

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.

NOVEMBER 10, 2022
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 9:00	WSE @ 13:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 13:00
172	378.27	378.20	372.21	6.06	5.99
173	378.84	378.76	372.95	5.89	5.81
174	379.41	379.31	373.73	5.68	5.58
175	379.98	379.87	374.30	5.68	5.57
176	380.55	380.43	374.74	5.81	5.69
177	381.02	380.96	375.29	5.80	5.67
178	381.56	381.38	375.74	5.82	5.64
179	382.03	381.81	376.07	5.96	5.74
180	382.50	382.34	376.37	6.13	6.07
181	382.78	382.52	376.38	6.40	6.14
182	383.06	382.80	376.38	6.68	6.42
183	383.35	383.09	376.38	6.97	6.70
183.3	383.43	383.16	376.38	7.05	6.78
184	383.43	383.16	376.38	7.05	6.78
185.1	383.43	383.16	376.38	7.05	6.78

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
168.7	Jefferson Barracks, MO	377.34	9:00	-0.94	13:00	-0.97
176.8	Engineers Depot, MO	378.98	9:00	2.02	13:00	1.89
180.0	St. Louis, MO	379.58	9:00	2.92	13:00	2.66
183.3	L&D27 Lower transferred to 183.3	349.49	9:00	33.94	13:00	33.67
185.1	Lock and Dam 27 Lower, IL	349.49	9:00	33.94	13:00	33.67



St. Louis District

DATES OF SURVEY:

NOVEMBER 10, 2022

FILE NO. 185_170K1022

REQUEST NO. W912P923F0004

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

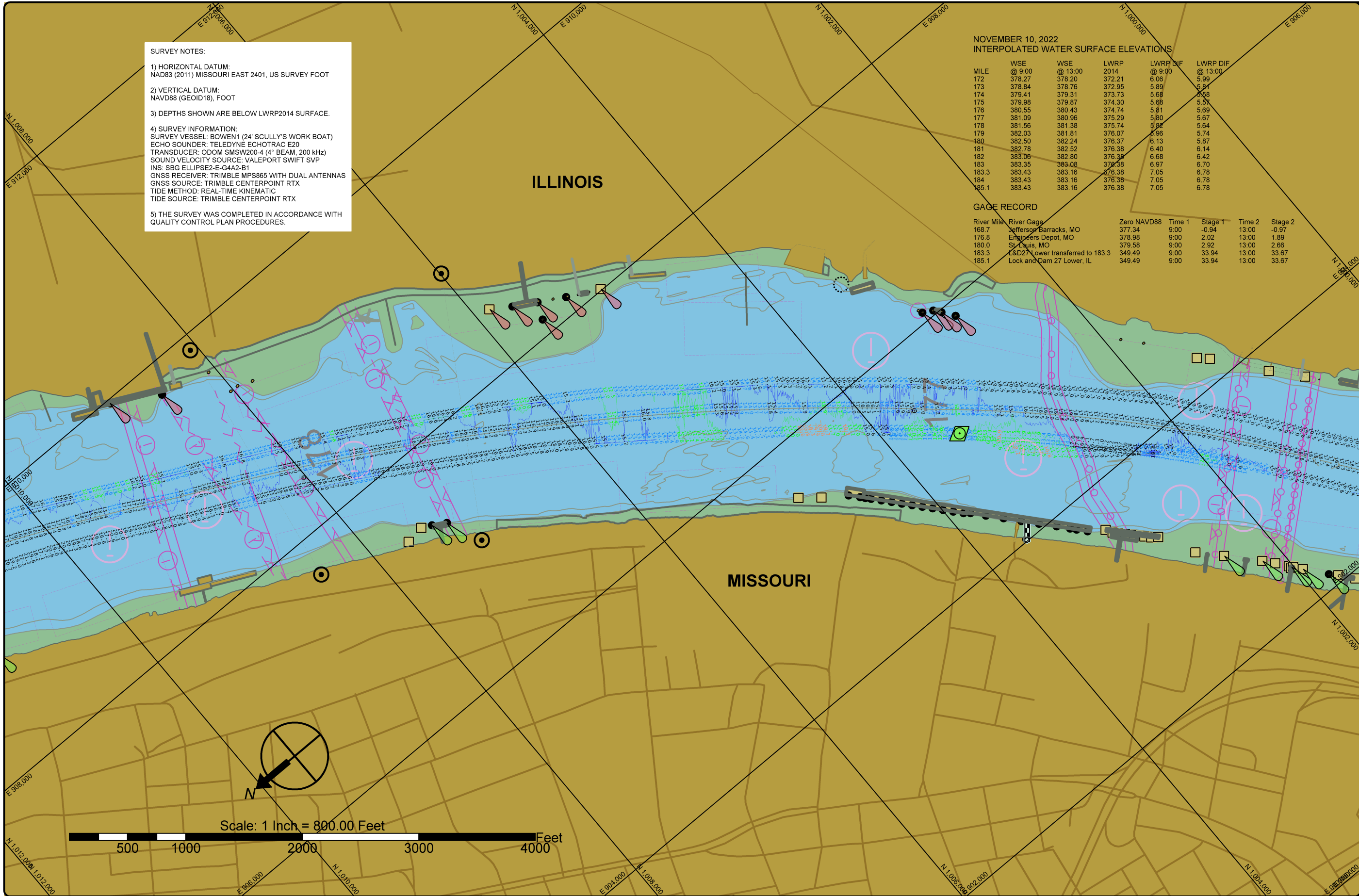
UPPER MISSISSIPPI RIVER
BASIN

MISSISSIPPI RIVER

CHANNEL PATROL
RIVER MILES 182.2 - 184.5

SHEET NO.

1 OF 1



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St. Louis District

DATES OF SURVEY:
NOVEMBER 10, 2022

FILE NO.: 185_170K1022
REQUEST NO.: W912P232F0004

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

Approved: _____

Approved: _____

Approved: _____

Approved: _____

Date: _____

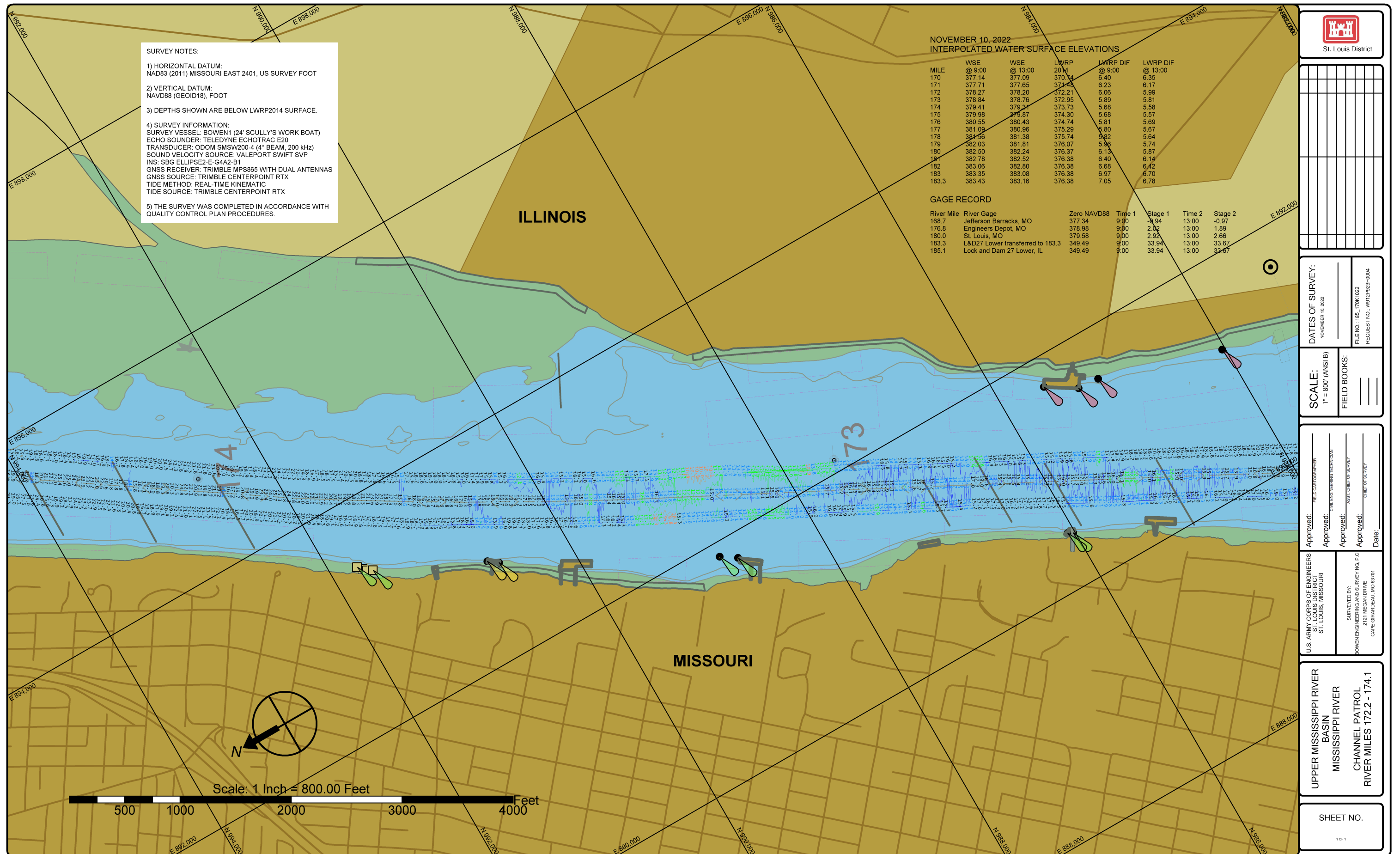
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

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 176.2 - 178.2

SHEET NO.

1 OF 1



DATES OF SURVEY:
NOVEMBER 10, 2022

FILE NO.: 185_170K1022
REQUEST NO.: W912P923F0004

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

Approved: _____ FIELD CARTOGRAPHER

Approved: _____
CIVIL ENGINEERING TECHNICIAN

Approved: _____
1001 CLIFF OF CLIMB

Approved:

Approved: _____
CHIEF OF SURVEY

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

1000

doi:10.1017/S002229240000209

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.

2121 MEGAN DRIVE
CAPE GIRARD, OH 43004

UPPER MISSISSIPPI RIVER
BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 172.2 - 174.1

HEET NO.

1 OF 1

