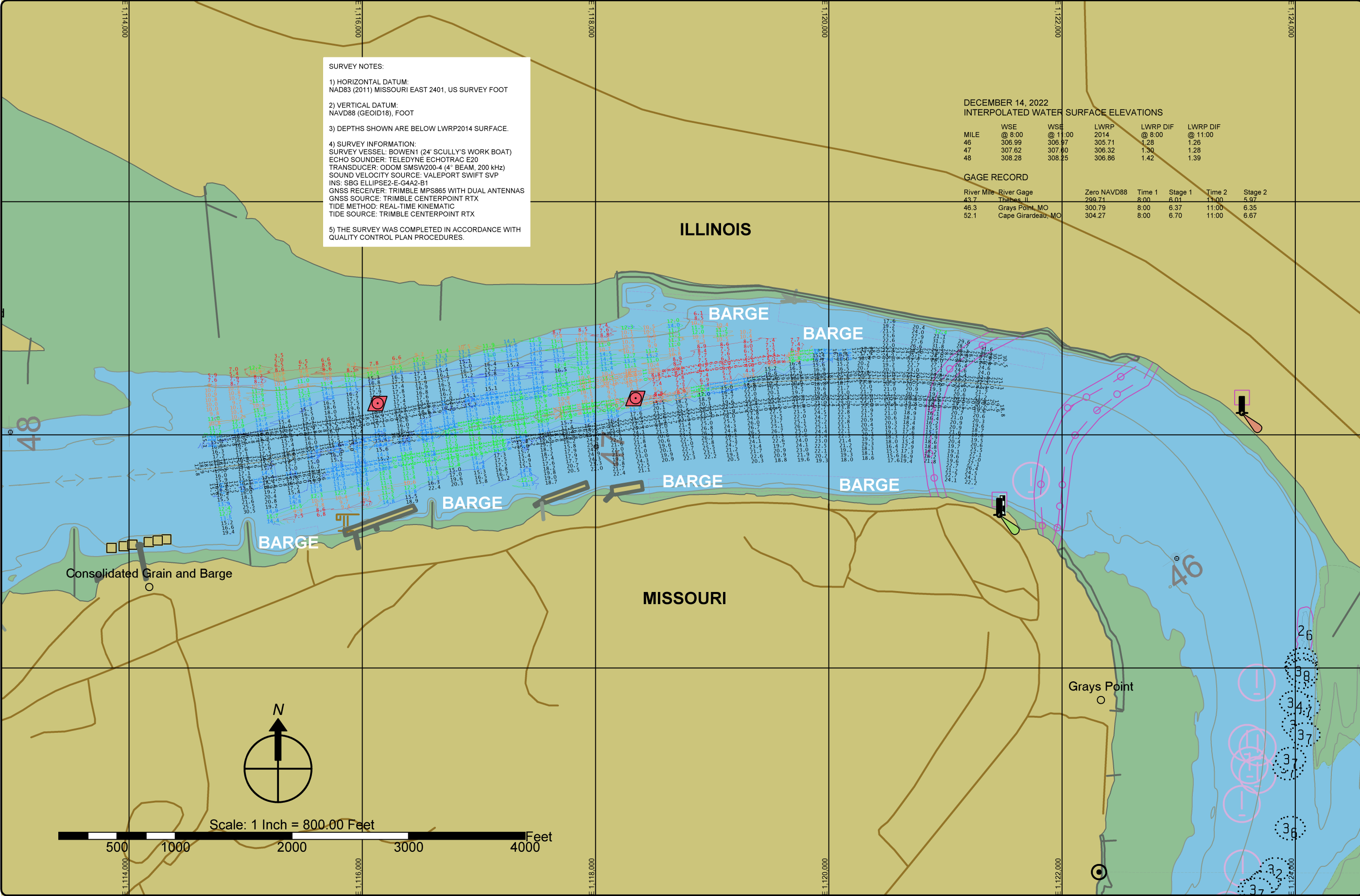




SURVEY NOTES:

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.

DECEMBER 14, 2022
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 8:00	WSE @ 11:00	LWRP 2014	LWRP DIF @ 8:00	LWRP DIF @ 11:00
46	306.99	306.97	305.71	1.28	1.26
47	307.62	307.60	306.32	1.30	1.28
48	308.28	308.25	306.86	1.42	1.39

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
43.7	Thabes II	299.71	8:00	6.01	11:00	5.97
46.3	Grays Point, MO	300.79	8:00	6.37	11:00	6.35
52.1	Cape Girardeau, MO	304.27	8:00	6.70	11:00	6.67



St. Louis District

DATES OF SURVEY:

DECEMBER 14, 2022

FILE NO: 047L1422

REQUEST NO: W912923F0004

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
MISSOURI 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
PRE DREDGE SURVEY
RIVER MILES 47.6 - 46.5

SHEET NO.

1 OF 1