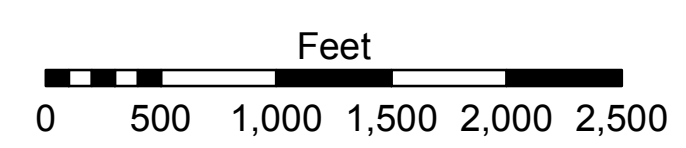
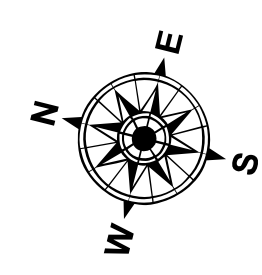


LEGEND			
--- Federal Navigation Channel	○ Cable Area	□ Borrow Area	■ 0' and above
— Federal Navigation Center Line	□ Placement Area	● Shoalest Sounding**	■ 0' to -5'
— As-built Pipeline/Cable	□ Anchorage Area	★ Beacon, General	■ -5' to -10'
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy	■ -10' to -20'
— Project Depth Contour	⚓ Wrecks-Submerged	◆ Green Navigation Buoy	■ -20' to -30'
			■ -30' to -35'
			■ -35' to -40'
			■ -40' to -45'
			■ -45' and below



LWRP: 1.3  
 Gage Reading: D:4.5R:3.4 USED:3.4 NGVD  
 Sea Conditions: CALM  
 Vessel Name: M/V OB167  
 Survey Type: CONDITION  
 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 based 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 N.O.A.A. Navigation Chart No. 11370.  
 \*\* 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.



**DISTRIBUTION LIABILITY:** The data represents the results of data processing for a specific US Army Corps of Engineers project and is only valid for its intended use, content, time and accuracy specifications. The user is responsible for the results of the application of the data for other than its intended purpose.  
 Data Constants: Hydrographic survey data is subject to change rapidly due to several factors including but not limited to changing bathymetry, sedimentation, and other factors. The user is responsible for the results of the application of the data for other than its intended purpose.  
 The information depicted on this map represents the results of a survey conducted under the authority of the US Army Corps of Engineers and is not to be used for any other purpose without the written consent of the US Army Corps of Engineers. Product maintainers should not rely solely upon it.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT			
Submitted:	Surveyed By:	Plotted By:	Checked By:
	RYLAND/SONNER	AO	AO
Recommended:	Chief, Survey Section		
Approved:	Chief, Waterways Maintenance Section		

**MISSISSIPPI RIVER - B.R. TO GULF  
 RICH BEND CROSSING  
 MD\_29\_RIB\_20161201  
 01 December 2016**

**Sheet Reference Number  
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