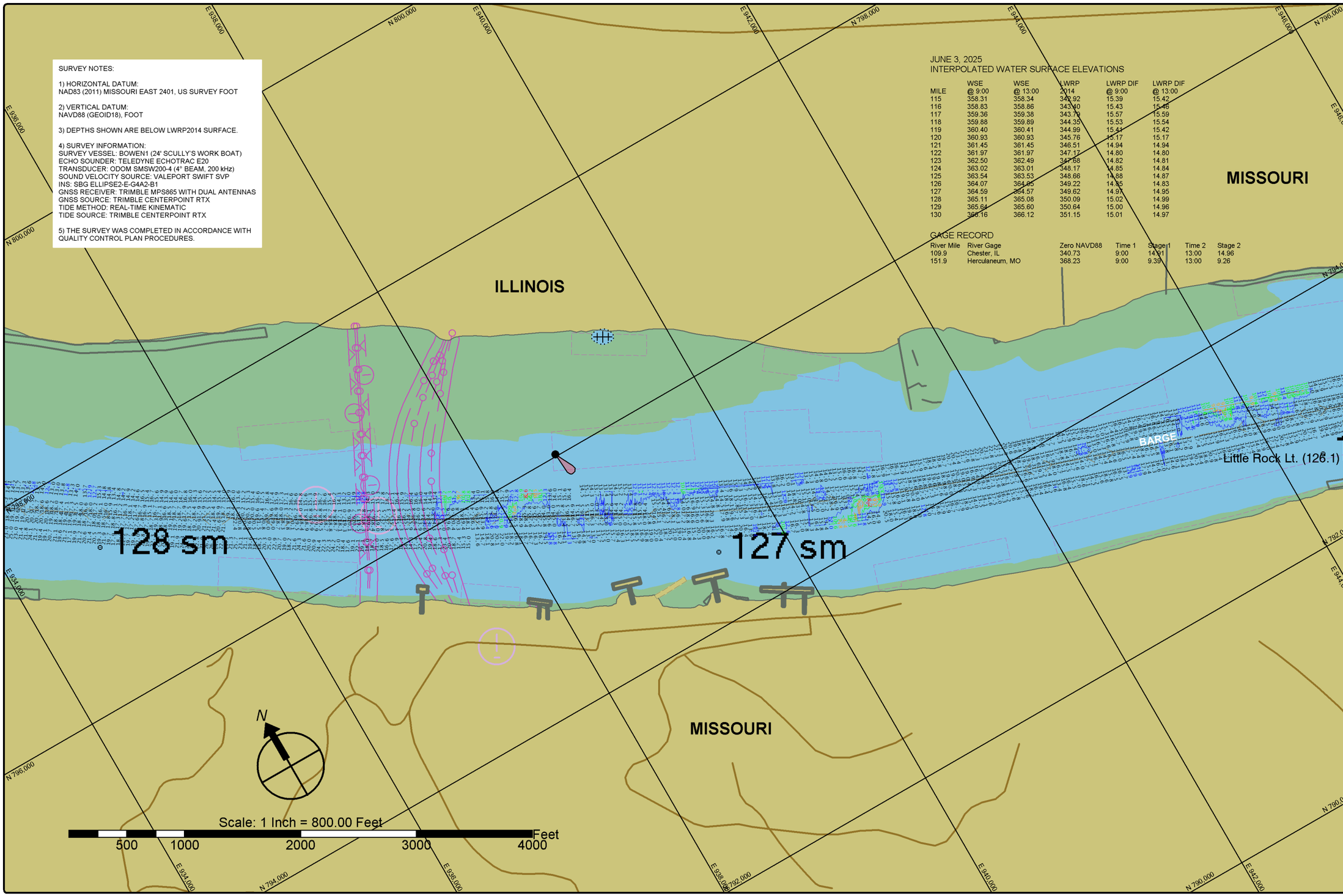

St. Louis District

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Approved: CHIEF OF SURVEY
Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 126.1 - 128.1

SHEET NO.
1 OF 1

SURVEY NOTES:

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TIDE METHOD: REAL-TIME KINEMATIC
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JUNE 3, 2025
INTERPOLATED WATER SURFACE ELEVATIONS

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River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
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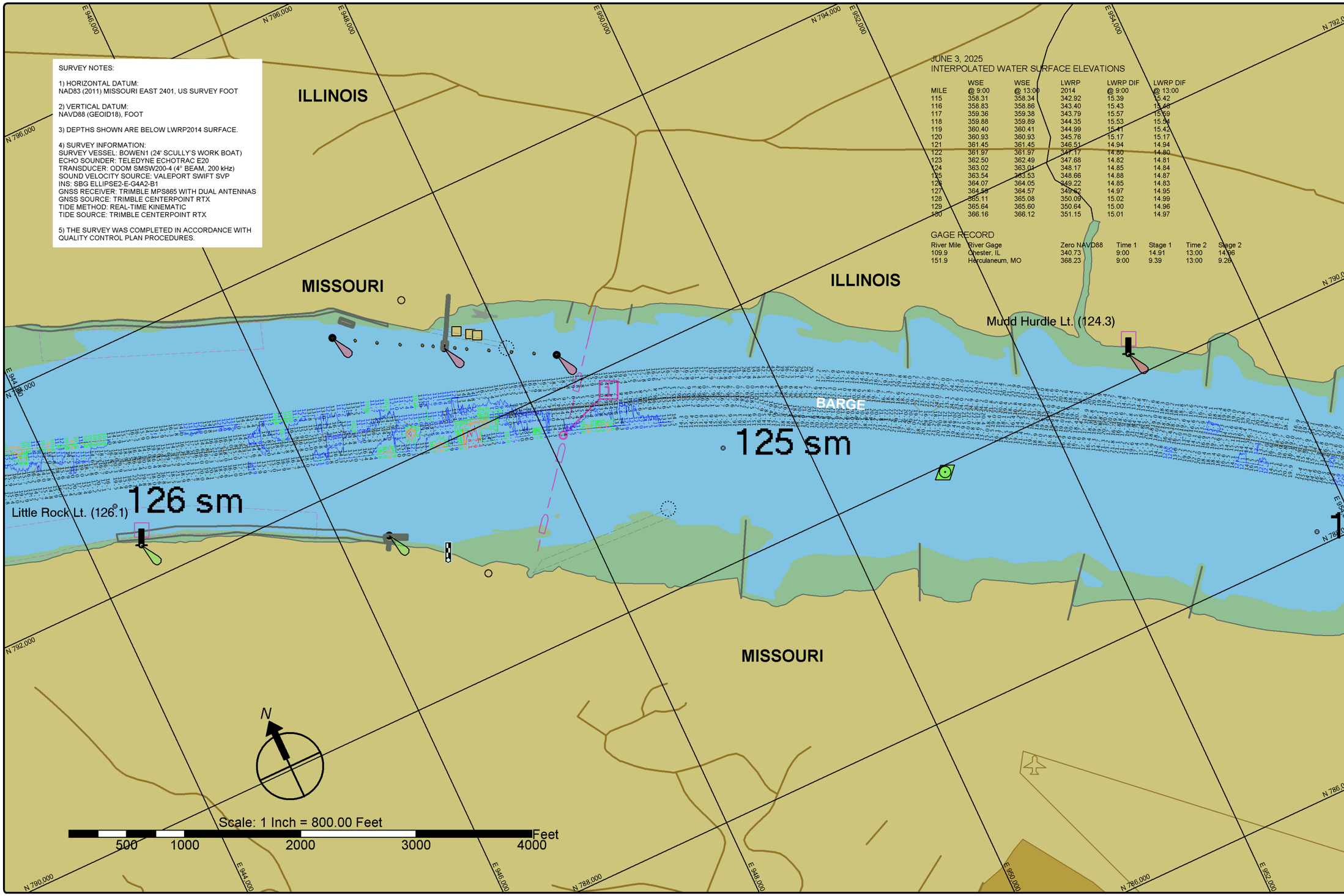

St. Louis District

DATES OF SURVEY:
JUNE 3, 2025

FILE NO.: 130_110F0325
REQUEST NO.: W912P925F0006

SCALE:
1" = 800' (ANSI B)

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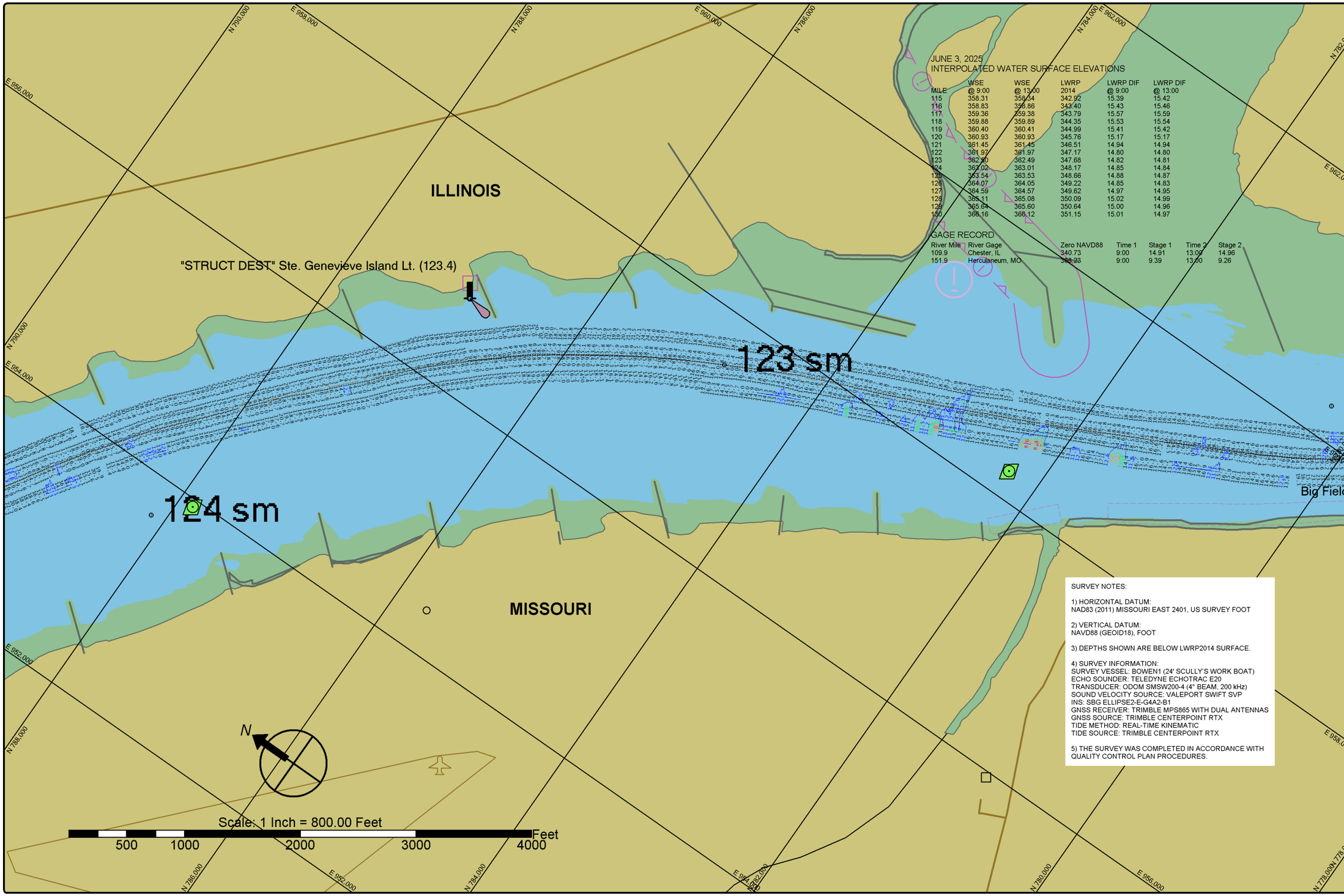
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 124.1 - 126.1

SHEET NO.
1 OF 1



JUNE 3, 2025
INTERPOLATED WATER SURFACE ELEVATIONS

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GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
109.9	Chester, IL	340.73	9:00	14.91	13:00	14.96
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SURVEY NOTES:

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NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT

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GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
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St. Louis District

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2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 122.1 - 124.1

SHEET NO.
1 OF 1

SURVEY NOTES:

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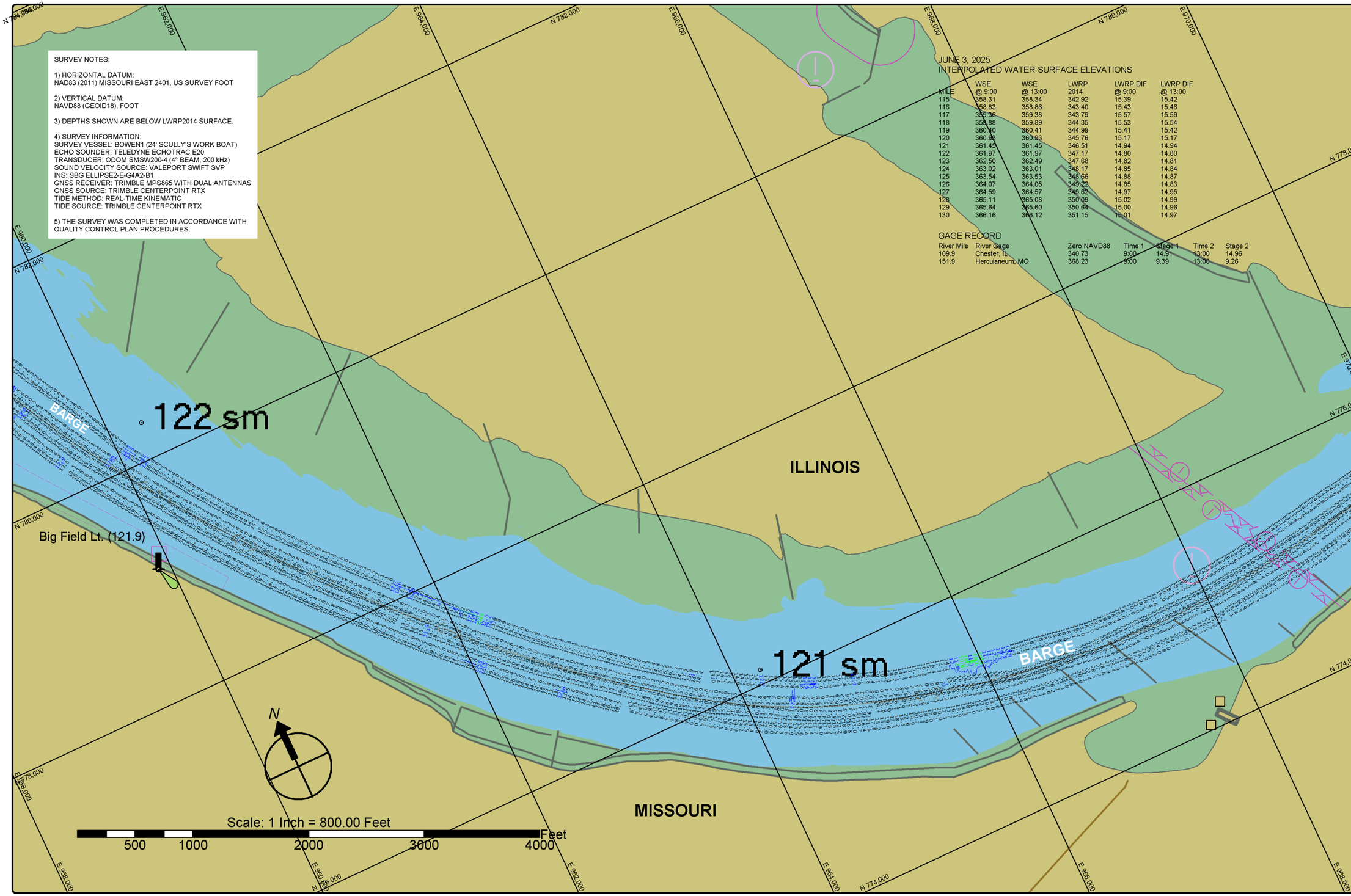

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U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 120.1 - 122.1

SHEET NO.
1 OF 1

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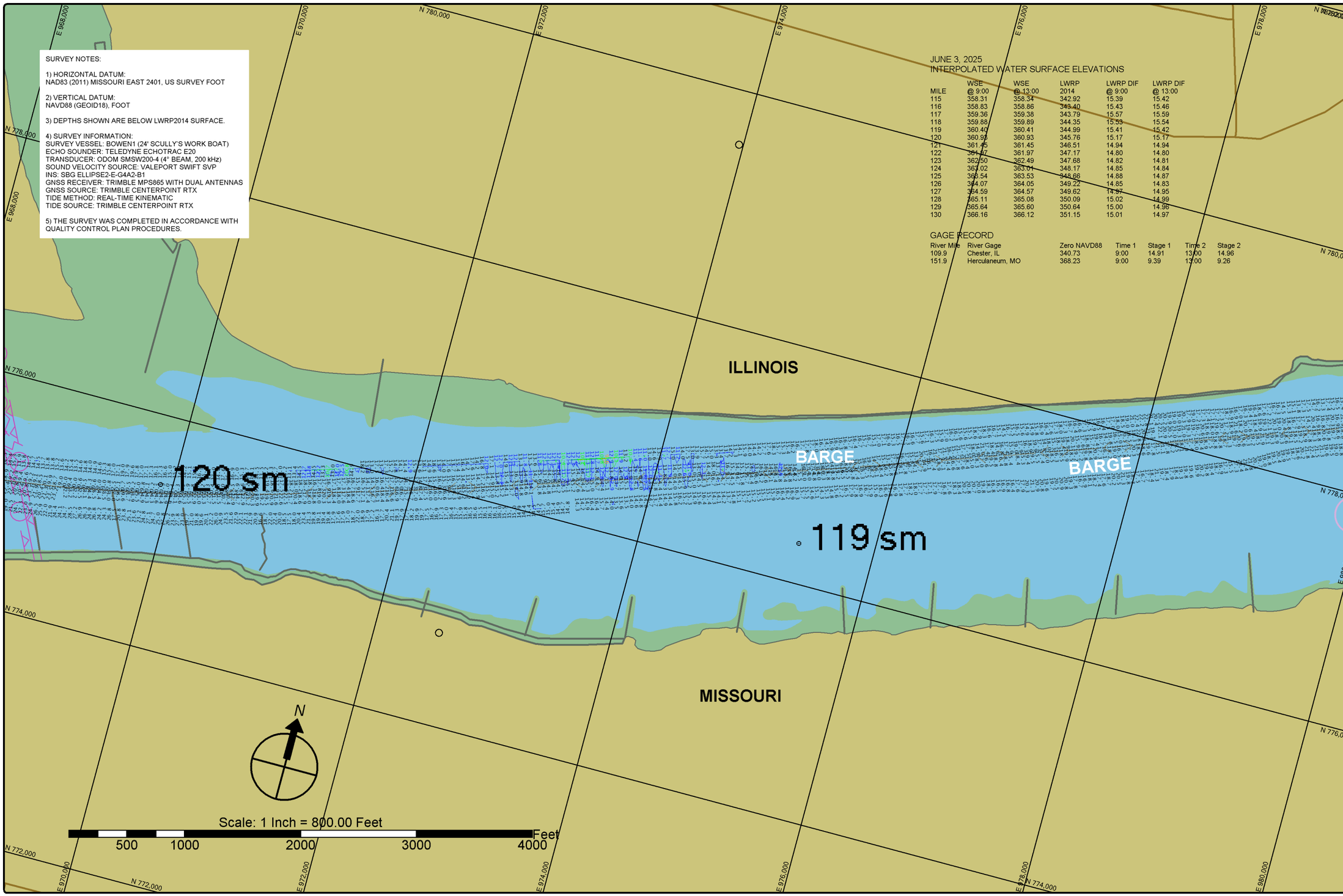
GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
109.9	Chester, IL	340.73	9:00	14.91	13:00	14.96
151.9	Herculaneum, MO	368.23	9:00	9.39	13:00	9.26



St. Louis District

DATES OF SURVEY:
JUNE 3, 2025

FILE NO.: 130_110F0325
REQUEST NO.: W912P925F0006

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

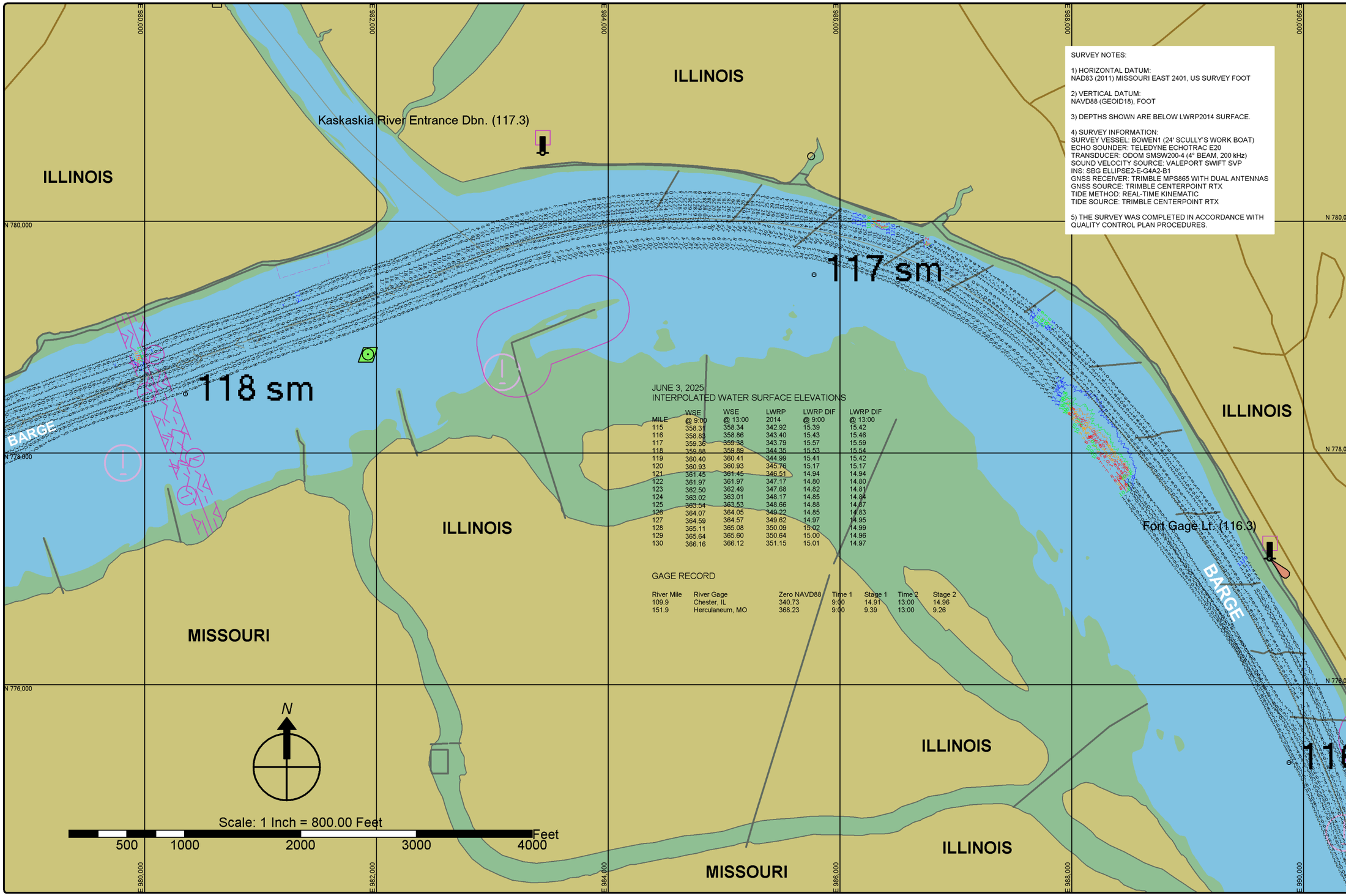
Approved: FIELD CARTOGRAPHER
Approved: CIVIL ENGINEERING TECHNICIAN
Approved: ASST. CHIEF OF SURVEY
Approved: CHIEF OF SURVEY
Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 118.2- 120.1

SHEET NO.
1 OF 1



SURVEY NOTES:

1) HORIZONTAL DATUM:
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT

2) VERTICAL DATUM:
NAVD88 (GEOID18), FOOT

3) DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.

4) SURVEY INFORMATION:
SURVEY VESSEL: BOWEN1 (24' SCULLY'S WORK BOAT)
ECHO SOUNDER: TELEDYNE ECHOTRAC E20
TRANSDUCER: ODOM SMSW200-4 (4° BEAM, 200 kHz)
SOUND VELOCITY SOURCE: VALEPORT SWIFT SVP
INS: SBG ELLIPSE2-E-G4A2-B1
GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS
GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
TIDE SOURCE: TRIMBLE CENTERPOINT RTX

5) THE SURVEY WAS COMPLETED IN ACCORDANCE WITH QUALITY CONTROL PLAN PROCEDURES.

JUNE 3, 2025
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 9:00	WSE @ 13:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 13:00
115	358.31	358.34	342.92	15.39	15.42
116	358.83	358.86	343.40	15.43	15.46
117	359.36	359.38	343.79	15.57	15.59
118	359.88	359.89	344.35	15.53	15.54
119	360.40	360.41	344.99	15.41	15.42
120	360.93	360.93	345.76	15.17	15.17
121	361.45	361.45	346.51	14.94	14.94
122	361.97	361.97	347.17	14.80	14.80
123	362.50	362.49	347.68	14.82	14.81
124	363.02	363.01	348.17	14.85	14.84
125	363.54	363.53	348.66	14.88	14.87
126	364.07	364.05	349.22	14.85	14.83
127	364.59	364.57	349.62	14.97	14.95
128	365.11	365.08	350.09	15.02	14.99
129	365.64	365.60	350.64	15.00	14.96
130	366.16	366.12	351.15	15.01	14.97

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
109.9	Chester, IL	340.73	9:00	14.91	13:00	14.96
151.9	Herculaneum, MO	368.23	9:00	9.39	13:00	9.26

St. Louis District

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JUNE 3, 2025

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REQUEST NO.: W912P925F0006

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1" = 800' (ANSI B)

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Approved: CIVIL ENGINEERING TECHNICIAN
Approved: ASST. CHIEF OF SURVEY
Approved: CHIEF OF SURVEY
Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER
BASIN
MISSISSIPPI RIVER

CHANNEL PATROL
RIVER MILES 116.1 - 118.2

SHEET NO.
1 OF 1

SURVEY NOTES:

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INS: SBG ELLIPSE2-E-G4A2-B1
GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS
GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
TIDE SOURCE: TRIMBLE CENTERPOINT RTX

5) THE SURVEY WAS COMPLETED IN ACCORDANCE WITH QUALITY CONTROL PLAN PROCEDURES.

JUNE 3, 2025
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 9:00	WSE @ 13:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 13:00
110	355.69	355.74	340.55	15.14	15.19
111	356.22	356.26	341.05	15.17	15.21
112	356.74	356.78	341.52	15.22	15.26
113	357.26	357.30	342.00	15.26	15.30
114	357.79	357.82	342.49	15.30	15.33
115	358.31	358.34	342.92	15.39	15.42
116	358.83	358.86	343.40	15.43	15.46
117	359.36	359.38	343.79	15.57	15.59
118	359.89	359.89	344.35	15.53	15.54
119	360.40	360.41	344.99	15.41	15.42
120	360.93	360.93	345.76	15.17	15.17
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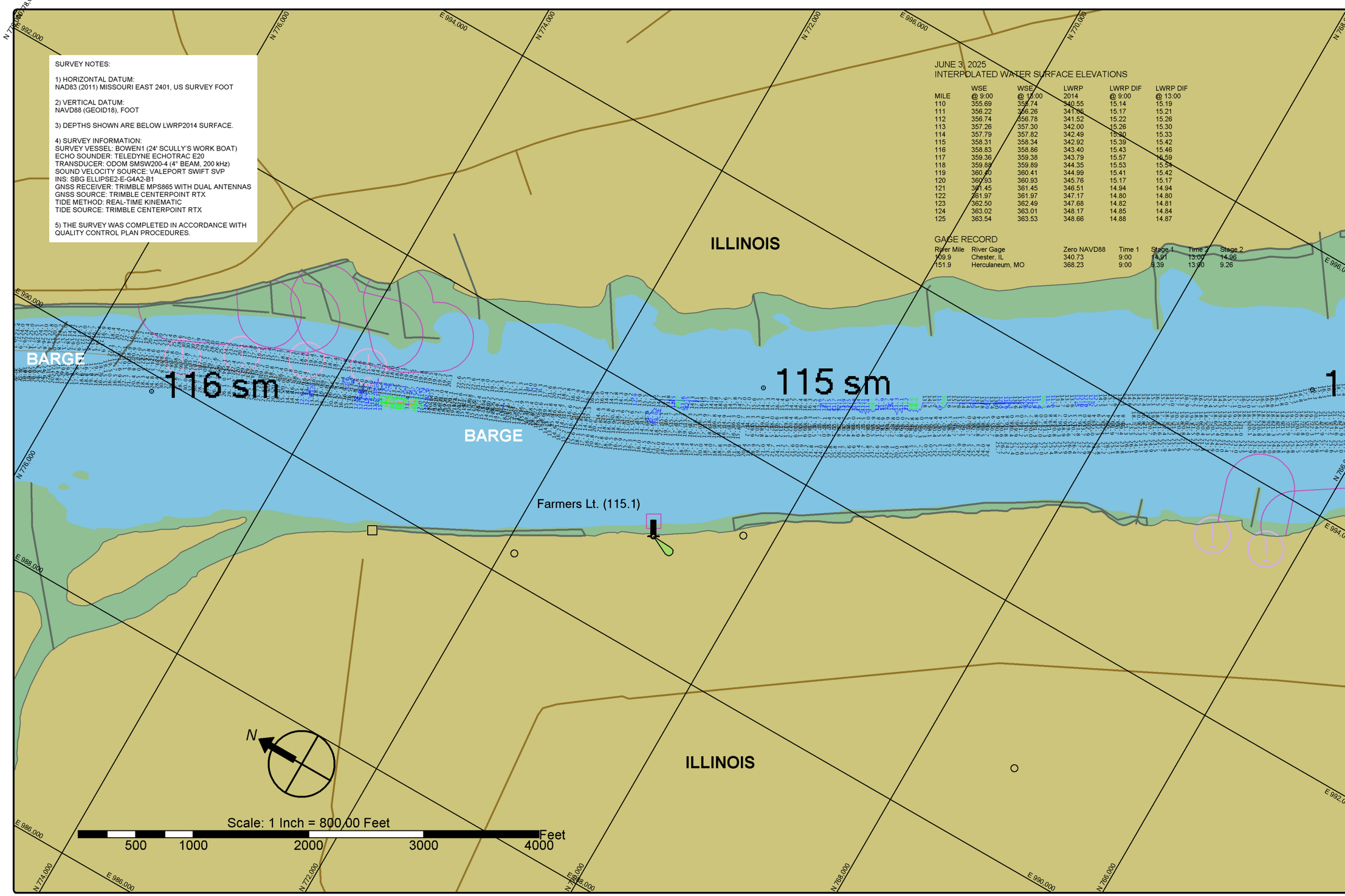
122	361.97	361.97	347.17	14.80	14.80
123	362.50	362.49	347.68	14.82	14.81
124	363.02	363.01	348.17	14.85	14.84
125	363.54	363.53	348.66	14.88	14.87

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
109.9	Chester, IL	340.73	9:00	14.91	13:00	14.96
151.9	Herculaneum, MO	368.23	9:00	9.39	13:00	9.26



St. Louis District

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Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 114.1 - 116.1

SHEET NO.
1 OF 1

SURVEY NOTES:

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GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
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JUNE 3, 2025
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 9:00	WSE @ 13:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 13:00
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River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
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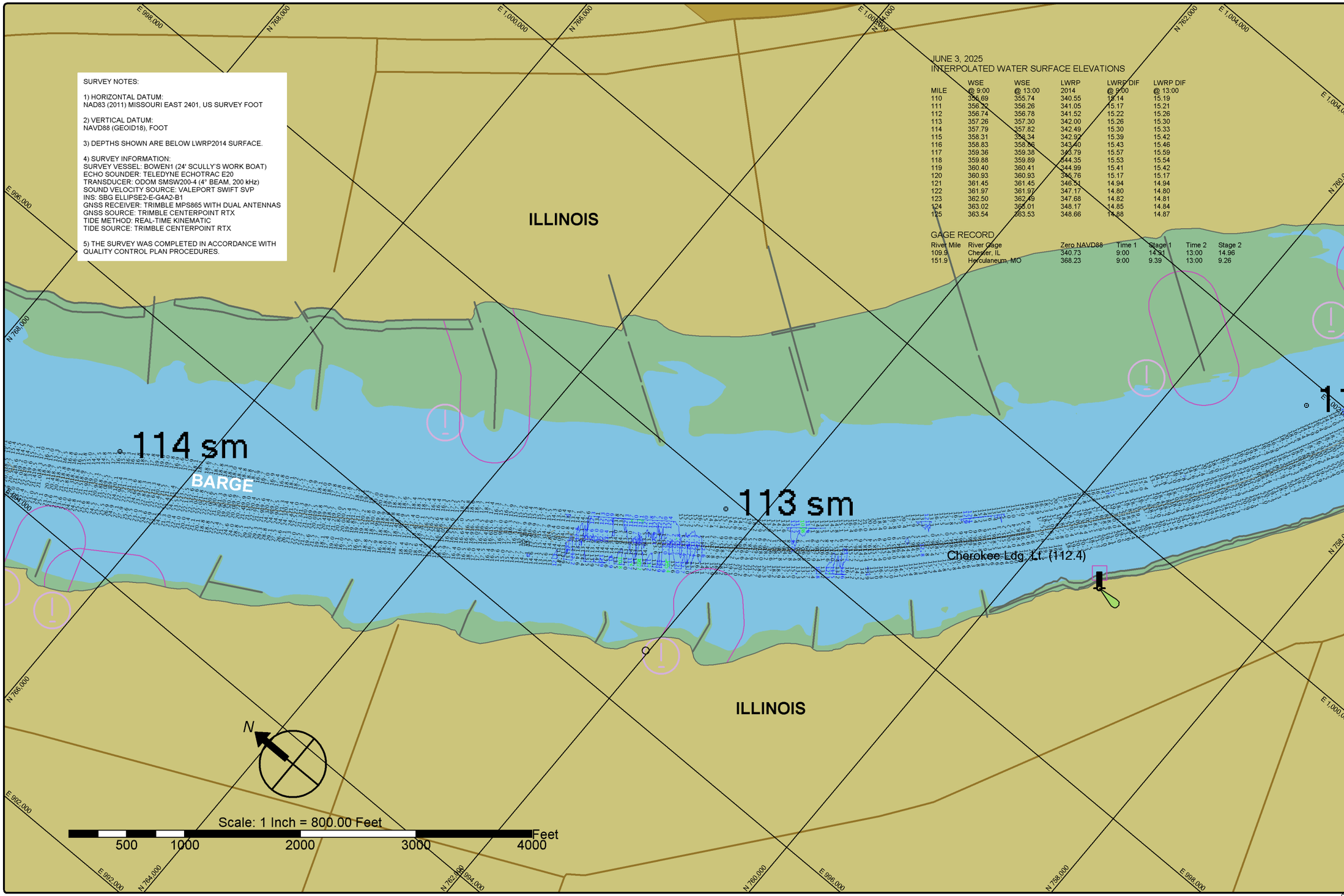

St. Louis District

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U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 112.1 - 114.1

SHEET NO.
1 OF 1

SURVEY NOTES:

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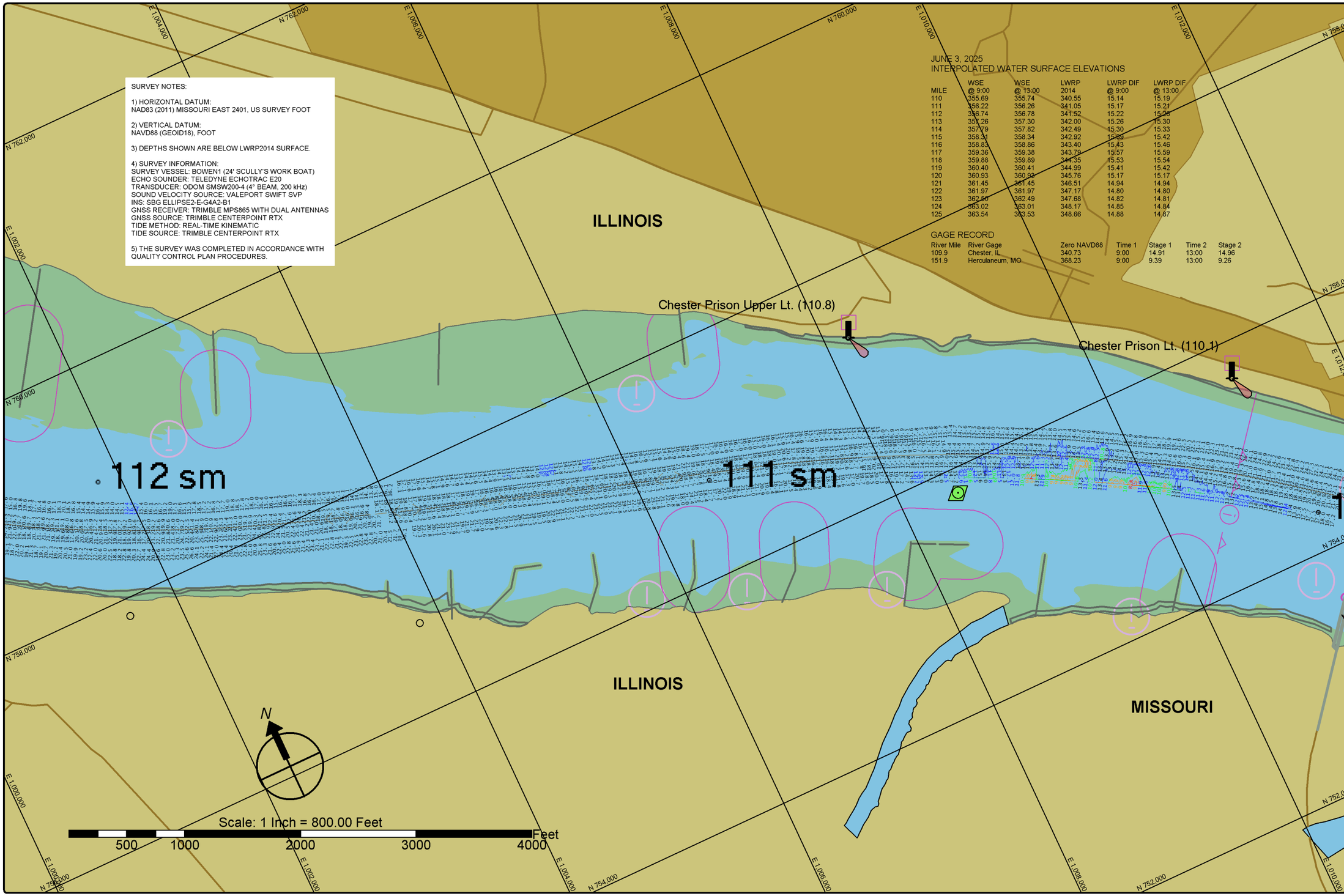

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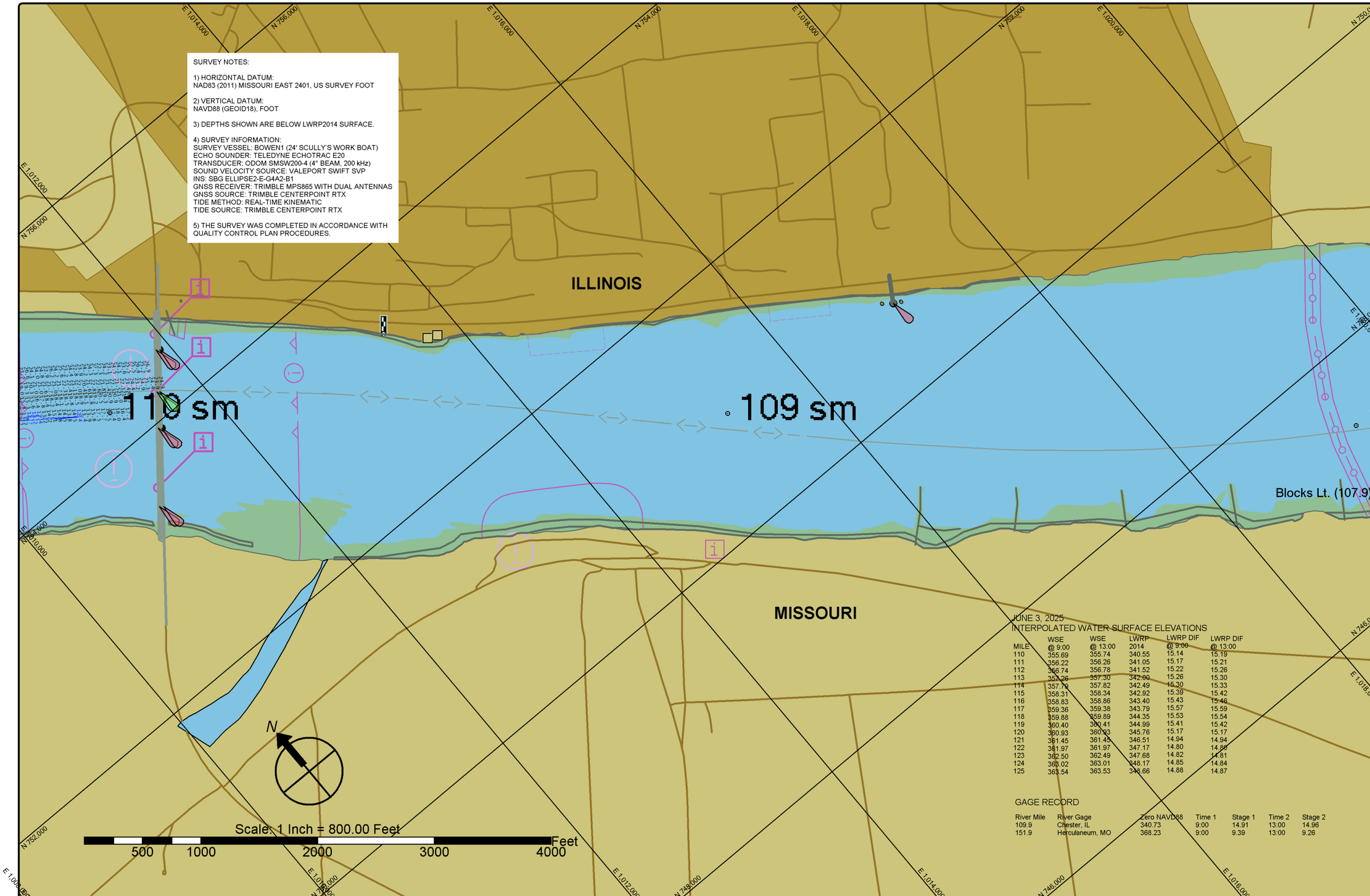
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 110.1 - 112.1

SHEET NO.
1 OF 1



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JUNE 3, 2025
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ST. LOUIS, MISSOURI

SURVEYED BY:
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2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 108.1 - 110.1

SHEET NO.
1 OF 1