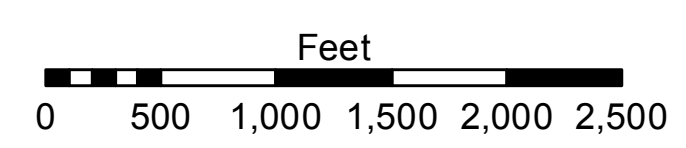
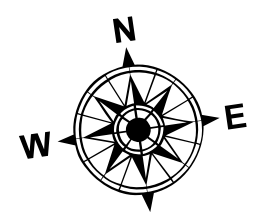


LEGEND

--- 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:28.46 D:19.96 USED:25.2 NGVD
 Sea Conditions: CHOPPY
 Vessel Name: OB 189
 Survey Type: RECON
 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 bathymeter
 settings.



DISTRIBUTION LIABILITY: The data represents the results of data collection/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. The user's application of the data for other than its intended purpose is at their own risk. The US Army Corps of Engineers is not responsible for any damage or injury resulting from the use of this data for purposes other than those intended.

DATA COLLECTION: Hydrographic survey data is subject to change due to several factors including but not limited to dredging, sedimentation, and channel conditions. The user is responsible for the hydrographical conditions which develop after the date of the survey. The US Army Corps of Engineers is not responsible for changes in the hydrographical conditions which develop after the date of the survey. The user is responsible for the hydrographical conditions which develop after the date of the survey. The user is responsible for the hydrographical conditions which develop after the date of the survey.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT		
Submitted:	Surveyed By:	Checked By:
Recommended:	DS, SR	MSK
Approved:	Plotted By:	
	BTD	

**MISSISSIPPI RIVER - B.R. TO GULF
 GRANADA RECON
 MR_10_GRA_20160509
 09 May 2016**

**Sheet Reference Number
 10 of 97**