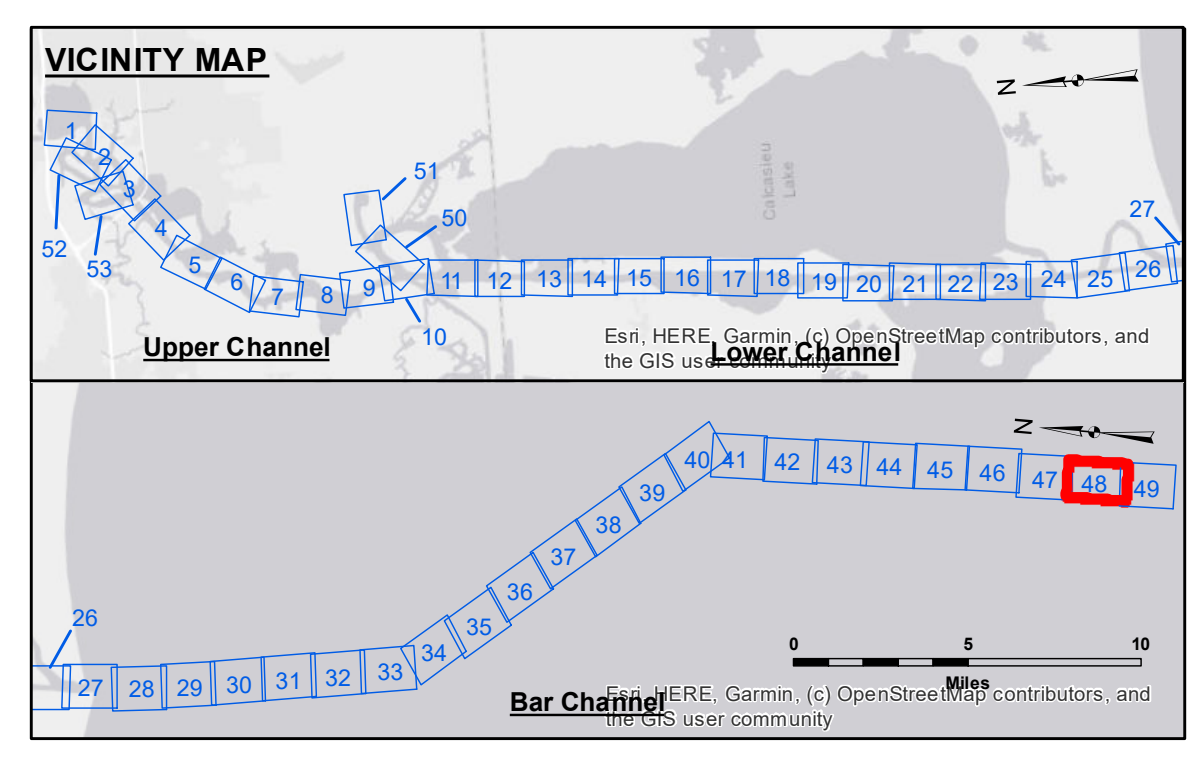


**DISCLAIMER**  
 The information depicted on this map represents the results of a hydrographic survey conducted by the United States Army Corps of Engineers. The user is responsible for the accuracy, completeness, and reliability of the data for their intended use. The user is not to be held liable for any damage or injury resulting from the use of this information. The information depicted on this map represents the results of a hydrographic survey conducted by the United States Army Corps of Engineers. The user is responsible for the accuracy, completeness, and reliability of the data for their intended use. The user is not to be held liable for any damage or injury resulting from the use of this information.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT		
Submitted:	Surveyed By: RYLAND ADAMS	Plotted By: BD
Recommended:	Chief, Survey Section	Checked By: AC
Approved:	Chief, Waterways Maintenance Section	

**CALCASIEU SHIP CHANNEL**  
**BAR SHEET 48**  
**CR\_48\_BAR\_20191120\_CS**  
**20 November 2019**



**LEGEND**

--- Federal Navigation Channel	○ Cable Area	3 Fluff Thickness (feet)*	■ -16' and above
— Federal Navigation Center Line	□ Placement Area	● Shoalest Sounding**	■ -16' to -21'
— As-built Pipeline/Cable	□ Anchorage Area	★ Beacon, General	■ -21' to -26'
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy	■ -26' to -33'
— Project Depth Contour	⚓ Wrecks-Submerged	◆ Green Navigation Buoy	■ -33' to -39'
			■ -39' to -41'
			■ -41' to -43'
			■ -43' and below

Gage Reading: CAMERON: 1.14 MLLW AVG.  
 Sea Conditions: 2-4 FT  
 Vessel Name: M/V VALENTOUR  
 Survey Type: CONDITION  
 Sounding Frequency\*\*\*: LOW

**NOTES:**  
 1. 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.  
 2. Vertical Datum: Soundings are shown in feet and indicate depths below Mean Lower Low Water Datum (MLLW). 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  
 3. Distances on the Calcasieu River are shown at 1 mile intervals.  
 4. The location of navigation aids are based on and provided by the U.S. Coast Guard and USACE survey crews.  
 5. 2015 Aerial Photography data source: NAIP  
 6. Reference is N.O.A.A. Navigation Chart No. 11339.  
 7. \* Difference between high and low frequency elevations where greater than 1.0'.  
 8. \*\* Shoalest Sounding per Quarter per Reach.  
 9. \*\*\* 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.

**Sheet Reference Number**  
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Revision Number:  
 4.0-201 907022