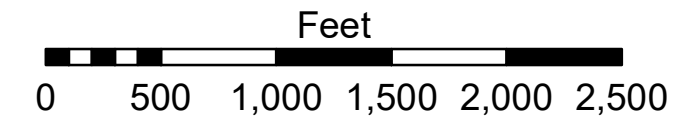
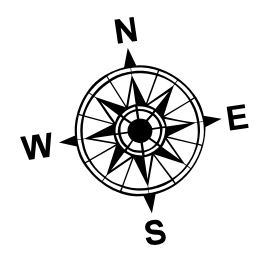


LEGEND	
--- Federal Navigation Channel	● Cable Area
— Federal Navigation Center Line	■ Placement Area
— As-built Pipeline/Cable	□ Anchorage Area
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point
— Project Depth Contour	⚓ Wrecks-Submerged
□ Borrow Area	★ Beacon, General
● Shoalest Sounding**	◆ Red Navigation Buoy
★ Beacon, General	◆ Green Navigation Buoy
◆ Red Navigation Buoy	0' and above
◆ Green Navigation Buoy	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:21.4D:13.0 USED:17.6 NAVD
 Sea Conditions: SMOOTH
 Vessel Name: VALENTOUR
 Survey Type: CS
 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 (NAVD).
 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. 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, 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. Data Constants: Hydrographic survey data is subject to change rapidly due to several factors including but not limited to dredging, channel migration, and changes in bathymetry. The user is responsible for the results of the data. The information depicted on this map represents the results of a survey conducted on the date of the survey. It is not intended to represent the general condition existing at that time.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT		
Submitted:	Surveyed By: DS/JA	Plotted By: AO
Recommended:	Chief, Survey Section	Checked By: AC
Approved:	Chief, Waterways Maintenance Section	

**MISSISSIPPI RIVER - B.R. TO GULF
 GRANADA CROSSING
 MD_10_GRA_20191017_CS
 17 October 2019**

**Sheet
 Reference
 Number
 10 of 97**

Revision Number:
 4-10-2019/012