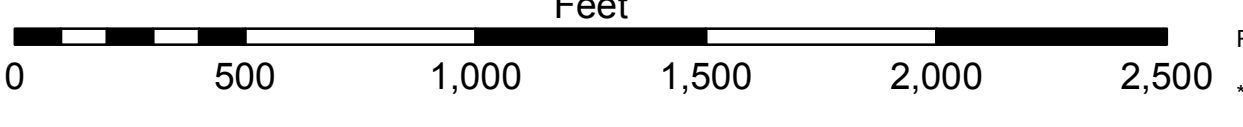
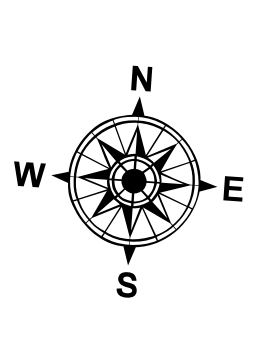


LEGEND

--- Federal Navigation Channel	○ Cable Area	■ Shoaling 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: 1.2
 Gage Reading: R:9.4NO:6.5 USED:9.3 NGVD
 Sea Conditions: ROUGH...VERY HEAVY TRAFFIC IN AREA
 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 (via 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.
 2015 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.



DISCLAIMER:
 The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the data are not warranted for any purpose other than that for which they were prepared, and that the user is responsible for the results of their use. The user is responsible for the results of their use. The user is responsible for the results of their use. The user is responsible for the results of their use.
 Data Constants: Hydrographic survey data is subject to change rapidly due to several factors including but not limited to encroaching vegetation, shifting sandbars, and changes in channel conditions. The Army Corps of Engineers accepts no responsibility for changes in the hydrographic conditions when developed after the date of the survey. The user is responsible for the results of their use. The user is responsible for the results of their use. The user is responsible for the results of their use.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT	
Submitted:	RYLAND/MOLLERE
Recommended:	AO
Approved:	AO

MISSISSIPPI RIVER - B. R. TO GULF
LUCY
MD_38_LUC_20170328_CS
28 March 2017

Sheet Reference Number
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