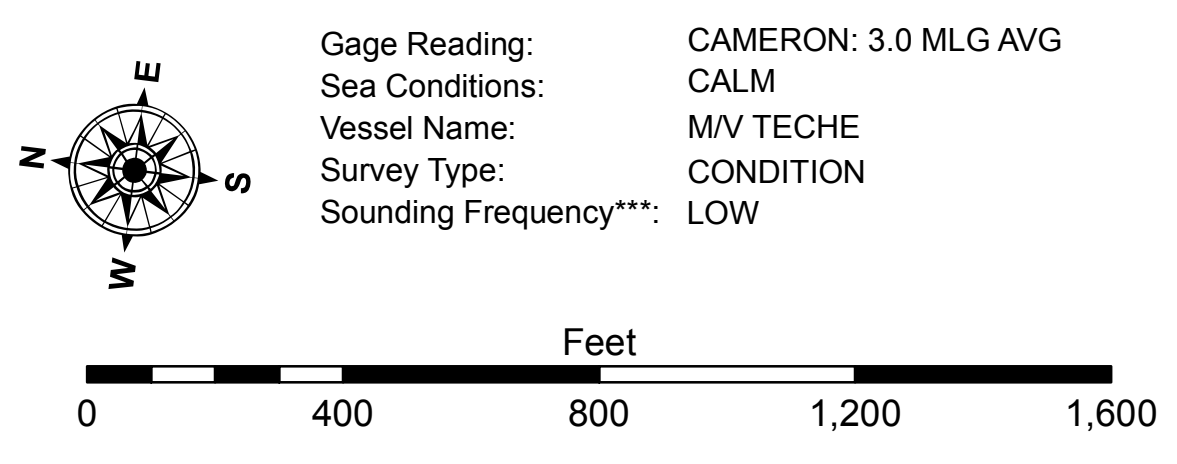


LEGEND			
--- Federal Navigation Channel	○ Cable Area	3 Fluff Thickness (feet)*	-15' and above
— Federal Navigation Center Line	□ Placement Area	● Shoalest Sounding**	-15' to -20'
— As-built Pipeline/Cable	□ Anchorage Area	★ Beacon, General	-20' to -25'
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy	-25' to -32'
— Project Depth Contour	⚓ Wrecks-Submerged	◆ Green Navigation Buoy	-32' to -38'
			-38' to -40'
			-40' to -42'
			-42' and below



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 Low Gulf Datum (MLG). Datum Relationships for gage 73650 as of December 2013: 0.0' NAVD88 (2009.55) = 1.3' MLLW = 2.3' 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 based on and provided by the U.S. Coast Guard and USACE survey crews.
 2015 Aerial Photography data source: NAIP
 Reference is N.O.A.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.



DISCLAIMER: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the Government makes no warranty, expressed, implied, or otherwise, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the information. The user is responsible for the results and for any damage or injury resulting from the use of the information. The user shall indemnify and hold the Government harmless from and against all claims, damages, and expenses, including reasonable attorneys' fees, that may be asserted against or incurred by the Government in connection with the use of the information. The information depicted on this map represents the results of a hydrographic survey conducted on or after the date of publication. The information is not intended to be used for navigation. The user is advised to consult the latest edition of the Hydrographic Survey of the Gulf of Mexico for the most current information. The information is not intended to be used for navigation. The user is advised to consult the latest edition of the Hydrographic Survey of the Gulf of Mexico for the most current information.

Submitted:	Surveyed By: SP-SR
Recommended:	Plotted By: AO
Approved:	Checked By: AO

U.S. ARMY CORPS OF ENGINEERS
 NEW ORLEANS DISTRICT
 Chart, Waterways Maintenance Section

CALCASIEU SHIP CHANNEL
BAR SHEET 31
CR_31_BAR_20170924_CS
24 September 2017

Sheet Reference Number
31 of 53