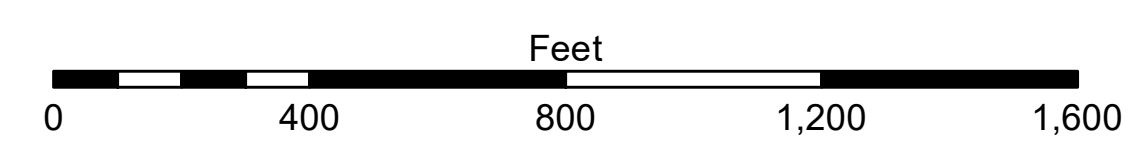
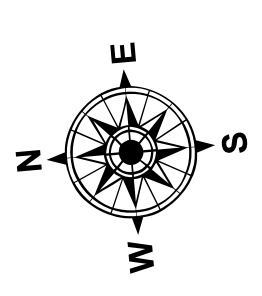


LEGEND			
	Federal Navigation Channel		Placement Area
	Federal Navigation Center Line		Beacon, General
	As-built Pipeline/Cable		Red Navigation Buoy
	Unconfirmed Pipeline/Cable		Green Navigation Buoy
	Project Depth Contour		Shoalest Sounding**
	Cable Area		Fluff Thickness (feet)*
	Anchorage Area		Beacon, General
	Obstruction Point		Red Navigation Buoy
	Wrecks-Submerged		Green Navigation Buoy



Gage Reading: HACKBERRY: 1.7 MLLW USED
 Sea Conditions: CALM
 Vessel Name: OB-167
 Survey Type: CONDITION
 Sounding Frequency***: LOW

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 Mean Lower Low Water Datum (MLLW). Datum Relationships for gage 73600 as of December 2013: 0.0' NAVD83 (OPUS 2010) = 1.0' MLLW = 2.0' MLG or 0.0' MLLW = 1.0' MLG
 Distances on the Calcasieu River are shown at 1 mile intervals.
 The location of navigation aids are base on and provided by the U.S. Coast Guard and USACE survey crews.
 2015 Aerial Photography data source: NAIP
 Reference is N.O.A. Navigation Chart No. 11339.
 * Difference between high and low frequency elevations where greater than 1.0'.
 ** 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:	Surveyed By: DS, JH
Recommended:	Plotted By: [Blank]
Checked By: [Blank]	Checked By: [Blank]
Approved: Chief, Waterways Maintenance Section	Checked By: [Blank]

**CALCASIEU SHIP CHANNEL
 LOWER SHEET 16
 CR_16_LWR_20180918_CS
 18 September 2018**

**Sheet Reference Number
 16 of 53**

US Army Corps of Engineers District: CEMVN

DISCLAIMER: The data represented on this map were derived from the results of a collection of data for a specific US Army Corps of Engineers project. The data are not intended to be used for any purpose other than that for which they were collected. The user is responsible for the results of any use of the data for other than the intended purpose. The application of the data for other than the intended purpose is at the user's risk. The US Army Corps of Engineers accepts no responsibility for changes in the hydrographical conditions when developed after the date of the original survey. Product maintainers should not rely solely upon this information.