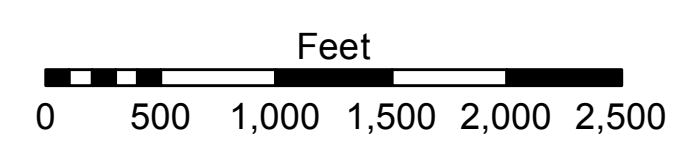
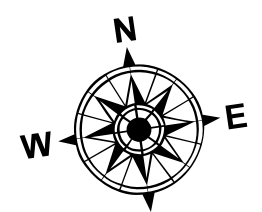


| LEGEND | |
|----------------------------------|-------------------------|
| — Federal Navigation Channel | ○ Cable Area |
| — Federal Navigation Center Line | □ Placement Area |
| — As-built Pipeline/Cable | □ Anchorage Area |
| ⋯ Unconfirmed Pipeline/Cable | ⊗ Obstruction Point |
| — Project Depth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



LWRP: 1.9
 Gage Reading: BR:22.5D:15.3 USED:19.2 NGVD
 Sea Conditions: CALM
 Vessel Name: M/V OB189
 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. 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.



DISTRICT NOTES:

Access Conditions: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that they are not to be used for any purpose other than that for which they were prepared, and that the accuracy, reliability, usability or suitability for any particular purpose of the data is not guaranteed. The user is responsible for the results of any use of the data. The application of the data for other than its intended purpose is at the user's risk. The user is responsible for the results of any use of the data. The application of the data for other than its intended purpose is at the user's risk.

Disclaimer: Hydrographic survey data is subject to change due to several factors including but not limited to dredging, sedimentation, and other factors. The user is responsible for the results of any use of the data. The application of the data for other than its intended purpose is at the user's risk.

The information depicted on this map represents the results of a survey conducted on the Mississippi River. It is not to be considered a representation of the general condition existing at this time.

| U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT | |
|--|--------|
| Submitted: | DR, JA |
| Recommended: | AO |
| Approved: | ML |

**MISSISSIPPI RIVER - B.R. TO GULF
 GRANADA RECON
 MR_10_GRA_20151201
 01 December 2015**

**Sheet
 Reference
 Number
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