

**LEGEND**

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

Gage Reading: DM72: 2.35 MLLW  
 Sea Conditions: ROUGH  
 Vessel Name: OB189  
 Survey Type: CONTROL  
 Sounding Frequency\*\*\*: LOW

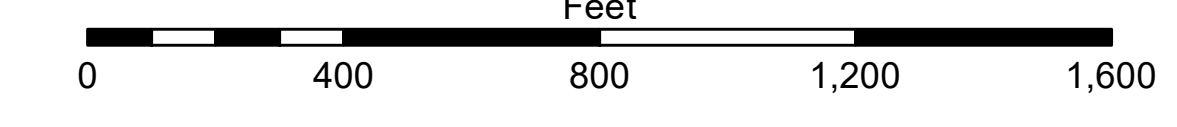
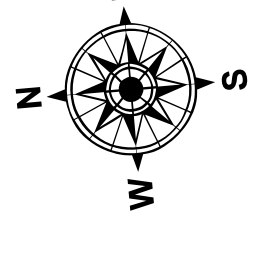
Vertical Datum:  
 Soundings are shown in feet and indicate depths below Mean Lower Low Water Datum (MLLW).  
 Datum Relationships for gage 73615 as of December 2013:  
 0.0' NAVD83 (2009.55) = 1.1' MLLW = 2.1' MLG or 0.0' MLLW = 1.0' MLG

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.



**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:  
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\*\*\* 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: DUS/JH
Recommended:	Plotted By: AO
Approved:	Checked By: AO

**CALCASIEU SHIP CHANNEL  
 LOWER SHEET 20  
 CR\_20\_LWR\_20190501\_BD  
 01 May 2019**

**Sheet Reference Number  
 20 of 53**