



LEGEND

--- Federal Navigation Channel	○ Cable Area	■ Shoaling Area	■ 0' and above
— Federal Navigation Center Line	□ Placement Area	● Shoalest Sounding**	■ 0' to -5'
— As-built Pipeline/Cable	□ Anchorage Area	★ Beacon, General	■ -5' to -9'
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy	□ -9' and below
— Project Depth Contour	⚓ Wrecks-Submerged	◆ Green Navigation Buoy	

LWRP: 14.2
Gage Reading: RRL:31.4BR:15.78 USED: 31.7 NGVD
Sea Conditions: SMOOTH
Vessel Name: OB189
Survey Type: CS
Sounding Frequency*:** HIGH

NOTES:
 Horizontal Coordinate System:
 North American Datum of 1983 (NAD83), projected to the State Plane Coordinate System (SPCS), Louisiana South Zone. Distance units in U.S. Survey Feet.
 Vertical Datum:
 Soundings are shown in feet and indicate depths below Low Water Reference Plane 2007 (NGVD).
 Distances on the Mississippi River, above and below Head of Passes are shown at 1 mile intervals.
 The location of navigation aids are base on and provided by the U.S. Coast Guard and USACE crew.
 2010 Aerial Photography data source: NAIP, USDA-FSA-APFO Aerial Photography Field Office.
 Reference is USACE IENC U35LM236.
 ** Shoalest Sounding per Quarter per Reach.
 *** High frequency (200 kHz) survey data represents the first signal return at a sounding location and will include suspended solids, known as "fluff", if present. Low frequency (20 kHz) survey data normally penetrates through this "fluff" layer to depict elevations of consolidated bottom material. Low frequency accuracies may vary depending on channel conditions and fathometer settings.



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DATE: 25 July 2018
 The information depicted on this map represents the results of a survey conducted on the date indicated. It is not to be used for any other purpose than the one for which it was prepared. The user is responsible for the results of any application of the data for other than its intended purpose.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT	
Submitted:	Surveyed By: DS/JA
Recommended:	Plotted By: AO
Approved:	Checked By: AC

**MISSISSIPPI RIVER - SHALLOW DRAFT
 SMITHLAND - SHEET 1
 MS_09_SM1_20180725_CS
 25 July 2018**

**Sheet Reference Number
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