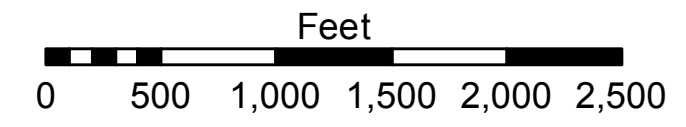
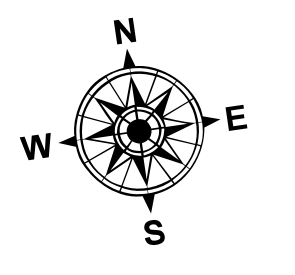


**LEGEND**

--- 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:27.67 D:18.65 USED:23.60 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.

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

**MISSISSIPPI RIVER - B.R. TO GULF  
 GRANADA RECON  
 MR\_10\_GRA\_20170628  
 28 June 2017**

**Sheet  
 Reference  
 Number  
 10 of 97**

Revision Number:  
 3.13-20160811



**DISCLAIMER:**

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