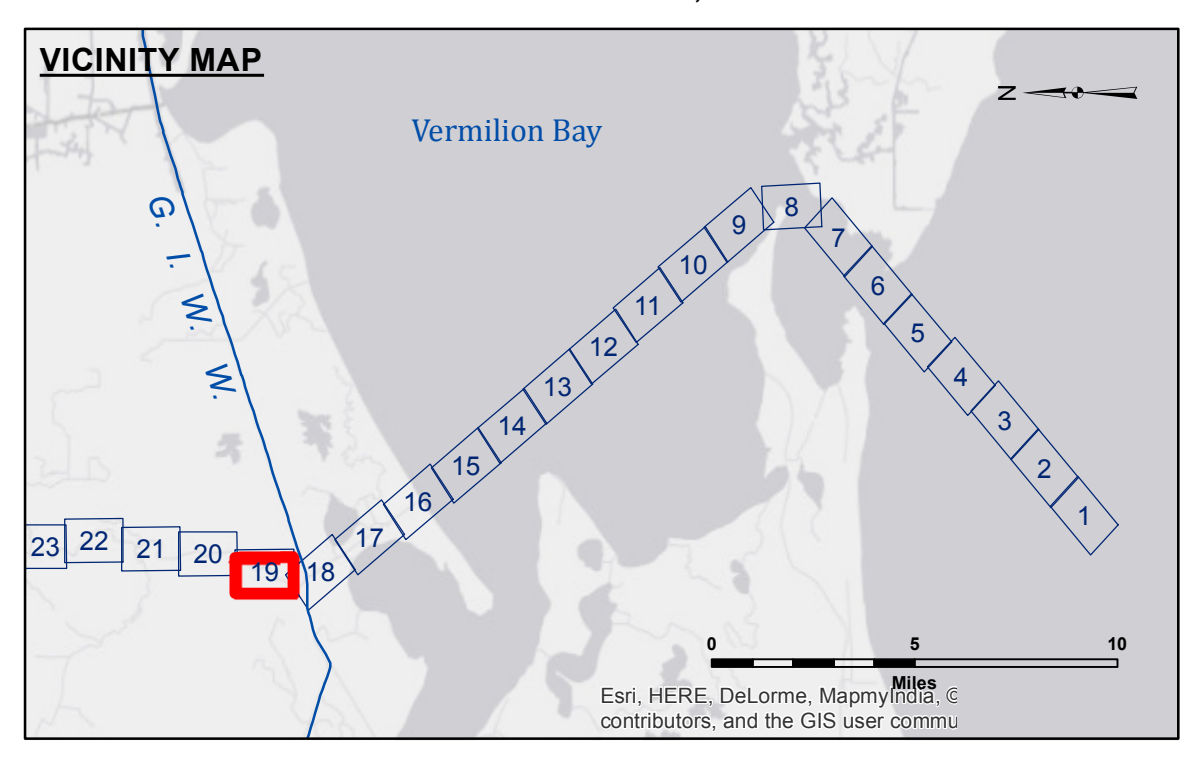


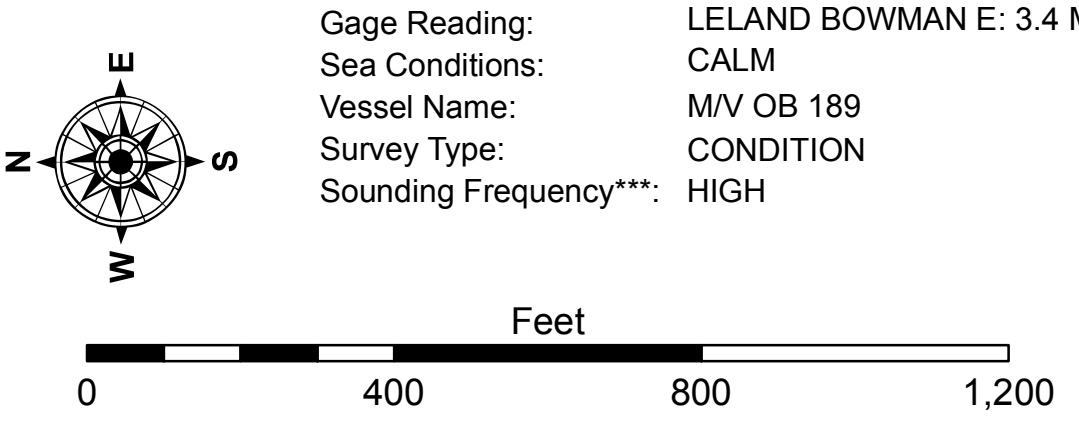
Sheet 20

Sheet 19



LEGEND

--- Federal Navigation Channel	○ Cable Area	□ Borrow Area	■ -9' and above
— Federal Navigation Center Line	□ Placement Area	● Shoalest Sounding**	□ -9' and below
— As-built Pipeline/Cable	□ Anchorage Area	★ Beacon, General	
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy	
— Project Depth Contour	✈ Wrecks-Submerged	◆ Green Navigation Buoy	



Gage Reading: LELAND BOWMAN E: 3.4 MLG AVG
 Sea Conditions: CALM
 Vessel Name: M/V OB 189
 Survey Type: CONDITION
 Sounding Frequency***: HIGH

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 76720 as of August 2014: 0.0' NAVD83 (OPUS 2014) = 2.08' MLG
 Distances on the Vermilion 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.
 2010 Aerial Photography data source: NAIP. Transparent green imagery from 1998 DOQQ.
 Reference is N.O.A.A. Navigation Chart No. 11350.
 ** 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 data are not to be used for any purpose other than that for which they were originally prepared, or implied concerning the accuracy, completeness, reliability, usability or suitability for any particular purpose of the recipient. The user is responsible for the results obtained from the use of these data for other than the intended purpose.
 Data Constraints: 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 obtained from the use of these data for other than the intended purpose.
 The information depicted on this map represents the results of a survey conducted on or about the date indicated. It is not to be used to represent the general condition existing at that time.

U.S. ARMY CORPS OF ENGINEERS
 NEW ORLEANS DISTRICT

Submitted:	Surveyed By: DR, SP	Plotted By: ATO	Checked By: TAF
Recommended:	Chart, Survey Section		
Approved:	Chart, Waterways Maintenance Section		

VERMILION RIVER
GIWW TO PERRY
VM_19_UPR_20150422
22 April 2015

Sheet Reference Number
19 of 49