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Disclaimer: Hydrographic survey data is subject to change rapidly due to several factors including but not limited to changing hydrographic conditions which develop after the date of the survey. The user is responsible for the results of any use of the data for other than its intended purpose.

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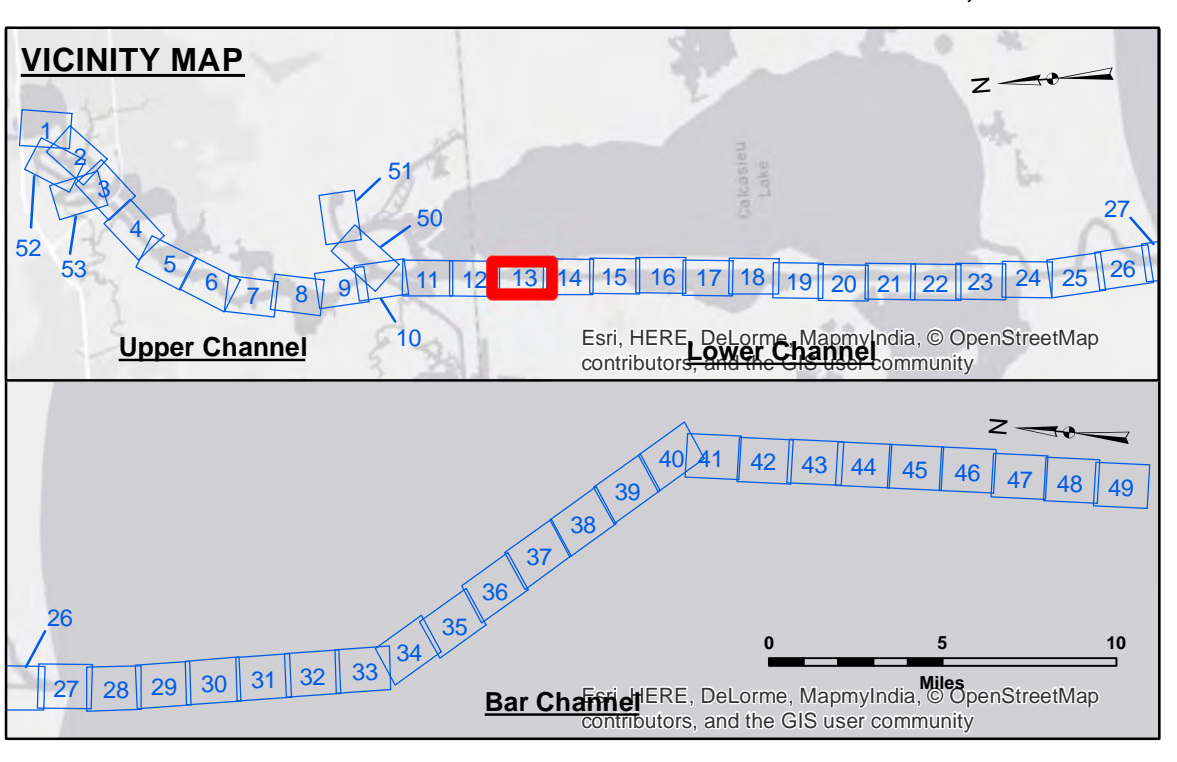
Accuracy: Hydrographic survey data is subject to change rapidly due to several factors including but not limited to changing hydrographic conditions which develop after the date of the survey. The user is responsible for the results of any use of the data for other than its intended purpose.

Submitted:	Surveyed By: PS, JH
Recommended:	Plotted By: BD
Approved:	Checked By: AC

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

**CALCASIEU SHIP CHANNEL
LOWER SHEET 13
CR_13_LWR_20180221_CS
21 February 2018**

**Sheet Reference Number
13 of 53**



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 73595 as of December 2013:
0.0 NAVD83 (OPUS 2013) = 0.9' MLLW = 1.9' 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.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.

Gage Reading: RANGE D/HACKBERRY: 3.05 AVG.
Sea Conditions: CHOPPY
Vessel Name: M/V LAFORUCHE
Survey Type: CONDITION
Sounding Frequency***: LOW