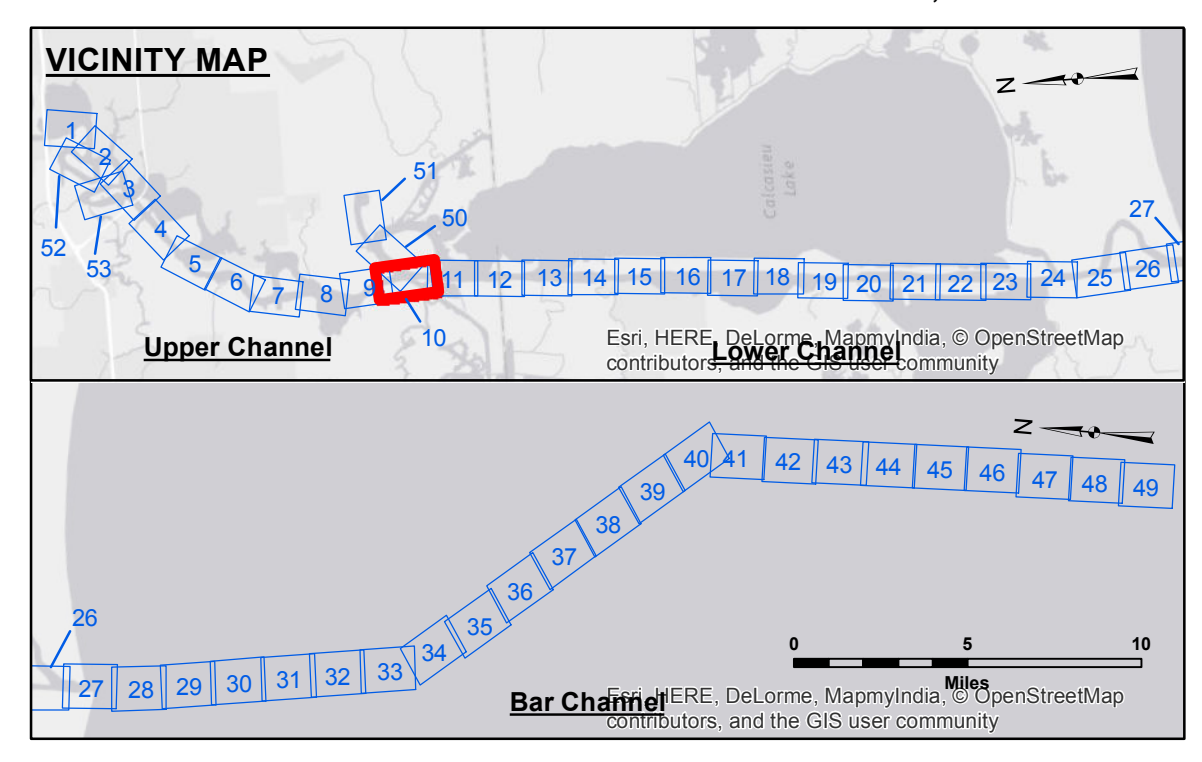


US Army Corps of Engineers District: CEMVN

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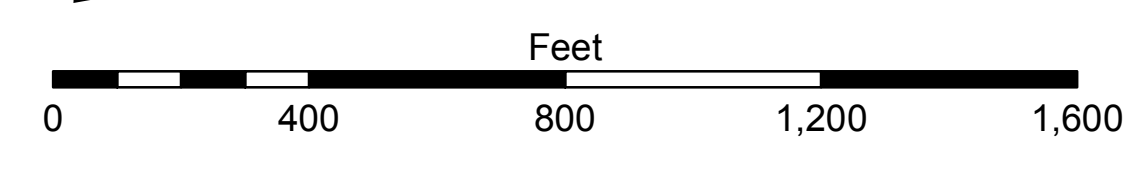
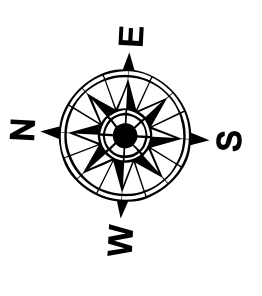
Submitted:	Surveyed By: PM, JH
Recommended:	Plotted By: AO
Approved:	Checked By: AO

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT



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



Gage Reading: RNG D: 1.2 MLG AVG
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 Low Gulf Datum (MLG). Datum Relationships for gage 73585 as of December 2013: 0.0' NAVD83 (OPUS 2013) = 0.8' MLLW = 1.8' 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. 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.

**CALCASIEU SHIP CHANNEL
UPPER SHEET 10
CR_10_UPR_20170216
16 February 2017**

**Sheet Reference Number
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