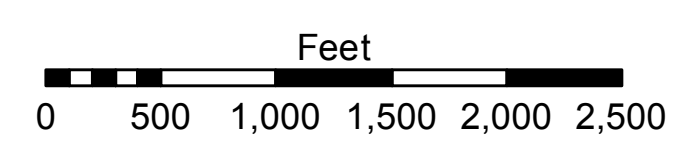
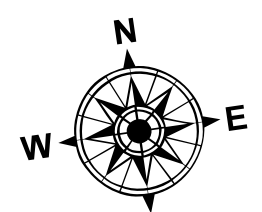


LEGEND			
— Federal Navigation Channel	○ Cable Area	□ Borrow Area	0' and above
— Federal Navigation Center Line	■ Placement Area	● Shoalest Sounding**	0' to -5'
— As-built Pipeline/Cable	□ Anchorage Area	★ Beacon, General	-5' to -10'
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation 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: 1.9
 Gage Reading: BR:19.97 D:12.27 USED:16.50(NGVD)
 Sea Conditions: CALM
 Vessel Name: OB-189
 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 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 N.O.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 collection processing for a specific US Army Corps of Engineers project. It is only valid for its intended use, control, time and accuracy specifications. The user is responsible for the results. The user's application of the data for other than its intended purpose. Data Collection: Hydrographic survey data is subject to change rapidly due to several factors including but not limited to dredging, sedimentation, and other factors. The user is responsible for changes in the hydrographical conditions when developing after the date of the survey. The information depicted on this map represents the results of a survey conducted on the date shown. It is not intended to represent the general condition existing at this time.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT		
Submitted:	Surveyed By:	RYLAND/SIMMONS
Recommended:	Plotted By:	BD
Approved:	Checked By:	AC

**MISSISSIPPI RIVER - B.R. TO GULF
 GRANADA RECON
 MR_10_GRA_20160830
 30 August 2016**

**Sheet
 Reference
 Number
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