

H13315

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Ocean Service

**DESCRIPTIVE REPORT**

Type of Survey: Navigable Area

Registry Number: H13315

**LOCALITY**

State(s): Louisiana

General Locality: Northern Gulf of Mexico

Sub-locality: 11 NM Southwest of Freshwater Bayou

**2019**

CHIEF OF PARTY  
John R. Bean

**LIBRARY & ARCHIVES**

Date:

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		REGISTRY NUMBER:
<b>HYDROGRAPHIC TITLE SHEET</b>		<b>H13315</b>
INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.		
State(s):	<b>Louisiana</b>	
General Locality:	<b>Northern Gulf of Mexico</b>	
Sub-Locality:	<b>11 NM Southwest of Freshwater Bayou</b>	
Scale:	<b>40000</b>	
Dates of Survey:	<b>09/12/2019 to 03/11/2020</b>	
Instructions Dated:	<b>07/25/2019</b>	
Project Number:	<b>OPR-K354-KR-19</b>	
Field Unit:	<b>Ocean Surveys</b>	
Chief of Party:	<b>John R. Bean</b>	
Soundings by:	<b>Multibeam Echo Sounder</b>	
Imagery by:	<b>Side Scan Sonar Multibeam Echo Sounder Backscatter</b>	
Verification by:	<b>Atlantic Hydrographic Branch</b>	
Soundings Acquired in:	<b>meters at Mean Lower Low Water</b>	
Remarks: The information presented in this report and the accompanying digital data represents the results of surveys performed by Ocean Surveys, Inc. during the period of September 12, 2019 to March 11, 2020 and can only be considered as indicating the conditions existing at that time. Reuse of this information by client or others beyond the specific scope of work for which it was acquired shall be at the sole risk of the user and without liability to OSI. <i>Any revisions to the Descriptive Report (DR) applied during office processing are shown in red italic text. The DR is maintained as a field unit product, therefore all information and recommendations within this report are considered preliminary unless otherwise noted. The final disposition of survey data is represented in the NOAA nautical chart products. All pertinent records for this survey are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via <a href="https://www.ncei.noaa.gov/">https://www.ncei.noaa.gov/</a>. Products created during office processing were generated in NAD83 UTM 15N, MLLW. All references to other horizontal or vertical datums in this report are applicable to the processed hydrographic data provided by the field unit.</i>		

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## Descriptive Report to Accompany Survey H13315

Project: OPR-K354-KR-19

Locality: Northern Gulf of Mexico

Sublocality: 11 NM Southwest of Freshwater Bayou

Scale: 1:40000

September 2019 - March 2020

### Ocean Surveys

Chief of Party: John R. Bean

## A. Area Surveyed

This survey provides hydrographic data for the Gulf of Mexico waters approaching the Louisiana Coast, southwest of Freshwater Bayou.

### A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
29° 27' 41.04" N 92° 36' 0.08" W	29° 17' 23.05" N 92° 25' 58.4" W

*Table 1: Survey Limits*

Survey limits were acquired in accordance with the requirements in the Project Instructions and the HSSD.

### A.2 Survey Purpose

The following text is copied verbatim from the Project Instructions' Purpose and Location Section:

"This Louisiana Coast survey will provide contemporary hydrographic data to update National Ocean Service (NOS) nautical chart products and services. This survey area supports a thriving energy industry containing numerous resource extraction platforms and pipelines and the marine traffic servicing these facilities. As well, the regional ecosystem supports commercial and recreational shrimping and fishing industries. This survey data will update legacy data acquired in the 1930s in an area where there is the expectation of significant sediment transport and where adjacent surveys have identified numerous exposed

pipelines and hazards. The project will cover approximately 406 square nautical miles of high-priority survey area. Survey data from this project is intended to supersede all prior survey data in the common area."

### A.3 Survey Quality

The entire survey is adequate to supersede previous data.

### A.4 Survey Coverage

The following table lists the coverage requirements for this survey as assigned in the project instructions:

Water Depth	Coverage Required
All waters in survey area	Complete Coverage Option B except where appropriate to use Option A for safety reasons (Refer to HSSD Section 5.2.2.3).
8 meters water depth and shoaler	Sidescan may be acquired at an altitude of 6-20% of the range scale

*Table 2: Survey Coverage*

Survey coverage was in accordance with the requirements listed above and in the HSSD.

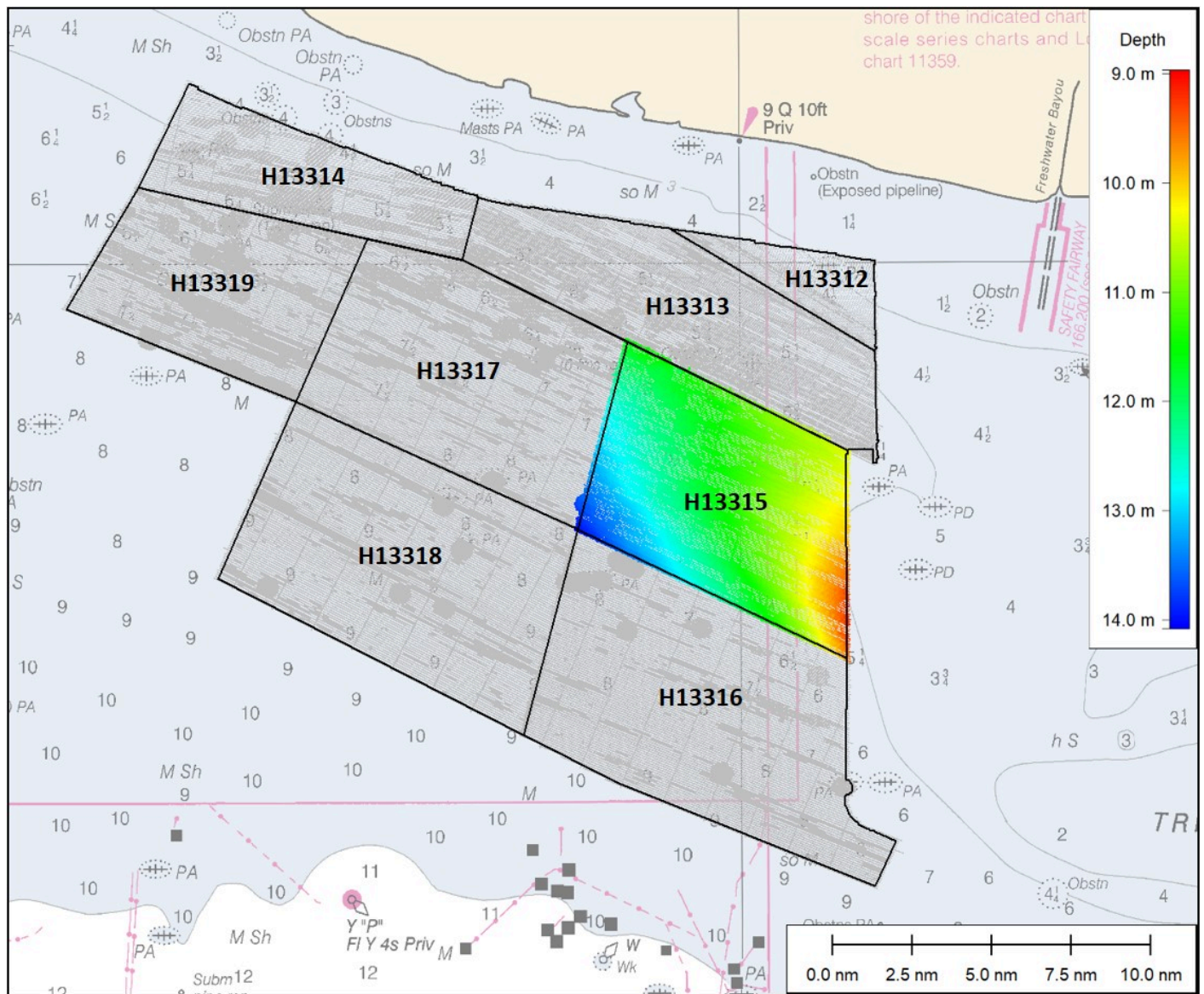


Figure 1: H13315 MBES survey coverage within project limits for OPR-K354-KR-19

## A.6 Survey Statistics

The following table lists the mainscheme and crossline acquisition mileage for this survey:

	<b>HULL ID</b>	<i>R/V H.F. Stout</i>	<i>R/V Ocean Explorer</i>	<i>Total</i>
<b>LNM</b>	<b>SBES Mainscheme</b>	0	0	0
	<b>MBES Mainscheme</b>	26.82	19.2	46.02
	<b>Lidar Mainscheme</b>	0	0	0
	<b>SSS Mainscheme</b>	0	0	0
	<b>SBES/SSS Mainscheme</b>	0	0	0
	<b>MBES/SSS Mainscheme</b>	0.81	1098.05	1098.86
	<b>SBES/MBES Crosslines</b>	0	37.12	37.12
	<b>Lidar Crosslines</b>	0	0	0
<b>Number of Bottom Samples</b>				9
<b>Number Maritime Boundary Points Investigated</b>				0
<b>Number of DPs</b>				0
<b>Number of Items Investigated by Dive Ops</b>				0
<b>Total SNM</b>				53.6

*Table 3: Hydrographic Survey Statistics*

The following table lists the specific dates of data acquisition for this survey:

<b>Survey Dates</b>	<b>Day of the Year</b>
09/12/2019	255

<b>Survey Dates</b>	<b>Day of the Year</b>
09/13/2019	256
11/09/2019	313
11/10/2019	314
11/11/2019	315
11/12/2019	316
11/13/2019	317
11/14/2019	318
11/24/2019	328
11/25/2019	329
12/03/2019	337
12/04/2019	338
02/23/2020	54
02/27/2020	58
02/28/2020	59
02/29/2020	60
03/01/2020	61
03/03/2020	63
03/10/2020	70
03/11/2020	71

*Table 4: Dates of Hydrography*

## **B. Data Acquisition and Processing**

### **B.1 Equipment and Vessels**

Refer to the Data Acquisition and Processing Report (DAPR) for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR are discussed in the following sections.

### B.1.1 Vessels

The following vessels were used for data acquisition during this survey:

<b>Hull ID</b>	<b><i>R/V Ocean Explorer</i></b>	<b><i>R/V H.F. Stout</i></b>
<b>LOA</b>	18 meters	9.1 meters
<b>Draft</b>	2 meters	0.76 meters

*Table 5: Vessels Used*

Most of the data collection in Survey H13315 was conducted by the R/V Ocean Explorer. The R/V H.F. Stout collected the bottom samples and a small amount of the MBES and SSS data.

### B.1.2 Equipment

The following major systems were used for data acquisition during this survey:

<b>Manufacturer</b>	<b>Model</b>	<b>Type</b>
Teledyne RESON	SeaBat 7125 SV2	MBES
EdgeTech	4200	SSS
Applanix	POS MV 320 v5	Positioning and Attitude System
AML Oceanographic	Micro SVP&T	Sound Speed System
AML Oceanographic	MicroX SV	Sound Speed System
AML Oceanographic	MicroX SV	Sound Speed System
Trimble	NetR9	Positioning System

*Table 6: Major Systems Used*

## B.2 Quality Control

### B.2.1 Crosslines

Multibeam/single beam echo sounder/side scan sonar crosslines acquired for this survey totaled 3.24% of mainscheme acquisition.



If the investigation and fill-in lines are not included in the mainscheme mileage, then the crosslines acquired for this survey totaled 4.84% of mainscheme acquisition.

Crosslines for Survey H13315 were acquired on September 12 and September 13, 2019 (DNs 255 and 256), the first days of surveying in this area. The crosslines were run approximately northeast-southwest, with mainscheme lines run perpendicular to the crosslines (Figure 2).

Agreement between crossline and mainscheme data was very good, with no geographic pattern to the magnitude of discrepancy. A difference surface was generated in CARIS HIPS to compare a surface of only crosslines to a surface of only mainscheme data, and the median difference was 0.02m. Figure 3 is a histogram showing the distribution of depth differences for all comparison grid cells considered.

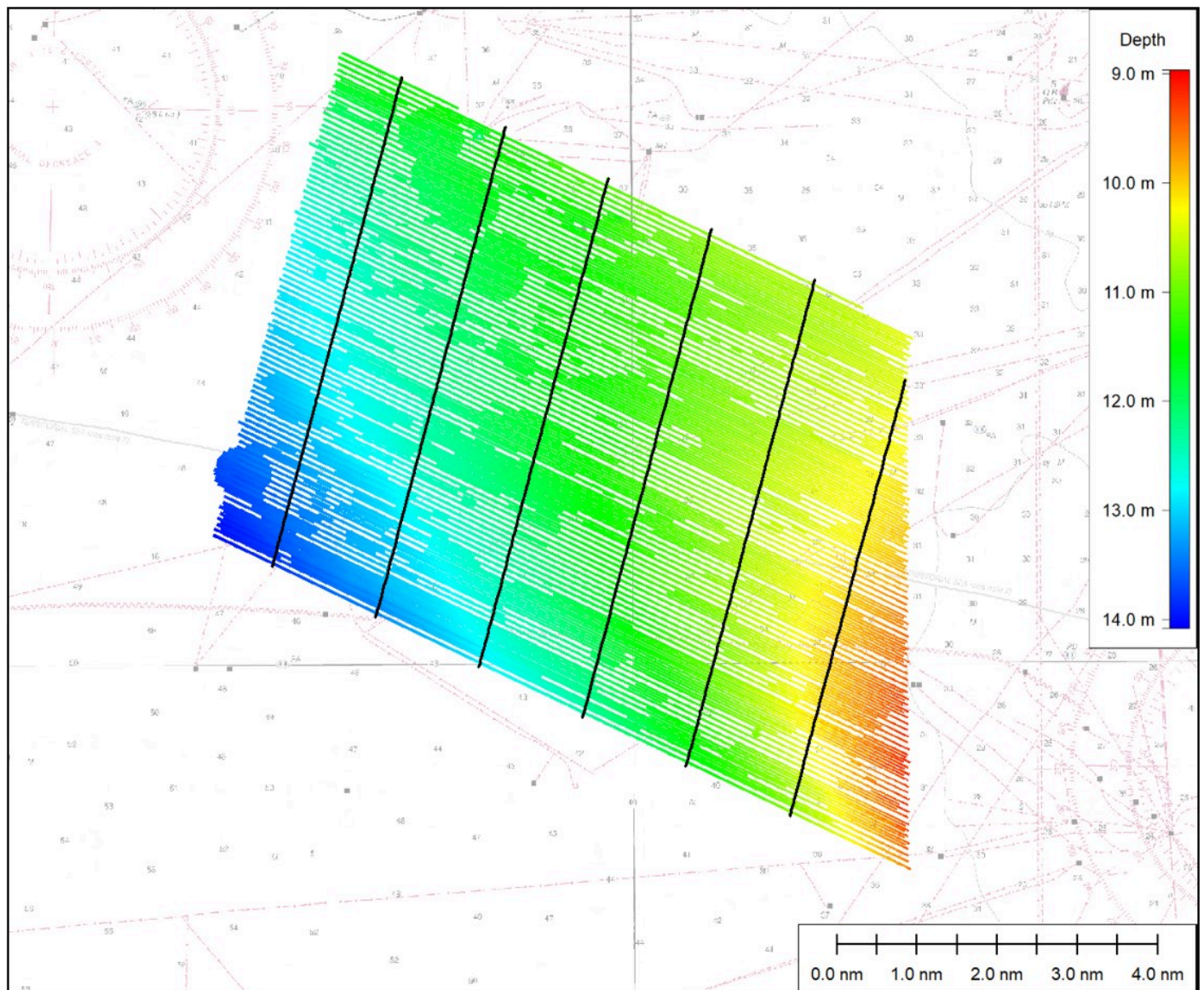
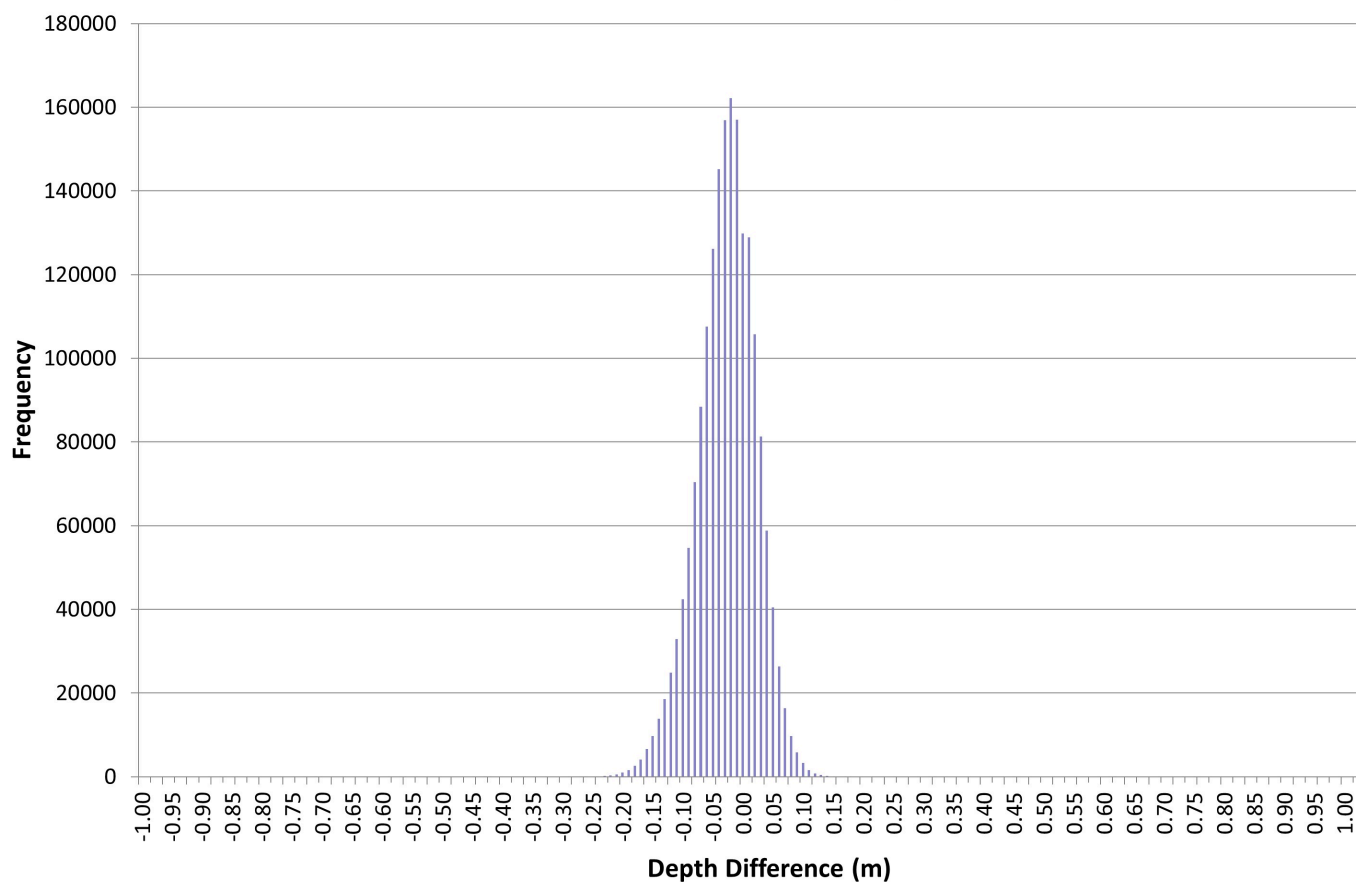


Figure 2: H13315 MBES crosslines (black) overlain on MBES survey coverage



**Depth Differences between Survey H13315 Crossline and Mainscheme Data**  
**Average : -0.0270 Median : -0.0200 Number of Samples = 1,838,258**  
**Standard Deviation : 0.0488 Percent within 2 Sigma : 94.20%**



*Figure 3: H13315 MBES crossline less mainscheme comparison statistics*

### B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

Method	Measured	Zoning
ERS via VDATUM	0 meters	14.1 centimeters

*Table 7: Survey Specific Tide TPU Values.*

Hull ID	Measured - CTD	Measured - MVP	Surface
R/V Ocean Explorer	N/A	1 meters/second	2 meters/second
R/V H.F. Stout	4 meters/second	N/A	2 meters/second

Table 8: Survey Specific Sound Speed TPU Values.

The methods used to minimize the uncertainty in the corrections to echo soundings are described in detail in the project DAPR.

The HydrOffice "QC Tools" application was used to calculate TVU QC, determined by a ratio of uncertainty to the allowable error per NOAA and IHO specifications. The finalized surface for Survey H13315 passed the uncertainty check, with 100% of the nodes meeting uncertainty standards (Figure 4).

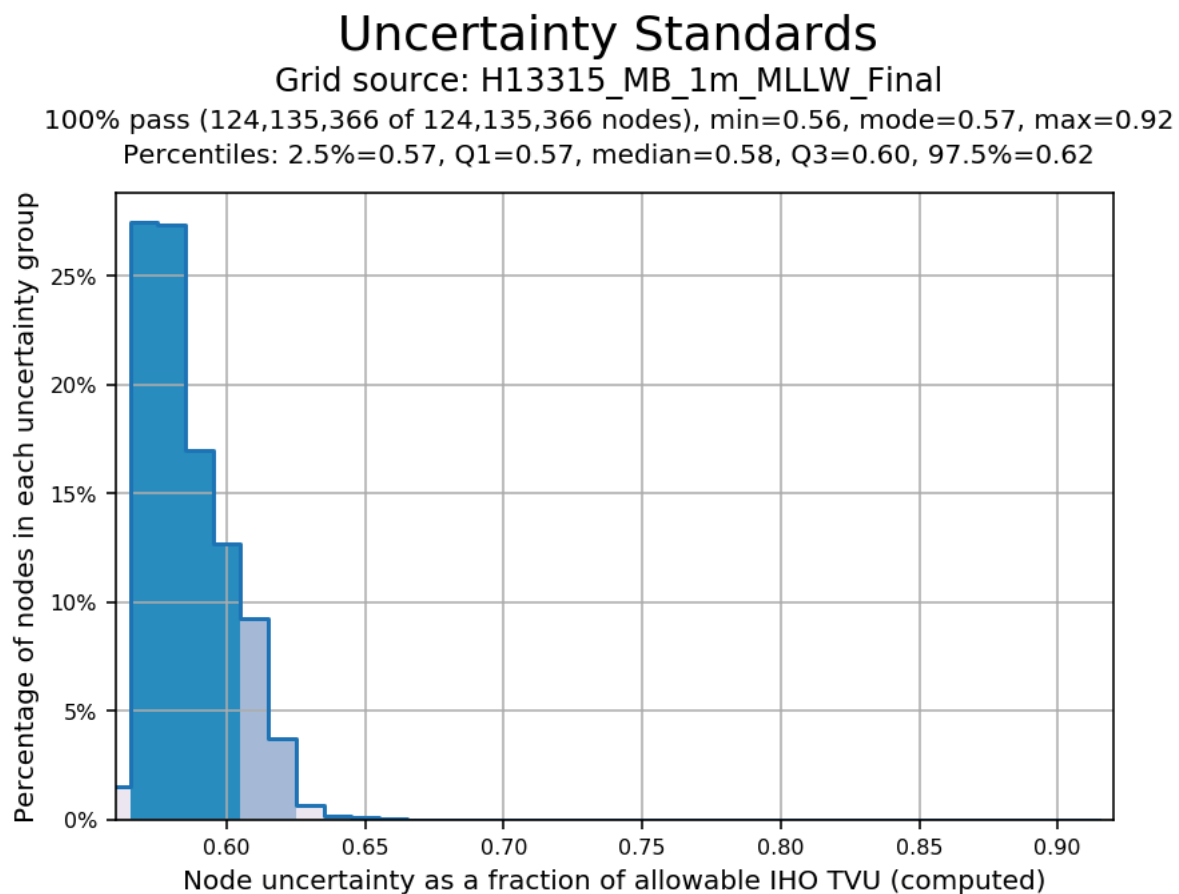


Figure 4: H13315 MBES surface uncertainty statistics

### **B.2.3 Junctions**

One prior survey and three current surveys junction with Survey H13315. Figure 5 displays the locations of the junction surveys for Project OPR-K354-KR-19, and the junctions specific to this survey are listed in Table 9.

Junction analyses were conducted by generating a difference surface in CARIS HIPS for each pair of surveys to compare the MBES surfaces where they overlap. A histogram of the depth differences was plotted to show the relative agreement of the surveyed depths, and to indicate shoaling or deepening trends by positive or negative differences. The magnitude of differences were compared to the maximum allowable TVU for the water depths in Survey H13315.

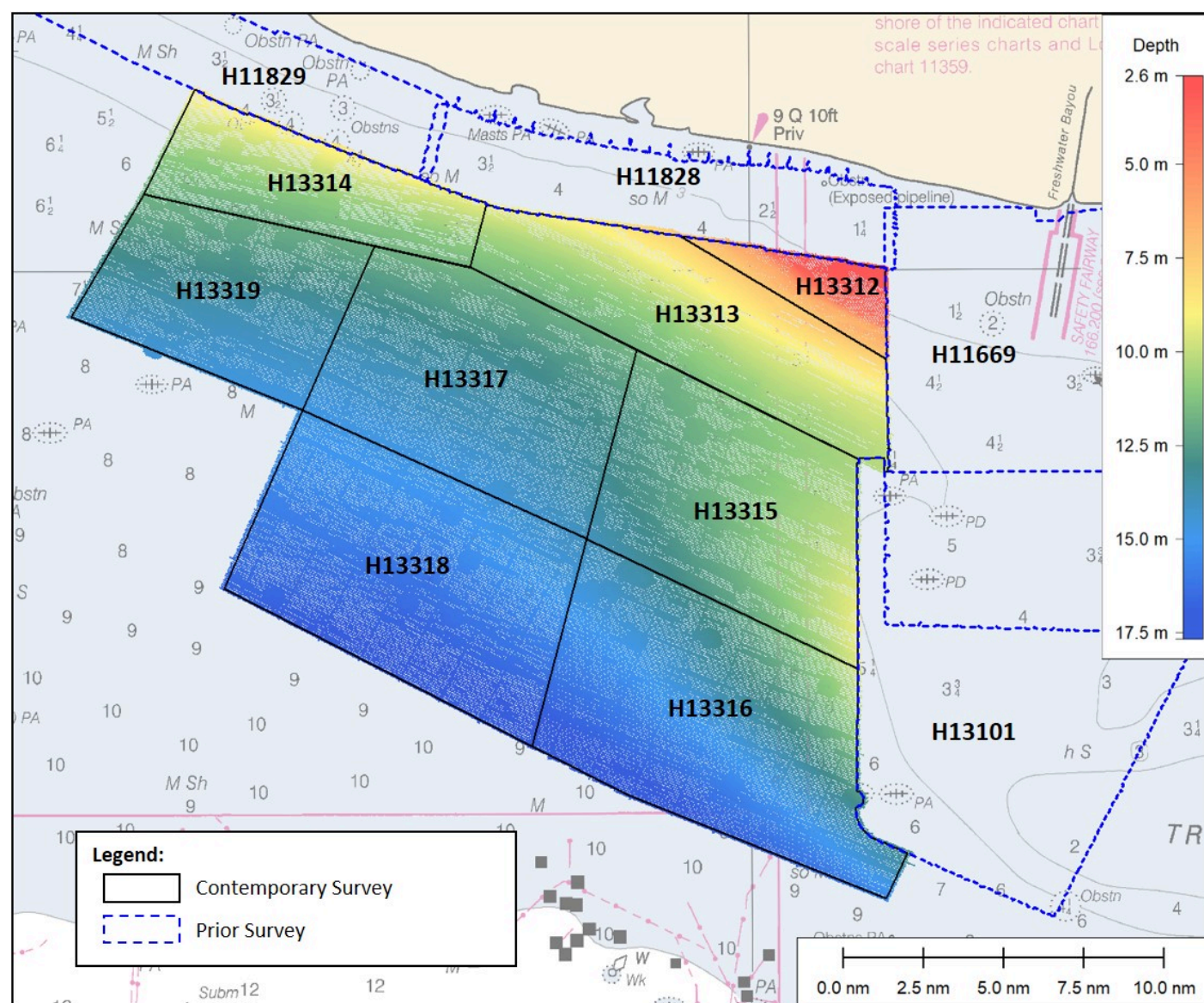


Figure 5: Survey junctions for Project OPR-K354-KR-19

The following junctions were made with this survey:

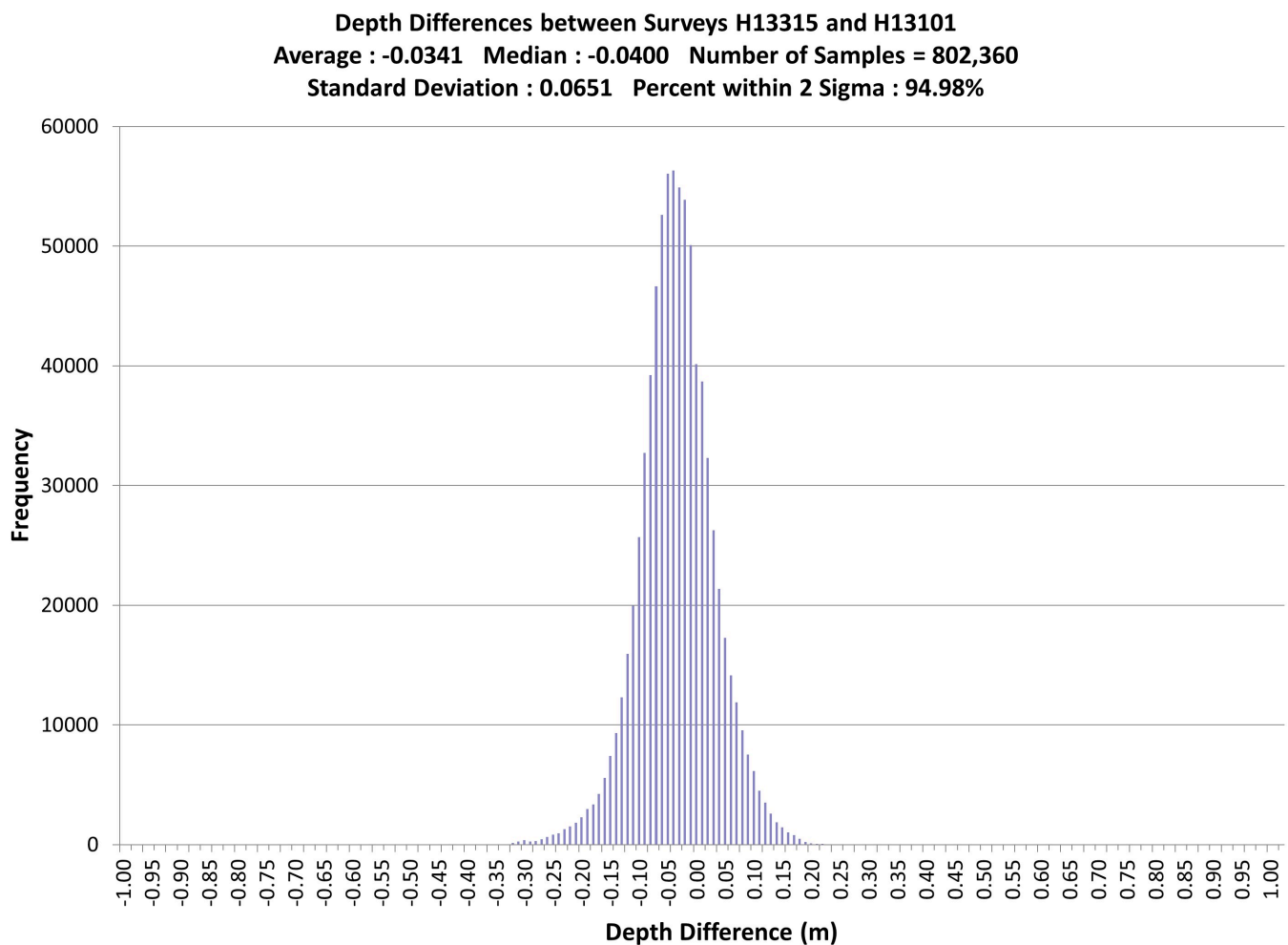
Registry Number	Scale	Year	Field Unit	Relative Location
H13101	1:40000	2018	Ocean Surveys, Inc.	E
H13313	1:40000	2019	Ocean Surveys, Inc.	N
H13316	1:40000	2019	Ocean Surveys, Inc.	S
H13317	1:40000	2019	Ocean Surveys, Inc.	W

Table 9: Junctioning Surveys

H13101

Prior Survey H13101 was conducted by Ocean Surveys in 2018. Survey H13101 junctions with the eastern border of Survey H13315, with an overlap area of approximately 12.4km long and 200m wide.

Depth discrepancies between the two surveys were minimal. All comparison cells had a difference well below the maximum allowable TVU, and the median difference was 0.04m. A histogram of the differences is shown in Figure 6.



*Figure 6: H13315 MBES less H13101 junction comparison statistics*

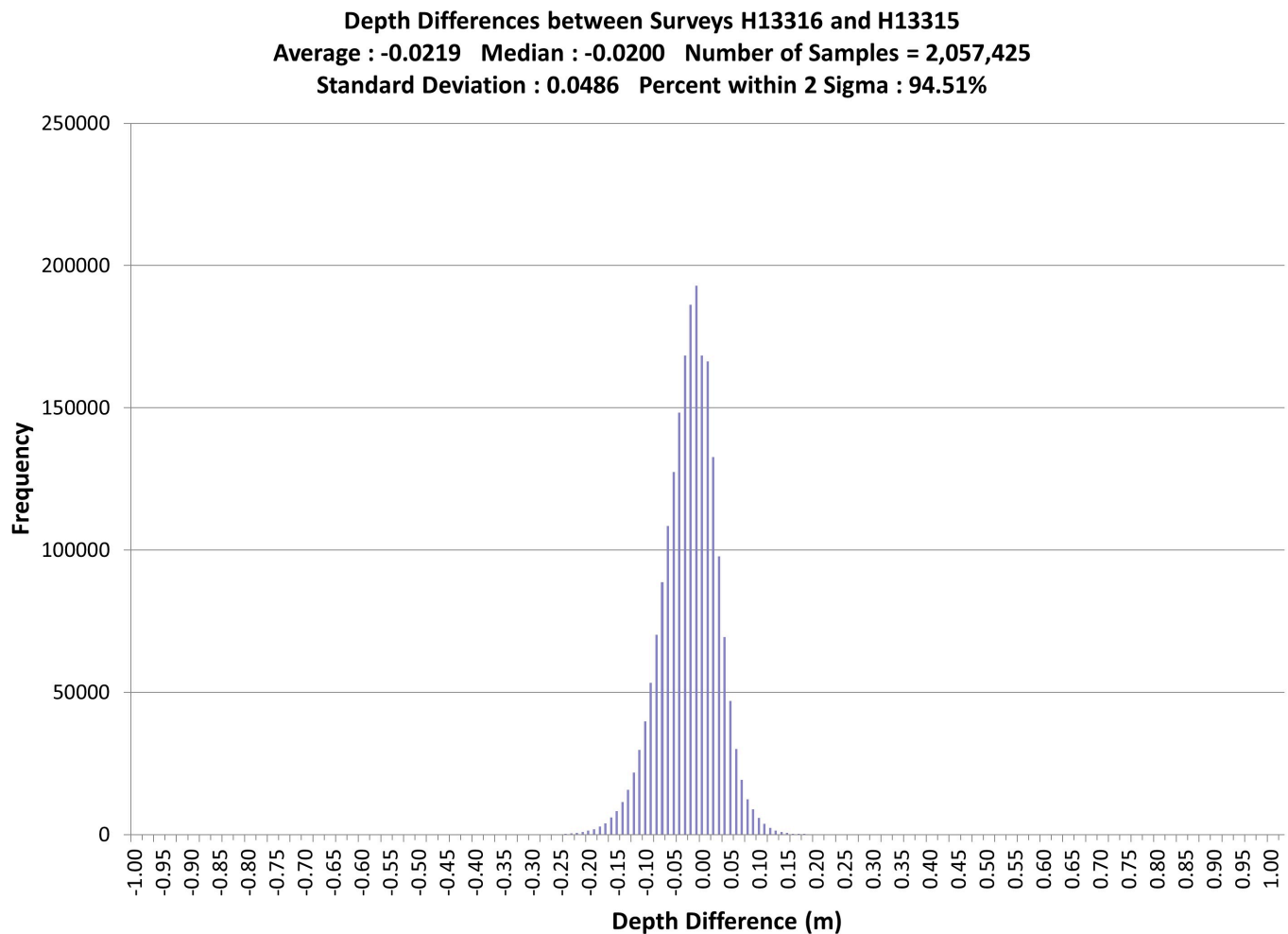
H13313

The junction between Surveys H13313 and H13315 is discussed in the DR for Survey H13313.

H13316

Current Survey H13316 junctions with the southern border of Survey H13315, with an overlap area of approximately 17.7km long and 200m to 400m wide.

Depth discrepancies between the two surveys were minimal. All comparison cells had a difference well below the maximum allowable TVU, and the median difference was 0.02m. A histogram of the differences is shown in Figure 7.

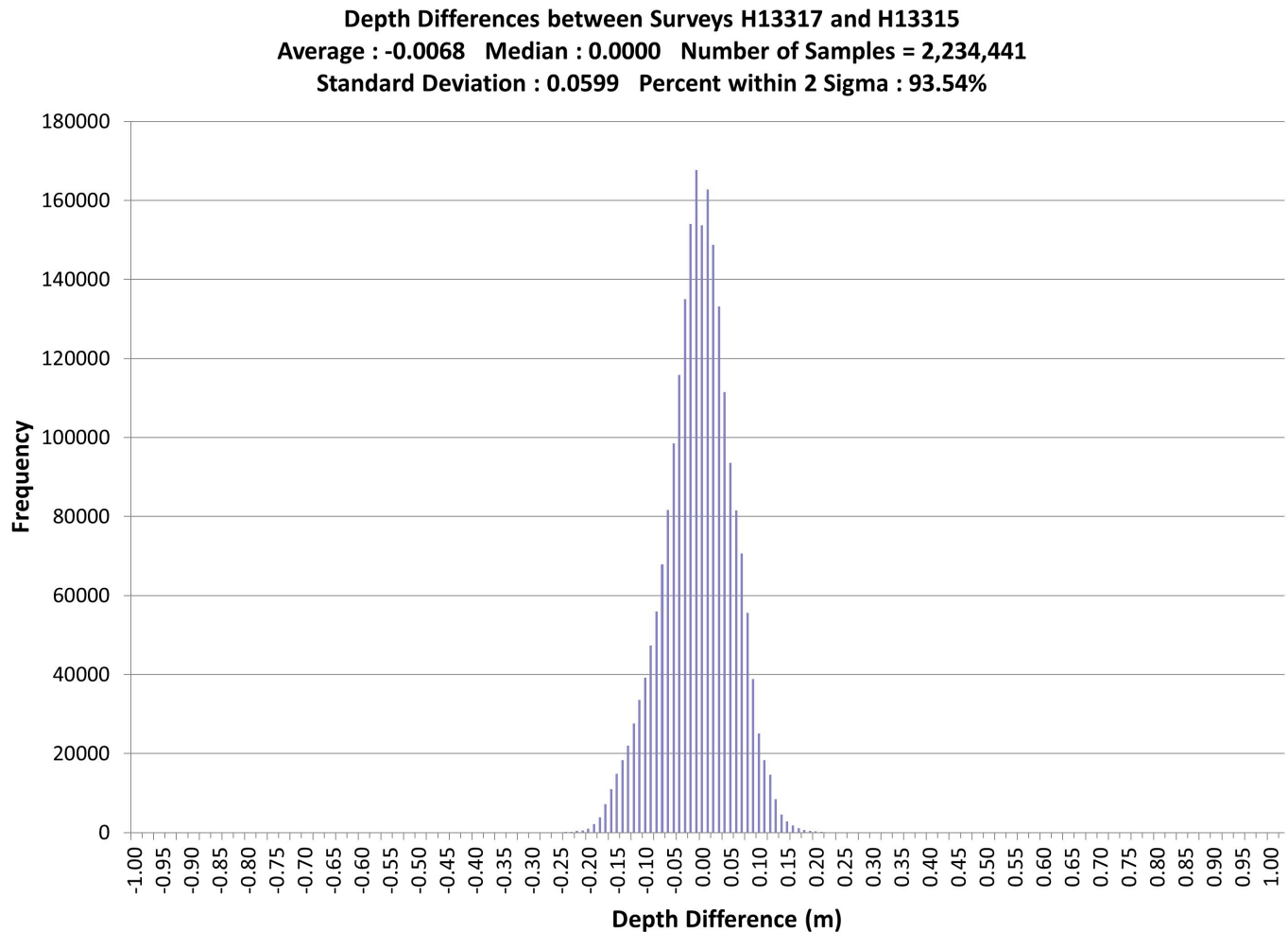


*Figure 7: H13316 MBES less H13315 junction comparison statistics*

H13317

Current Survey H13317 junctions with the western border of Survey H13315, with an overlap area of approximately 11.6km long and 350m to 450m wide, with an investigation area overlapping by 750m. Mainscheme lines for the surveys are aligned with one another, so the junction area is dense with data.

Depth discrepancies between the two surveys were minimal. All comparison cells had a difference well below the maximum allowable TVU, and the median difference was 0.00m. A histogram of the differences is shown in Figure 8.



*Figure 8: H13317 MBES less H13315 junction comparison statistics*

#### **B.2.4 Sonar QC Checks**

Sonar system quality control checks were conducted as detailed in the quality control section of the DAPR.



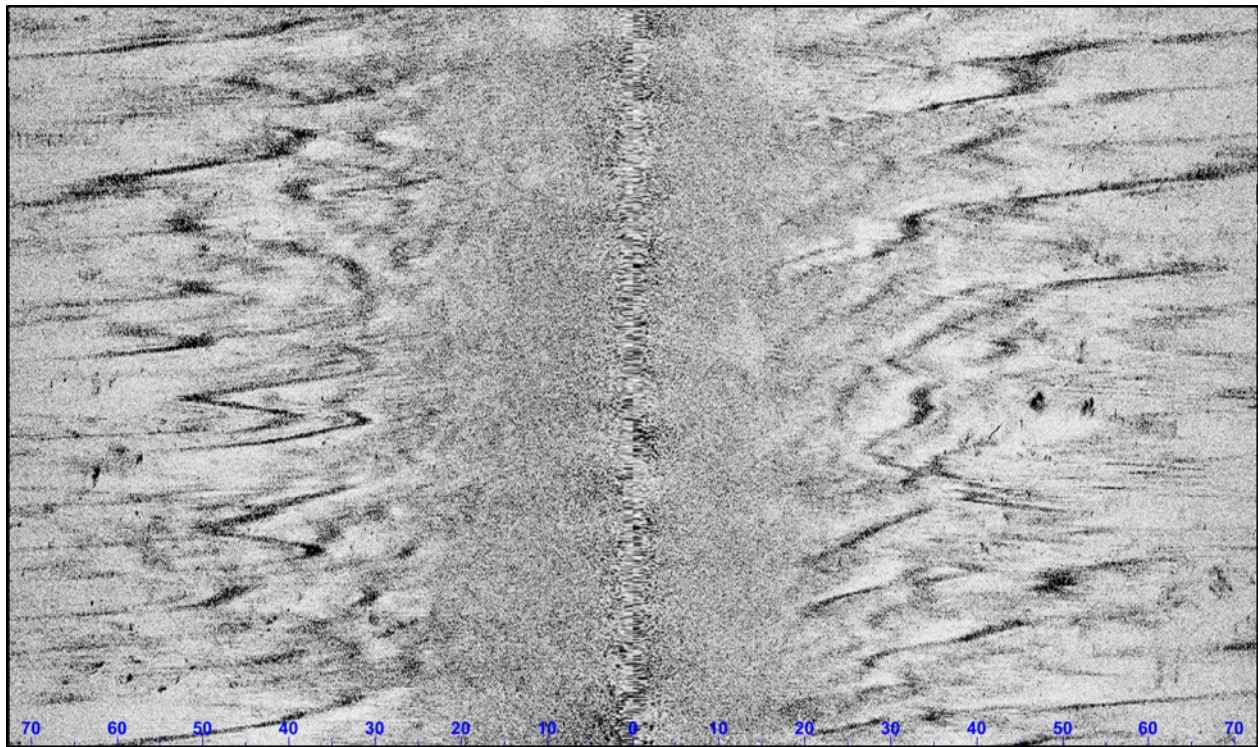
### B.2.5 Equipment Effectiveness

There were no conditions or deficiencies that affected equipment operational effectiveness.

### B.2.6 Factors Affecting Soundings

#### SSS Refraction

Dynamic sound speed changes affected the SSS imagery at times, causing refraction in the outer ranges of the SSS swath (Figure 9). To ensure coverage with high quality SSS data, lines with excessive refraction were rejected. If clear SSS imagery from adjacent lines was insufficient to cover the area of refraction, portions of the line were re-run.



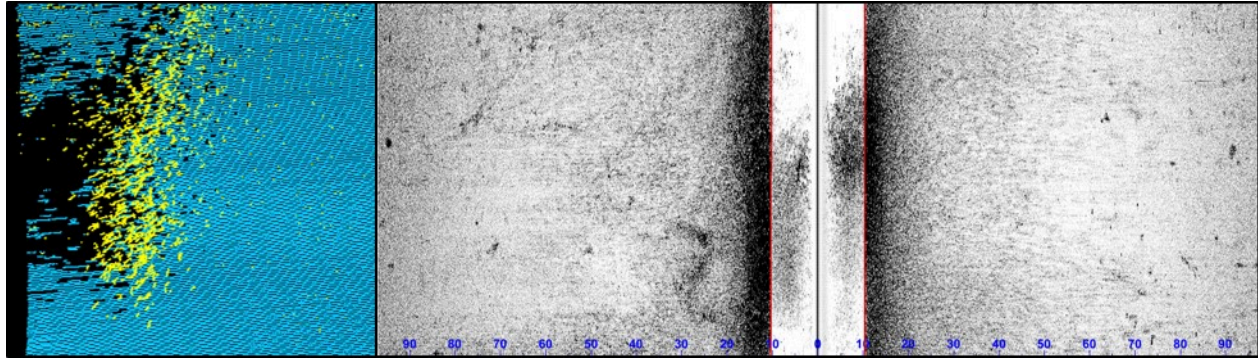
*Figure 9: SSS imagery showing refraction.*

#### Fish in SSS Imagery and MBES Data

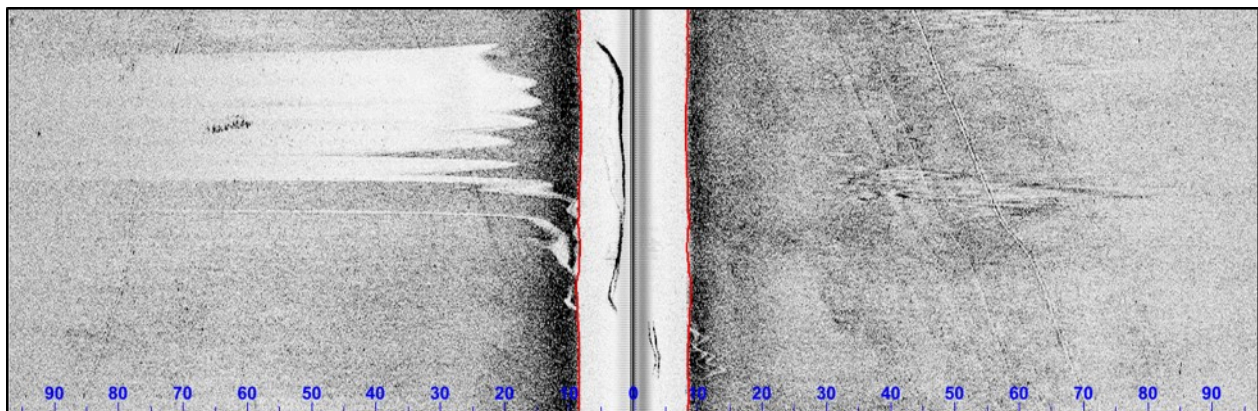
An abundance of fish and marine sea life were seen in the SSS and MBES data, either as lone swimmers or in schools (Figures 10 and 11). In cases where large shadows in the SSS imagery or gaps in the MBES



data were created by schools of fish or dolphins, additional coverage was obtained to ensure no significant features were located in these fish and dolphin shadows.



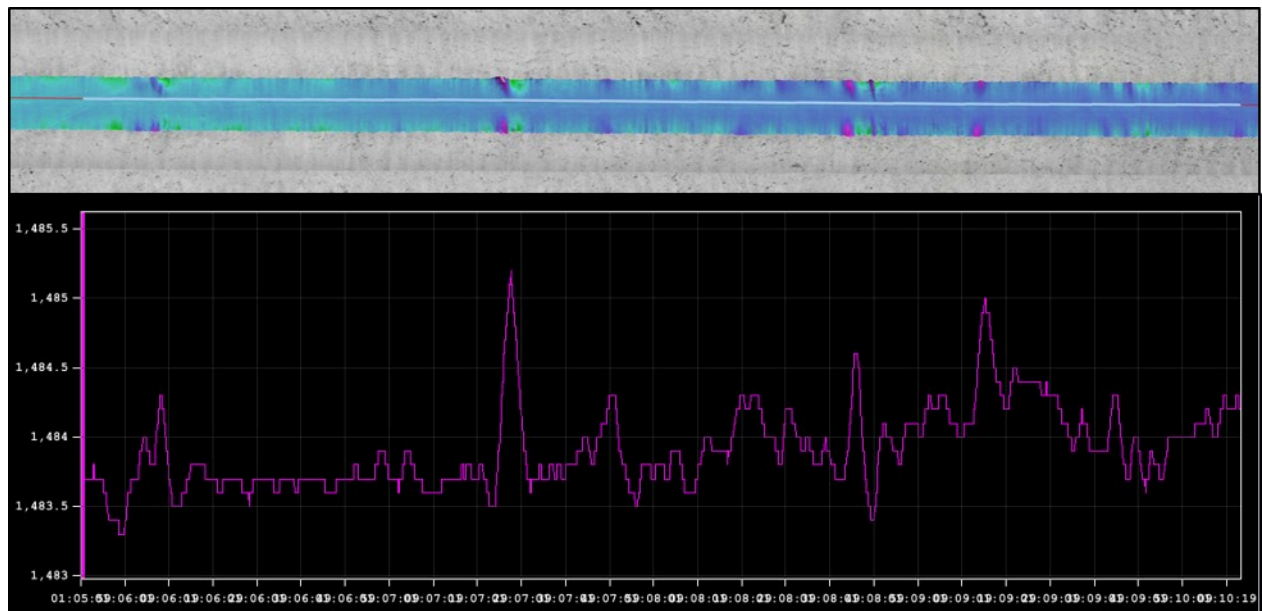
*Figure 10: MBES (left) and SSS (right) images showing a school of fish and the acoustic shadow it casts in each dataset. Rejected soundings are colored yellow.*



*Figure 11: SSS image showing dolphins and the acoustic shadow they cast.*

### MBES Refraction Artifacts

At various times throughout the survey time period (September 2019 to March 2020) OSI observed short period depth undulations in the outer beams of the MBES data. These localized artifacts were caused by refraction from a large and variable near surface speed of sound gradient. These refraction artifact areas are most prevalent from January to March 2020, particularly after a strong north wind drove cool fresh water from the coastal marshes into the Gulf of Mexico, less frequent artifacts were observed during September to December 2019. The MBES data in these areas were rejected, resulting in a narrower MBES swath. The remaining high-quality MBES data covers the SSS nadir gap which fulfills the survey coverage requirements. The SSS fish was flown below the gradient and SSS imagery was unaffected.



*Figure 12: Example MBES Refraction Artifacts: MBES/SSS plan view (top) with associated sound speed time series from the AML sensor at the MBES head (bottom).*

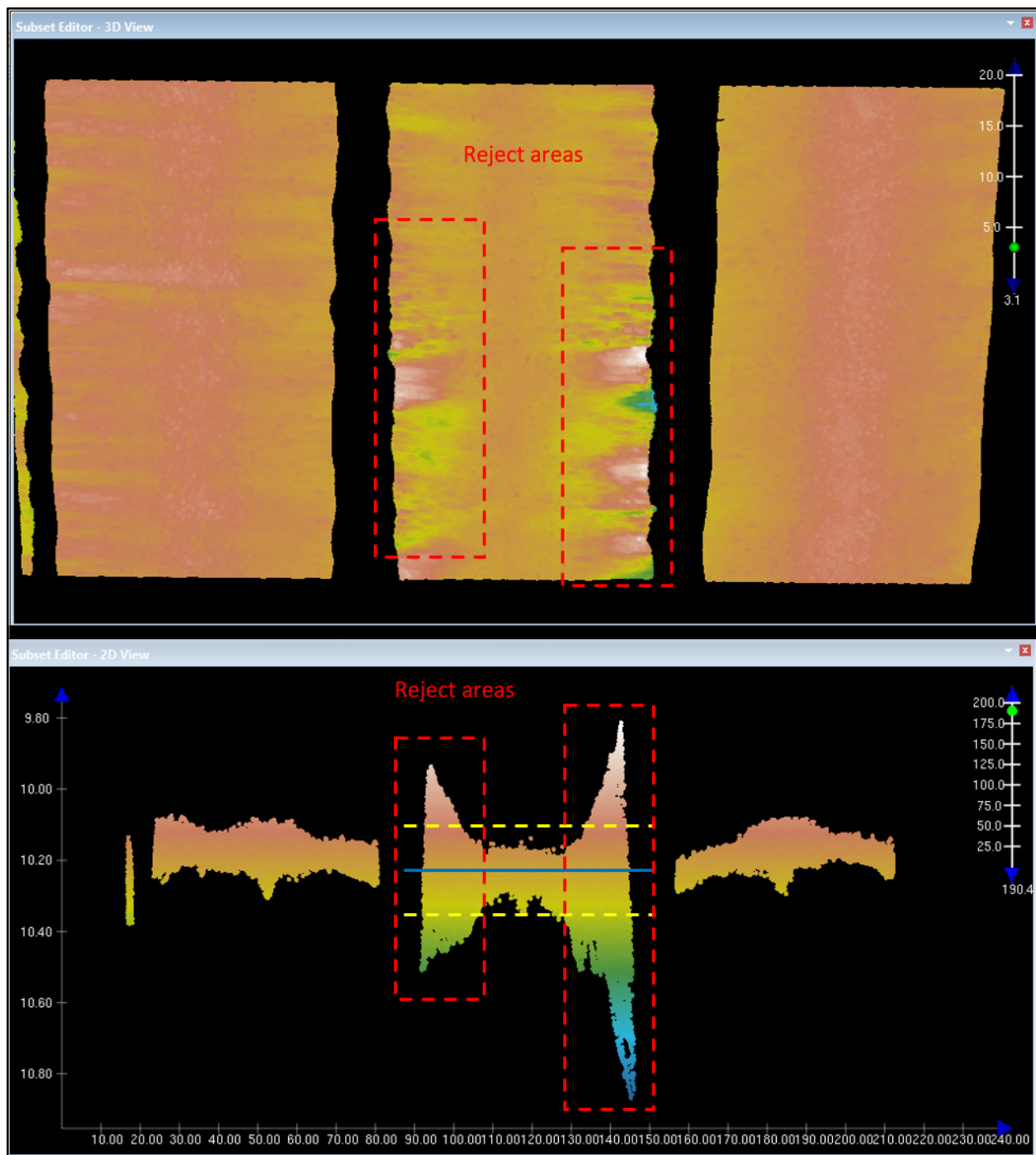


Figure 13: Example MBES Refraction Artifacts: Plan (top) and profile (bottom) views show refraction areas where outer-beam MBES data were rejected.

### **B.2.7 Sound Speed Methods**

Sound Speed Cast Frequency: On board the R/V Ocean Explorer, sound speed profile data were acquired with the AML MVP30 approximately every 15 minutes, as documented in the DAPR.

All MBES lines were sound speed corrected using the CARIS HIPS "Nearest in Time" method.

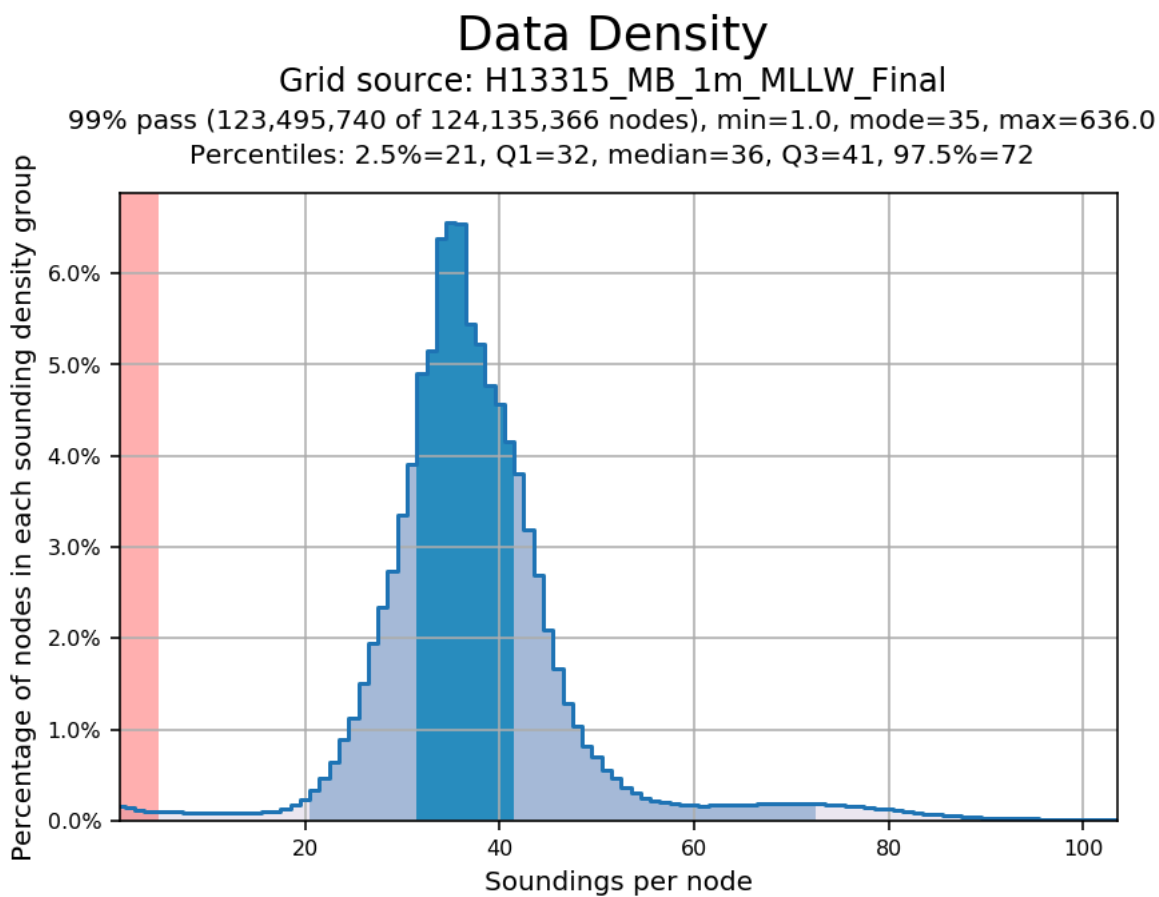
OSI submitted H13315 sound speed data in NetCDF format to the National Centers for Environmental Information (NCEI) on March 18, 2020 via the S2N tool. NCEI assigned the Accession Number 0209229 to the data. Correspondence regarding the NCEI data submission is included in Appendix II.

### **B.2.8 Coverage Equipment and Methods**

Survey H13315 was conducted to achieve Complete Coverage, using 100% SSS coverage with concurrent MBES (Option B; HSSD Section 5.2.2.3). All potentially significant features located by mainscheme SSS or MBES were also developed with MBES data to meet the Complete Coverage Multibeam requirements.

For single-resolution surfaces, HSSD Section 5.2.2.3 specifies a grid resolution of 1m for depths less than 20m, which covers all water depths of Survey H13315.

The HydrOffice "QC Tools" application was used to evaluate the density of the 1m finalized grid for Survey H13315. The data density plot (Figure 14) shows that the finalized surface for H13315 meets the density coverage requirements, with 99% of nodes having 5 or more soundings.



*Figure 14: H13315 MBES density statistics*

## B.3 Echo Sounding Corrections

### B.3.1 Corrections to Echo Soundings

All data reduction procedures conform to those detailed in the DAPR.

### B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

## B.4 Backscatter

Backscatter data for this survey were acquired but not processed. All equipment and survey methods were used as detailed in the DAPR.

## B.5 Data Processing

### B.5.1 Primary Data Processing Software

The following Feature Object Catalog was used: NOAA Profile Version 2019.

### B.5.2 Surfaces

The following surfaces and/or BAGs were submitted to the Processing Branch:

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13315_MB_1m_MLLW_Final.csar	CARIS Raster Surface (CUBE)	1 meters	7.438 meters - 14.181 meters	NOAA_1m	Complete MBES
H13315_MB_1m_MLLW.csar	CARIS Raster Surface (CUBE)	1 meters	8.870 meters - 14.181 meters	NOAA_1m	Complete MBES
H13315_SSSAB_1m_600kHz_1of2.tif	SSS Mosaic	1 meters	-	N/A	100% SSS
H13315_SSSAB_1m_600kHz_2of2.tif	SSS Mosaic	1 meters	-	N/A	200% SSS

*Table 10: Submitted Surfaces*

In addition to the surfaces in Table 10, a set of 0.25m SSS mosaic images were submitted in Enhanced Compressed Wavelet (ECW) format to assist with the survey review.

## C. Vertical and Horizontal Control

Additional information discussing the vertical or horizontal control for this survey can be found in the accompanying HVCR.

### C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

#### ERS Datum Transformation

The following ellipsoid-to-chart vertical datum transformation was used:

Method	Ellipsoid to Chart Datum Separation File
ERS via VDATUM	OPR-K354-KR-2019_NAD83-MLLW_xGeoid17B.csar

*Table 11: ERS method and SEP file*

### C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD 83).

The projection used for this project is Universal Transverse Mercator (UTM) Zone 15.

The following PPK methods were used for horizontal control:

- Smart Base

The following CORS Stations were used for horizontal control:

<b>HVCR Site ID</b>	<b>Base Station ID</b>
Abdalla Hall ULL	TONY
Franklin High Sch	FSHS
Eugene Island 337	DEV1
Cameron Parish Ct	CAMR
McNeese St Univ	MCNE
Amerada Pass	AMER
Calcasieu Pass	CALC

*Table 12: CORS Base Stations*

The following user installed stations were used for horizontal control:

<b>HVCR Site ID</b>	<b>Base Station ID</b>
OSI Freshwater Canal Locks	OSFL

*Table 13: User Installed Base Stations*

## **D. Results and Recommendations**

### **D.1 Chart Comparison**

Chart comparisons were conducted visually using a difference surface generated by subtracting ENC soundings from a finalized CUBE depth surface of survey MBES data. The difference surface, shown in Figure 15, represents regions of deepening with negative depth differences (cool colors), shoaling with positive depth differences (warm colors), and grey indicating areas of no significant change.

The CUBE depth surface of survey data used for this difference surface had a resolution of 10m. ENC soundings were taken from the latest editions of the charts available on the NOAA OCS website.

Local NTMs and NTMs from July 25, 2019 to March 14, 2020 were reviewed in conjunction with the chart comparison. The last NTM reviewed was No. 11, dated March 14, 2020, and the last Local NTM reviewed was notice 10/20, dated March 11, 2020. During this time 2 notices were made concerning platforms in Survey H13315. One platform was reported to have an inoperable sound signal in Notice 07/20, and returned to watching properly in Notice 10/20. Another platform was listed as having the light extinguished, as of Notice 43/18.



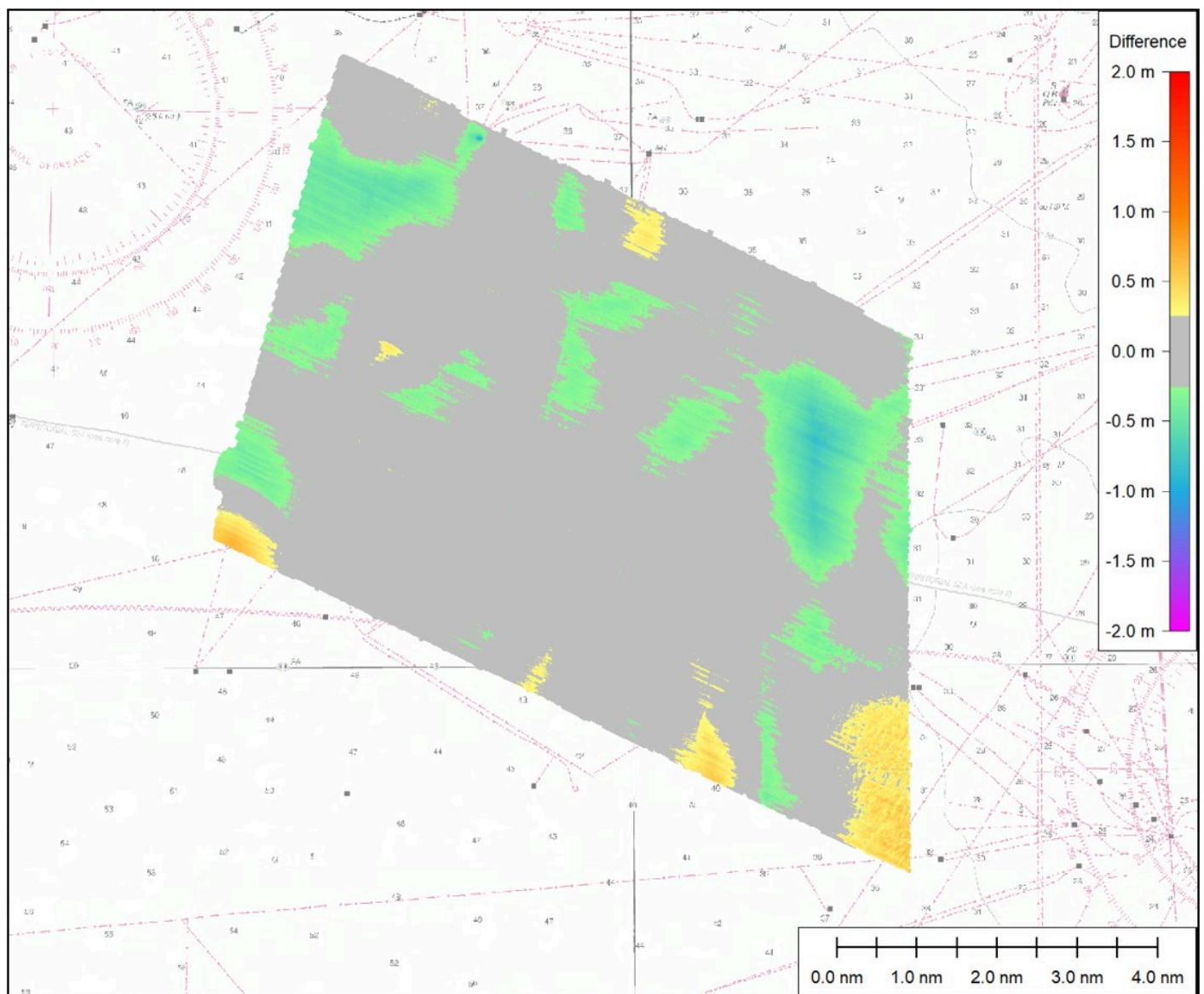


Figure 15: H13315 MBES less ENC charted depths surface comparison

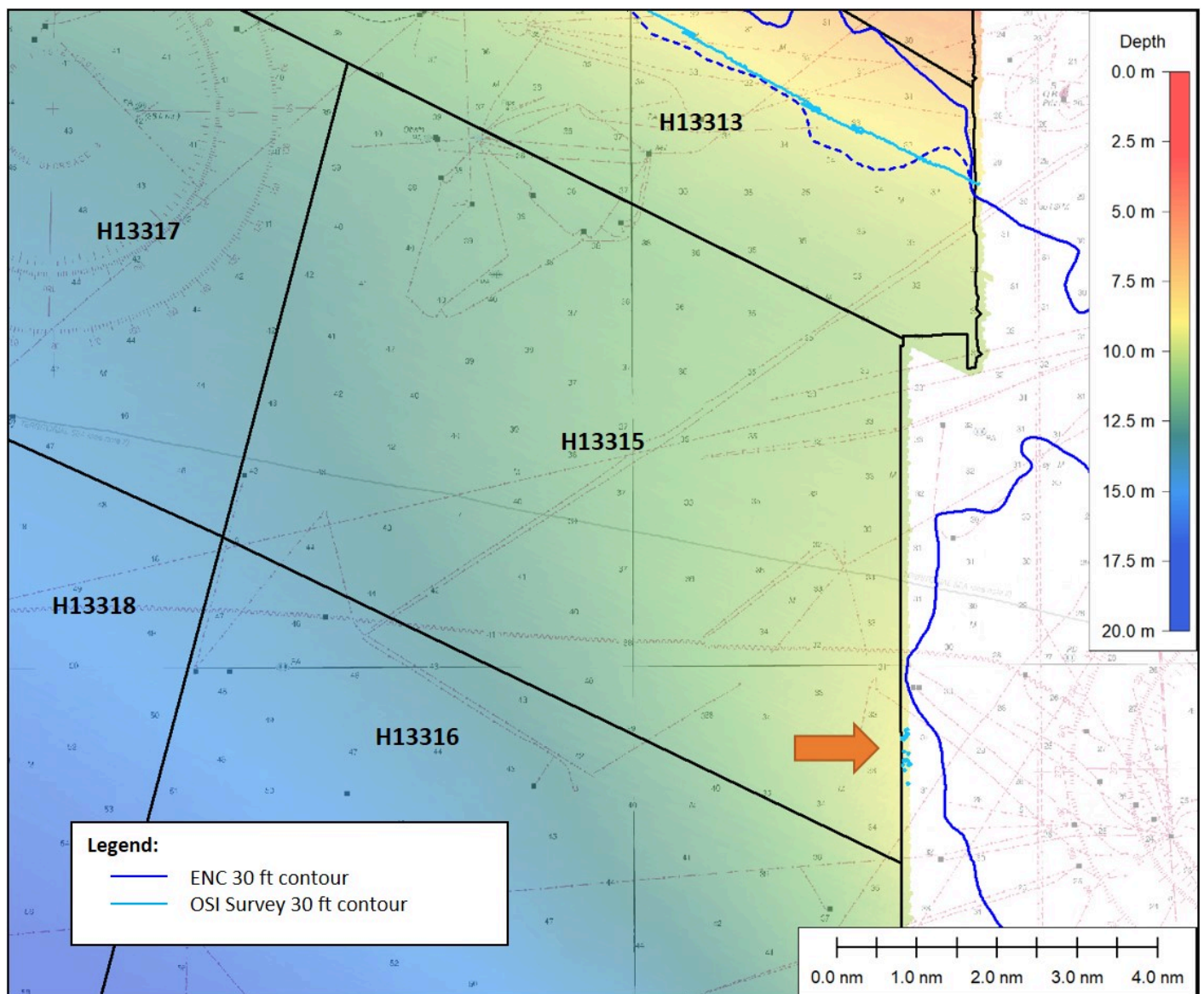


Figure 16: Charted contours compared to contours drawn from H13315 surveyed soundings

### D.1.1 Electronic Navigational Charts

The following are the largest scale ENC's, which cover the survey area:

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US4LA14M	1:80000	26	12/09/2019	02/28/2020	NO
US4LA15M	1:80000	34	03/05/2020	03/05/2020	NO

*Table 14: Largest Scale ENC's*

#### US4LA14M

ENC US4LA14M covers the western part of Survey H13315, approximately three-quarters of the survey area. Depths were surveyed similar to charted depths for most of the survey area, with a few patches of shoaling or deepening of less than 1m in magnitude (Figure 15). No contours were charted or surveyed within the area covered by US4LA14M.

#### US4LA15M

ENC US4LA15M covers the eastern quarter of Survey H13315. Depths were surveyed similar to charted depths for most of the survey area, with a few patches of shoaling or deepening of less than 1m in magnitude (Figure 15). The charted 30-foot contour is just within the survey limits for a short section of the eastern border, where OSI surveyed data shows the contour south of its charted position (Figure 16).

### D.1.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

### D.1.3 Charted Features

There were 2 charted features within Survey H13315, a wreck and an obstruction, both labeled "PA." Both the wreck and the obstruction were disproved.

### D.1.4 Uncharted Features

Within Survey H13315, there was 1 uncharted obstruction that was not addressed as a DTON.

### **D.1.5 Shoal and Hazardous Features**

There were 5 DTONs submitted for Survey H13315. Of these DTONs, 1 was an uncharted platform and the other 4 were submerged obstructions. There were no other potentially hazardous features surveyed.

### **D.1.6 Channels**

No channels exist for this survey. There are no designated anchorages, precautionary areas, safety fairways, traffic separation schemes, pilot boarding areas, or channel and range lines within the survey limits.

### **D.1.7 Bottom Samples**

There were 9 bottom samples collected in Survey H13315. All bottom samples were primarily mud. See the FFF for further details and images of each sample.

## **D.2 Additional Results**

### **D.2.1 Shoreline**

Shoreline was not assigned in the Hydrographic Survey Project Instructions or Statement of Work.

### **D.2.2 Aids to Navigation**

No Aids to Navigation (ATONs) exist for this survey.

### **D.2.3 Overhead Features**

No overhead features exist for this survey.

### **D.2.4 Submarine Features**

There were 46 submarine pipeline features and 1 submarine cable assigned in the CSF for Survey H13315. Prior to field operations, OSI also reviewed pipeline data from the Bureau of Ocean Energy Management (BOEM) to identify any potential uncharted pipelines. Within Survey H13315, BOEM data included 9 additional pipelines. There were no pipelines observed in the survey data as elevated or exposed, and the submarine cable was also not observed.

BOEM pipeline data were obtained as a shape file "ppl\_arcs.shp" from the BOEM website (<https://www.data.boem.gov/Main/Mapping.aspx>) and re-projected as a .DXF file

“BOEM\_Pipelines\_UTM\_15N\_NAD83\_Meters.dxf.” The data reviewed prior to surveying were downloaded on August 21, 2019, and data used for final chart comparisons were downloaded on March 12, 2020. The most recent BOEM files are included with the digital deliverables for Survey H13315.

### **D.2.5 Platforms**

The CSF for Survey H13315 included 8 assigned platforms, and a review of BOEM platform data identified an additional 37 potentially uncharted BOEM platforms. There were 3 charted platforms present within Survey H13315, and 1 large platform that was not charted but was represented in the BOEM data. That platform was submitted as a DTON. See the FFF for details.

BOEM platform data were obtained as a shape file "platform.shp" from the BOEM website (<https://www.data.boem.gov/Main/Mapping.aspx>) and re-projected as a .DXF file “BOEM\_Platforms\_UTM\_15N\_NAD83\_Meters.dxf.” The data reviewed prior to surveying were downloaded on August 21, 2019, and data used for final chart comparisons were downloaded on March 12, 2020. The most recent BOEM files are included with the digital deliverables for Survey H13315.

### **D.2.6 Ferry Routes and Terminals**

No ferry routes or terminals exist for this survey.

### **D.2.7 Abnormal Seafloor and/or Environmental Conditions**

No abnormal seafloor and/or environmental conditions exist for this survey.

### **D.2.8 Construction and Dredging**

No present or planned construction or dredging exist within the survey limits.

### **D.2.9 New Survey Recommendation**

No new surveys or further investigations are recommended for this area.

### **D.2.10 Inset Recommendation**

No new insets are recommended for this area.

## E. Approval Sheet

As Chief of Party, field operations for this hydrographic survey were conducted under my direct supervision, with frequent personal checks of progress and adequacy. I have reviewed the attached survey data and reports.

All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to the Processing Branch.

The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys Specifications and Deliverables (2019), Field Procedures Manual (2014), Project Instructions, and all HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Descriptive Report.

Approver Name	Approver Title	Approval Date	Signature
John R. Bean	Chief of Party	04/14/2020	John R. Bean 2020.04.14 16:26:38 -04'00'
David T. Somers	Data Processing Manager	04/13/2020	David T. Somers 2020.04.14 16:27:03 -04'00'

## F. Table of Acronyms

<b>Acronym</b>	<b>Definition</b>
<b>AHB</b>	Atlantic Hydrographic Branch
<b>AST</b>	Assistant Survey Technician
<b>ATON</b>	Aid to Navigation
<b>AWOIS</b>	Automated Wreck and Obstruction Information System
<b>BAG</b>	Bathymetric Attributed Grid
<b>BASE</b>	Bathymetry Associated with Statistical Error
<b>CO</b>	Commanding Officer
<b>CO-OPS</b>	Center for Operational Products and Services
<b>CORS</b>	Continuously Operating Reference Station
<b>CTD</b>	Conductivity Temperature Depth
<b>CEF</b>	Chart Evaluation File
<b>CSF</b>	Composite Source File
<b>CST</b>	Chief Survey Technician
<b>CUBE</b>	Combined Uncertainty and Bathymetry Estimator
<b>DAPR</b>	Data Acquisition and Processing Report
<b>DGPS</b>	Differential Global Positioning System
<b>DP</b>	Detached Position
<b>DR</b>	Descriptive Report
<b>DTON</b>	Danger to Navigation
<b>ENC</b>	Electronic Navigational Chart
<b>ERS</b>	Ellipsoidal Referenced Survey
<b>ERTDM</b>	Ellipsoidally Referenced Tidal Datum Model
<b>ERZT</b>	Ellipsoidally Referenced Zoned Tides
<b>FFF</b>	Final Feature File
<b>FOO</b>	Field Operations Officer
<b>FPM</b>	Field Procedures Manual
<b>GAMS</b>	GPS Azimuth Measurement Subsystem
<b>GC</b>	Geographic Cell
<b>GPS</b>	Global Positioning System
<b>HIPS</b>	Hydrographic Information Processing System
<b>HSD</b>	Hydrographic Surveys Division

<b>Acronym</b>	<b>Definition</b>
<b>HSSD</b>	Hydrographic Survey Specifications and Deliverables
<b>HSTB</b>	Hydrographic Systems Technology Branch
<b>HSX</b>	Hypack Hysweep File Format
<b>HTD</b>	Hydrographic Surveys Technical Directive
<b>HVCR</b>	Horizontal and Vertical Control Report
<b>HVF</b>	HIPS Vessel File
<b>IHO</b>	International Hydrographic Organization
<b>IMU</b>	Inertial Motion Unit
<b>ITRF</b>	International Terrestrial Reference Frame
<b>LNM</b>	Linear Nautical Miles
<b>MBAB</b>	Multibeam Echosounder Acoustic Backscatter
<b>MCD</b>	Marine Chart Division
<b>MHW</b>	Mean High Water
<b>MLLW</b>	Mean Lower Low Water
<b>NAD 83</b>	North American Datum of 1983
<b>NALL</b>	Navigable Area Limit Line
<b>NTM</b>	Notice to Mariners
<b>NMEA</b>	National Marine Electronics Association
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NOS</b>	National Ocean Service
<b>NRT</b>	Navigation Response Team
<b>NSD</b>	Navigation Services Division
<b>OCS</b>	Office of Coast Survey
<b>OMAO</b>	Office of Marine and Aviation Operations (NOAA)
<b>OPS</b>	Operations Branch
<b>MBES</b>	Multibeam Echosounder
<b>NWLON</b>	National Water Level Observation Network
<b>PDBS</b>	Phase Differencing Bathymetric Sonar
<b>PHB</b>	Pacific Hydrographic Branch
<b>POS/MV</b>	Position and Orientation System for Marine Vessels
<b>PPK</b>	Post Processed Kinematic
<b>PPP</b>	Precise Point Positioning
<b>PPS</b>	Pulse per second



<b>Acronym</b>	<b>Definition</b>
<b>PRF</b>	Project Reference File
<b>PS</b>	Physical Scientist
<b>RNC</b>	Raster Navigational Chart
<b>RTK</b>	Real Time Kinematic
<b>RTX</b>	Real Time Extended
<b>SBES</b>	Singlebeam Echosounder
<b>SBET</b>	Smooth Best Estimate and Trajectory
<b>SNM</b>	Square Nautical Miles
<b>SSS</b>	Side Scan Sonar
<b>SSSAB</b>	Side Scan Sonar Acoustic Backscatter
<b>ST</b>	Survey Technician
<b>SVP</b>	Sound Velocity Profiler
<b>TCARI</b>	Tidal Constituent And Residual Interpolation
<b>TPU</b>	Total Propagated Uncertainty
<b>USACE</b>	United States Army Corps of Engineers
<b>USCG</b>	United States Coast Guard
<b>UTM</b>	Universal Transverse Mercator
<b>XO</b>	Executive Officer
<b>ZDF</b>	Zone Definition File

**From:** [John R. Bean](#)  
**To:** ["ocs.ndb@noaa.gov"](#); ["Coast.Pilot@noaa.gov"](#)  
**Cc:** ["Douglas Wood - NOAA Federal"](#); ["Christy Fandel - NOAA Federal"](#)  
**Subject:** OPR-K354-KR-19\_Approaches to Louisiana Coast, Coast Pilot Review Report  
**Date:** Friday, March 13, 2020 11:32:00 AM  
**Attachments:** [OPR-K354-KR-19 Coast Pilot Review Report.pdf](#)

---

Good morning,

Please see the attached Coast Pilot Review Report for NOAA contract hydrographic survey OPR-K354-KR-19\_Approaches to Louisiana Coast. Please contact me should you have any questions.

Best Regards,

**John R. Bean, MS, CH**  
Manager-Hydrographic Surveys

**OCEAN SURVEYS, INC.**  
129 Mill Rock Road East, Old Saybrook, CT 06475  
**T** 860-388-4631 x148 **M** 860-710-8653 **F** 860-388-5879  
[jrb@oceansurveys.com](mailto:jrb@oceansurveys.com) | [www.oceansurveys.com](http://www.oceansurveys.com)

**From:** [Douglas Wood - NOAA Federal](#)  
**To:** [John R. Bean](#)  
**Cc:** [ocs.ndb@noaa.gov](mailto:ocs.ndb@noaa.gov); [Coast.Pilot@noaa.gov](mailto:Coast.Pilot@noaa.gov); [Christy Fandel - NOAA Federal](#)  
**Subject:** Re: OPR-K354-KR-19\_Approaches to Louisiana Coast, Coast Pilot Review Report  
**Date:** Friday, March 13, 2020 12:44:18 PM

---

Thank you John,

I have read it over and forwarded it to our *Coast Pilot* person.

Thank you for reporting on some of the canals and waterways which were outside of the survey area. This can be helpful to future mariners.

Doug

On Fri, Mar 13, 2020 at 11:32 AM John R. Bean <[jrb@oceansurveys.com](mailto:jrb@oceansurveys.com)> wrote:

Good morning,

Please see the attached Coast Pilot Review Report for NOAA contract hydrographic survey OPR-K354-KR-19\_Approaches to Louisiana Coast. Please contact me should you have any questions.

Best Regards,

**John R. Bean, MS, CH**

Manager-Hydrographic Surveys

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--

Douglas Wood  
Physical Scientist  
Hydrographic Surveys Division

**From:** [David Somers](#)  
**To:** [ahb.dton@noaa.gov](mailto:ahb.dton@noaa.gov); [Douglas Wood - NOAA Federal](#); [Christina Fandel - NOAA Federal](#); [Kathryn Pridgen - NOAA Federal](#)  
**Cc:** [John R. Bean](#); [George Reynolds](#)  
**Subject:** H13315 DtoN 1  
**Date:** Thursday, February 20, 2020 9:46:48 AM  
**Attachments:** [H13315 DTON 1 Platform.zip](#)

---

Good morning,

OSI has compiled and attached a DtoN feature file along with supporting imagery for survey H13315.

H13315 DtoN 1 - Platform

Please let me know if OSI can provide any additional information regarding these DtoNs.

Regards,  
Dave

**David Somers**  
Data Processing Manager

**OCEAN SURVEYS, INC.**  
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**From:** [Castle Parker - NOAA Federal](#)  
**To:** [OCS NDB - NOAA Service Account](#)  
**Cc:** [AHB Chief - NOAA Service Account](#); [Douglas Wood - NOAA Federal](#); [Christina Fandel - NOAA Federal](#); [John R. Bean](#); [David Somers](#); [George Reynolds](#)  
**Subject:** H13315 DtoN #1 Submission to NDB  
**Date:** Thursday, February 20, 2020 11:20:04 AM  
**Attachments:** [H13315 DtoNs 1.zip](#)

---

Good day,

Please find attached compressed file for H13315 DtoN Report #1 containing three uncharted offshore platforms. The uncharted platforms are located offshore and south of Flat Lake and Rollover Bayou, LA. The submission to Nautical Data Branch (NDB) and Marine Chart Division (MCD) is intended for chart application.

The information originates from a NOAA contract field unit and was submitted to the Atlantic Hydrographic Branch (AHB) for review, processing, and submission. The contents of the attached file were generated at AHB. The attached file contains a DtoN Letter (PDF), associated image files, and a Pydro XML file.

If you have any questions, please contact me via email or phone 757-364-7472. Thank you for your assistance with this matter.

Regards,  
Gene

*Castle Eugene Parker  
NOAA Office of Coast Survey  
Atlantic Hydrographic Branch  
Hydrographic Team Lead / Physical Scientist  
[castle.e.parker@noaa.gov](mailto:castle.e.parker@noaa.gov)  
office (757) 364-7472*

**From:** [OCS NDB - NOAA Service Account](#)  
**To:** [Castle Parker - NOAA Federal](#)  
**Cc:** [AHB Chief - NOAA Service Account](#); [Douglas Wood - NOAA Federal](#); [Christina Fandel - NOAA Federal](#); [John R. Bean](#); [David Somers](#); [George Reynolds](#); [NSD Coast Pilot](#); [PHB Chief](#); [James M Crocker](#); [Matt Kroll](#); [Nautical Data Branch](#); [Tara Wallace](#); [Chris Libeau](#); [Ken Forster](#); [Michael Gaeta](#); [Charles Porter - NOAA Federal](#); [Kevin Jett - NOAA Federal](#); [William Winner](#); [\\_NOS OCS PBA Branch](#); [\\_NOS OCS PBB Branch](#); [\\_NOS OCS PBC Branch](#); [\\_NOS OCS PBD Branch](#); [\\_NOS OCS PBE Branch](#); [\\_NOS OCS PBG Branch](#)  
**Subject:** Re: H13315 DtoN #1 Submission to NDB  
**Date:** Thursday, February 20, 2020 3:30:47 PM  
**Attachments:** [H13315 DtoNs 1.zip](#)

---

DD-32103 has been registered by the Nautical Data Branch and directed to Products Branch G for processing.

The DtoNs reported are three platforms located approximately 11 NM southwest of the Freshwater Bayou entrance channel.

The following charts have been assigned to the record:

11344 KAPP 123

11340 KAPP 49

The following ENC has been assigned to the record:

US4LA14M

References:

H13315

OPR-K354-KR-19

This information was discovered by a NOAA contractor and was submitted by AHB.

Nautical Data Branch/[Marine Chart Division](#)/  
Office of Coast Survey/[National Ocean Service](#)/  
[National Oceanic and Atmospheric Administration](#)  
[United States Department of Commerce](#)  
Contact: [ocs.ndb@noaa.gov](mailto:ocs.ndb@noaa.gov)

On Thu, Feb 20, 2020 at 11:20 AM Castle Parker - NOAA Federal

<[castle.e.parker@noaa.gov](mailto:castle.e.parker@noaa.gov)> wrote:

Good day,

Please find attached compressed file for H13315 DtoN Report #1 containing three uncharted offshore platforms. The uncharted platforms are located offshore and south of Flat Lake and Rollover Bayou, LA. The submission to Nautical Data Branch (NDB) and Marine Chart Division (MCD) is intended for chart application.

The information originates from a NOAA contract field unit and was submitted to the Atlantic Hydrographic Branch (AHB) for review, processing, and submission. The contents of the attached file were generated at AHB. The attached file contains a DtoN Letter (PDF),

associated image files, and a Pydro XML file.

If you have any questions, please contact me via email or phone 757-364-7472. Thank you for your assistance with this matter.

Regards,

Gene

*Castle Eugene Parker*

*NOAA Office of Coast Survey*

*Atlantic Hydrographic Branch*

*Hydrographic Team Lead / Physical Scientist*

*[castle.e.parker@noaa.gov](mailto:castle.e.parker@noaa.gov)*

*office (757) 364-7472*

**From:** [David Somers](#)  
**To:** [ahb.dton@noaa.gov](mailto:ahb.dton@noaa.gov); [Douglas Wood - NOAA Federal](#); [Christina Fandel - NOAA Federal](#); [Kathryn Pridgen - NOAA Federal](#)  
**Cc:** [John R. Bean](#); [George Reynolds](#)  
**Subject:** H13315 DtoNs #2-5  
**Date:** Monday, March 9, 2020 9:52:27 AM  
**Attachments:** [H13315 DTON 2 Obstn.zip](#)  
[H13315 DTON 3 Obstn.zip](#)  
[H13315 DTON 4 Obstn.zip](#)  
[H13315 DTON 5 Obstn.zip](#)

---

Good morning,

OSI has compiled and attached DtoN feature files along with supporting imagery for survey H13315.

H13315 DtoN 2 - Obstruction  
H13315 DtoN 3 - Obstruction  
H13315 DtoN 4 - Obstruction  
H13315 DtoN 5 - Obstruction

Please let me know if OSI can provide any additional information regarding these DtoNs.

Regards,  
Dave

**David Somers**  
Data Processing Manager

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**From:** [Castle Parker - NOAA Federal](#)  
**To:** [OCS NDB - NOAA Service Account](#)  
**Cc:** [AHB Chief - NOAA Service Account](#); [Douglas Wood - NOAA Federal](#); [Christina Fandel - NOAA Federal](#); [David Somers](#); [John R. Bean](#); [George Reynolds](#)  
**Subject:** H13315 DtoNs #2 - #5 submission to NDB  
**Date:** Monday, March 9, 2020 12:15:48 PM  
**Attachments:** [H13315 DtoNs 2-5.zip](#)

---

Good day,

Please find attached compressed file for H13315 DtoN Report #2 through #4 containing four uncharted obstructions. The obstructions are located offshore and south of Rollover Bayou, LA. The submission to Nautical Data Branch (NDB) and Marine Chart Division (MCD) is intended for chart application.

The information originates from a NOAA contract field unit and was submitted to the Atlantic Hydrographic Branch (AHB) for review, processing, and submission. The contents of the attached file were generated at AHB. The attached file contains a DtoN Letter (PDF), associated image files, and a Pydro XML file.

If you have any questions, please contact me via email or phone 757-364-7472. Thank you for your assistance with this matter.

Regards,  
Gene

*Castle Eugene Parker  
NOAA Office of Coast Survey  
Atlantic Hydrographic Branch  
Hydrographic Team Lead / Physical Scientist  
[castle.e.parker@noaa.gov](mailto:castle.e.parker@noaa.gov)  
office (757) 364-7472*

**From:** [OCS NDB - NOAA Service Account](#)  
**To:** [Castle Parker - NOAA Federal](#)  
**Cc:** [AHB Chief - NOAA Service Account](#); [Douglas Wood - NOAA Federal](#); [Christina Fandel - NOAA Federal](#); [David Somers](#); [John R. Bean](#); [George Reynolds](#); [NSD Coast Pilot](#); [PHB Chief](#); [James M Crocker](#); [Matt Kroll](#); [Nautical Data Branch](#); [Tara Wallace](#); [Chris Libeau](#); [Ken Forster](#); [Michael Gaeta](#); [Charles Porter - NOAA Federal](#); [Kevin Jett - NOAA Federal](#); [William Winner](#); [\\_NOS OCS PBA Branch](#); [\\_NOS OCS PBB Branch](#); [\\_NOS OCS PBC Branch](#); [\\_NOS OCS PBD Branch](#); [\\_NOS OCS PBE Branch](#); [\\_NOS OCS PBG Branch](#)  
**Subject:** Re: H13315 DtoNs #2 - #5 submission to NDB  
**Date:** Monday, March 9, 2020 4:18:10 PM  
**Attachments:** [H13315 DtoNs 2-5.zip](#)

---

DD-32168 has been registered by the Nautical Data Branch and directed to Products Branch G for processing.

The DtoNs reported are four submerged obstructions located offshore and south of Rollover Bayou, LA, in the Gulf of Mexico.

The following charts have been assigned to the record:

11344 KAPP 123

11349 KAPP 64

11340 KAPP 49

The following ENC's have been assigned to the record:

US4LA14M

US3GC03M

References:

H13315

OPR-K354-KR-19

This information was discovered by a NOAA contractor and was submitted by AHB.

Nautical Data Branch/[Marine Chart Division](#)/  
Office of Coast Survey/[National Ocean Service](#)/  
[National Oceanic and Atmospheric Administration](#)  
[United States Department of Commerce](#)  
Contact: [ocs.ndb@noaa.gov](mailto:ocs.ndb@noaa.gov)

On Mon, Mar 9, 2020 at 12:15 PM Castle Parker - NOAA Federal

<[castle.e.parker@noaa.gov](mailto:castle.e.parker@noaa.gov)> wrote:

Good day,

Please find attached compressed file for H13315 DtoN Report #2 through #4 containing four uncharted obstructions. The obstructions are located offshore and south of Rollover Bayou, LA. The submission to Nautical Data Branch (NDB) and Marine Chart Division (MCD) is intended for chart application.

The information originates from a NOAA contract field unit and was submitted to the

Atlantic Hydrographic Branch (AHB) for review, processing, and submission. The contents of the attached file were generated at AHB. The attached file contains a DtoN Letter (PDF), associated image files, and a Pydro XML file.

If you have any questions, please contact me via email or phone 757-364-7472. Thank you for your assistance with this matter.

Regards,

Gene

*Castle Eugene Parker*

*NOAA Office of Coast Survey*

*Atlantic Hydrographic Branch*

*Hydrographic Team Lead / Physical Scientist*

[castle.e.parker@noaa.gov](mailto:castle.e.parker@noaa.gov)

*office (757) 364-7472*

**From:** [John R. Bean](#)  
**To:** ["pop.information@noaa.gov"](#); ["ocs.ecc@noaa.gov"](#)  
**Cc:** ["Douglas Wood - NOAA Federal"](#); ["Christy Fandel - NOAA Federal"](#)  
**Subject:** OPR-K354-KR-19 Approaches to Louisiana Coast: Marine Mammal Observation Reports  
**Date:** Friday, March 13, 2020 1:20:00 PM  
**Attachments:** [OPR-K354-KR-19\\_MMO\\_Reports.pdf](#)  
[OPR-K354-KR-19\\_MMO-Training\\_Report.pdf](#)

---

Good afternoon,

Please see the attached Marine Mammal Observation reports for NOAA contract hydrographic survey OPR-K354-KR-19 Approaches to Louisiana Coast. Reports are included for both vessels on the project (R/V Ocean Explorer and R/V H.F. Stout). Also attached is a list of trained observers. Please let me know if you have any questions.

Best Regards,

**John R. Bean, MS, CH**  
Manager-Hydrographic Surveys

**OCEAN SURVEYS, INC.**  
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**From:** [Jay Nunenkamp - NOAA Federal](#)  
**To:** [John R. Bean](#)  
**Cc:** [pop.information@noaa.gov](mailto:pop.information@noaa.gov); [NOS OCS ECC](#); [Douglas Wood - NOAA Federal](#); [Christy Fandel - NOAA Federal](#)  
**Subject:** Re: OPR-K354-KR-19 Approaches to Louisiana Coast: Marine Mammal Observation Reports  
**Date:** Friday, March 13, 2020 3:39:02 PM

---

Received, thank you.

Sincerely,

Jay Nunenkamp (he/his)  
Environmental Compliance Coordinator  
Office of Coast Survey  
National Oceanic and Atmospheric Administration  
SSMC3 Room 6513  
(240) 533-0118

On Fri, Mar 13, 2020 at 1:25 PM John R. Bean <[jrb@oceansurveys.com](mailto:jrb@oceansurveys.com)> wrote:

Good afternoon,

Please see the attached Marine Mammal Observation reports for NOAA contract hydrographic survey OPR-K354-KR-19 Approaches to Louisiana Coast. Reports are included for both vessels on the project (R/V Ocean Explorer and R/V H.F. Stout). Also attached is a list of trained observers. Please let me know if you have any questions.

Best Regards,

**John R. Bean, MS, CH**

Manager-Hydrographic Surveys

**OCEAN SURVEYS, INC.**

129 Mill Rock Road East, Old Saybrook, CT 06475

**T** 860-388-4631 x148 **M** 860-710-8653 **F** 860-388-5879

[jrb@oceansurveys.com](mailto:jrb@oceansurveys.com) | [www.oceansurveys.com](http://www.oceansurveys.com)

The following table lists Oceans Surveys, Inc. staff who were trained Marine Mammal Observers aboard the *R/V Ocean Explorer* and the *R/V H.F. Stout* during the NOAA Contract Survey Project OPR-K354-KR 19—Approaches to Louisiana Coast. The period of the survey was September 06, 2019 to March 11, 2020.

Personnel	Position	Marine Species Awareness Video Viewing Date
Yulio Araya	Hydrographic Survey Technician	April 3, 2019
Morgan D. Barrett	Hydrographic Survey Technician	April 3, 2019
John Bean	Lead Hydrographer	May 2, 2016
Jack Brigg	Captain	April 26, 2019
Jack Brigg	Captain	April 26, 2019
Logan Crouse	Senior Hydrographer	July 21, 2017
Lily Glynos	Hydrographic Survey Technician	September 9, 2019
Michael Bradley Hughes	Senior Hydrographer	November 3, 2019
Benjamin J. Jackson	Hydrographic Survey Technician	November 1, 2019
Corey Leamy	Hydrographer	May 15, 2018
Hugh Lincoln	Hydrographer	April 3, 2019
Dalton Leonhardt	Hydrographer	August 18, 2017
George Main Sr.	Captain	July 22, 2016
George Main III	Captain	July 22, 2016
Curt Ramsay	Hydrographic Survey Technician	July 22, 2016
James M. Roth	Hydrographic Survey Technician	April 24, 2019
Evan Shalagan	Hydrographic Survey Technician	April 3, 2019
David Tiffany	Hydrographic Survey Technician	September 3, 2019
Joseph Tyler	Lead Hydrographer	June 5, 2017
Alexander Unrein	Lead Hydrographer	May 25, 2017
David Vinick	Captain	May 10, 2018
Robert Wallace	Lead Hydrographer	May 2, 2016

**From:** [Joseph DiPalma](#)  
**To:** [Kelley Bostrom](#); [David Somers](#); [John R. Bean](#)  
**Subject:** Fw: NCEI online publication confirmation of NCEI Accession 0209251  
**Date:** Monday, March 23, 2020 4:53:04 PM

---

Acceptance of NCEI svp data for OE sheets 13 and 15

----- Forwarded Message -----

**From:** Alexandra.Grodsky@noaa.gov <alexandra.grodsky@noaa.gov>  
**To:** "jjd@oceansurveys.com" <jjd@oceansurveys.com>  
**Cc:** "alexandra.grodsky@noaa.gov" <alexandra.grodsky@noaa.gov>  
**Sent:** Monday, March 23, 2020, 04:00:13 PM EDT  
**Subject:** NCEI online publication confirmation of NCEI Accession 0209251

Dear Joseph DiPalma,

Thank you for sending your data and metadata files to be archived and published by the NOAA National Centers for Environmental Information (NCEI). NCEI received these data, SOUND VELOCITY collected from RV Ocean Explorer in Coastal Waters of Gulf of Mexico from 2020-01-12 to 2020-02-23, on 2020-03-05 15:17:39 via S2N.

Your data, identified as NCEI Accession Number 0209251, are now publicly accessible online via the NCEI Ocean Archive System at <https://accession.nodc.noaa.gov/0209251>. Use this link, <https://accession.nodc.noaa.gov/0209251/data/0-data>, to access the original data files in the NCEI archival information package.

These data will be discoverable via the NCEI Geoportal (<https://data.nodc.noaa.gov/geoportal>) and other online discovery tools, such as Data.gov about 24 hours after you receive this email.

If at any time you wish to update the content of NCEI Accession Number 0209251, please send an e-mail to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov). Please remember to include the NCEI Accession Number.

No additional action is required from you at this time: This is a system-generated email notification to complete the Send2NCEI submission tracking process. Please let me know if you have any additional questions about NCEI archival activities or your archived data package. Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

Regards,  
Alexandra Grodsky  
[Alexandra.Grodsky@noaa.gov](mailto:Alexandra.Grodsky@noaa.gov)

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: P46AC9  
From: [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov)  
To: [jjd@oceansurveys.com](mailto:jjd@oceansurveys.com)

Dear Joseph DiPalma,

Thank you for submitting your data collection, titled "SOUND VELOCITY collected from RV Ocean Explorer in Coastal Waters of Gulf of Mexico from 2020-01-12 to 2020-02-23", to the NOAA National Centers for Environmental Information (NCEI). Your submission package has been assigned Reference ID: P46AC9. After reviewing your data and metadata, NCEI will update you about the archival status of your submission package.

You will be notified if NCEI creates an archival information package (accession) of your data, including the unique identifier for that archival information package (the NCEI Accession number). When your data are archived, NCEI keeps an exact copy of the data and metadata you sent and will develop necessary tracking and discovery metadata. In addition, NCEI may create additional versions to ensure your data are preserved for long-term access.

Upon completion of these archival ingest actions, NCEI will publish your data online (including a copy of your original files). You will receive another email once your submission package (Reference ID: P46AC9) is published for global access. In addition, NCEI may include all or part of your data into one or more product databases, such as the World Ocean Database.

No additional action is required from you at this time: This is a system-generated email notification to complete the Send2NCEI submission tracking process. If you have any questions about NCEI archival processes, please contact [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov). Also, if at any time you wish to update your submission package, please send an e-mail to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov) with your request. Please remember to include your submission package Reference ID.

Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

NCEI Data Officer Team  
NOAA National Centers for Environmental Information  
NOAA/NESDIS  
1315 East-West Highway  
Silver Spring, MD 20910  
USA



**From:** [Joseph DiPalma](#)  
**To:** [Kelley Bostrom](#); [David Somers](#); [John R. Bean](#)  
**Subject:** Fw: NCEI online publication confirmation of NCEI Accession 0209252  
**Date:** Monday, March 23, 2020 5:07:26 PM

---

Acceptance of NCEI svp data for OE 2019

----- Forwarded Message -----

**From:** Alexandra.Grodsky@noaa.gov <alexandra.grodsky@noaa.gov>  
**To:** "jjd@oceansurveys.com" <jjd@oceansurveys.com>  
**Cc:** "alexandra.grodsky@noaa.gov" <alexandra.grodsky@noaa.gov>  
**Sent:** Monday, March 23, 2020, 04:45:10 PM EDT  
**Subject:** NCEI online publication confirmation of NCEI Accession 0209252

Dear Joseph DiPalma,

Thank you for sending your data and metadata files to be archived and published by the NOAA National Centers for Environmental Information (NCEI). NCEI received these data, SOUND VELOCITY collected from RV Ocean Explorer in Coastal Waters of Gulf of Mexico from 2019-09-06 to 2019-12-15, on 2020-03-05 15:08:37 via S2N.

Your data, identified as NCEI Accession Number 0209252, are now publicly accessible online via the NCEI Ocean Archive System at <https://accession.nodc.noaa.gov/0209252>. Use this link, <https://accession.nodc.noaa.gov/0209252/data/0-data>, to access the original data files in the NCEI archival information package.

These data will be discoverable via the NCEI Geoportal (<https://data.nodc.noaa.gov/geoportal>) and other online discovery tools, such as Data.gov about 24 hours after you receive this email.

If at any time you wish to update the content of NCEI Accession Number 0209252, please send an e-mail to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov). Please remember to include the NCEI Accession Number.

No additional action is required from you at this time: This is a system-generated email notification to complete the Send2NCEI submission tracking process. Please let me know if you have any additional questions about NCEI archival activities or your archived data package. Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

Regards,  
Alexandra Grodsky  
[Alexandra.Grodsky@noaa.gov](mailto:Alexandra.Grodsky@noaa.gov)

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: X6JDJT  
From: [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov)  
To: [jjd@oceansurveys.com](mailto:jjd@oceansurveys.com)

Dear Joseph DiPalma,

Thank you for submitting your data collection, titled "SOUND VELOCITY collected from RV Ocean Explorer in Coastal Waters of Gulf of Mexico from 2019-09-06 to 2019-12-15", to the NOAA National Centers for Environmental Information (NCEI). Your submission package has been assigned Reference ID: X6JDJT. After reviewing your data and metadata, NCEI will update you about the archival status of

your submission package.

You will be notified if NCEI creates an archival information package (accession) of your data, including the unique identifier for that archival information package (the NCEI Accession number). When your data are archived, NCEI keeps an exact copy of the data and metadata you sent and will develop necessary tracking and discovery metadata. In addition, NCEI may create additional versions to ensure your data are preserved for long-term access.

Upon completion of these archival ingest actions, NCEI will publish your data online (including a copy of your original files). You will receive another email once your submission package (Reference ID: X6JDJT) is published for global access. In addition, NCEI may include all or part of your data into one or more product databases, such as the World Ocean Database.

No additional action is required from you at this time: This is a system-generated email notification to complete the Send2NCEI submission tracking process. If you have any questions about NCEI archival processes, please contact [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov). Also, if at any time you wish to update your submission package, please send an e-mail to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov) with your request. Please remember to include your submission package Reference ID.

Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

NCEI Data Officer Team  
NOAA National Centers for Environmental Information  
NOAA/NESDIS  
1315 East-West Highway  
Silver Spring, MD 20910  
USA

**From:** [Joseph DiPalma](#)  
**To:** [Kelley Bostrom](#); [David Somers](#); [John R. Bean](#)  
**Subject:** Fw: NCEI online publication confirmation of NCEI Accession 0209250  
**Date:** Monday, March 23, 2020 5:08:09 PM

---

Stout 2019

----- Forwarded Message -----

**From:** Alexandra.Grodsky@noaa.gov <alexandra.grodsky@noaa.gov>  
**To:** "jjd@oceansurveys.com" <jjd@oceansurveys.com>  
**Cc:** "alexandra.grodsky@noaa.gov" <alexandra.grodsky@noaa.gov>  
**Sent:** Monday, March 23, 2020, 05:00:09 PM EDT  
**Subject:** NCEI online publication confirmation of NCEI Accession 0209250

Dear Joseph DiPalma,

Thank you for sending your data and metadata files to be archived and published by the NOAA National Centers for Environmental Information (NCEI). NCEI received these data, SOUND VELOCITY collected from RV H.F. Stout in Coastal Waters of Gulf of Mexico from 2019-09-07 to 2019-12-13, on 2020-03-05 14:53:23 via S2N.

Your data, identified as NCEI Accession Number 0209250, are now publicly accessible online via the NCEI Ocean Archive System at <https://accession.nodc.noaa.gov/0209250>. Use this link, <https://accession.nodc.noaa.gov/0209250/data/0-data>, to access the original data files in the NCEI archival information package.

These data will be discoverable via the NCEI Geoportal (<https://data.nodc.noaa.gov/geoportal>) and other online discovery tools, such as Data.gov about 24 hours after you receive this email.

If at any time you wish to update the content of NCEI Accession Number 0209250, please send an e-mail to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov). Please remember to include the NCEI Accession Number.

No additional action is required from you at this time: This is a system-generated email notification to complete the Send2NCEI submission tracking process. Please let me know if you have any additional questions about NCEI archival activities or your archived data package. Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

Regards,  
Alexandra Grodsky  
[Alexandra.Grodsky@noaa.gov](mailto:Alexandra.Grodsky@noaa.gov)

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: 6FEF1X  
From: [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov)  
To: [jjd@oceansurveys.com](mailto:jjd@oceansurveys.com)

Dear Joseph DiPalma,

Thank you for submitting your data collection, titled "SOUND VELOCITY collected from RV H.F. Stout in Coastal Waters of Gulf of Mexico from 2019-09-07 to 2019-12-13", to the NOAA National Centers for Environmental Information (NCEI). Your submission package has been assigned Reference ID: 6FEF1X. After reviewing your data and metadata, NCEI will update you about the archival status of your submission package.

You will be notified if NCEI creates an archival information package (accession) of your data, including the unique identifier for that archival information package (the NCEI Accession number). When your data are archived, NCEI keeps an exact copy of the data and metadata you sent and will develop necessary tracking and discovery metadata. In addition, NCEI may create additional versions to ensure your data are preserved for long-term access.

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No additional action is required from you at this time: This is a system-generated email notification to complete the Send2NCEI submission tracking process. If you have any questions about NCEI archival processes, please contact [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov). Also, if at any time you wish to update your submission package, please send an e-mail to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov) with your request. Please remember to include your submission package Reference ID.

Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

NCEI Data Officer Team  
NOAA National Centers for Environmental Information  
NOAA/NESDIS  
1315 East-West Highway  
Silver Spring, MD 20910  
USA

**From:** [Joseph DiPalma](#)  
**To:** [Kelley Bostrom](#); [David Somers](#); [John R. Bean](#)  
**Subject:** Fw: NCEI online publication confirmation of NCEI Accession 0209249  
**Date:** Monday, March 23, 2020 5:08:27 PM

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Stout 2020

----- Forwarded Message -----

**From:** Alexandra.Grodsky@noaa.gov <alexandra.grodsky@noaa.gov>  
**To:** "jjd@oceansurveys.com" <jjd@oceansurveys.com>  
**Cc:** "alexandra.grodsky@noaa.gov" <alexandra.grodsky@noaa.gov>  
**Sent:** Monday, March 23, 2020, 05:00:19 PM EDT  
**Subject:** NCEI online publication confirmation of NCEI Accession 0209249

Dear Joseph DiPalma,

Thank you for sending your data and metadata files to be archived and published by the NOAA National Centers for Environmental Information (NCEI). NCEI received these data, SOUND VELOCITY collected from RV H.F. Stout in Coastal Waters of Gulf of Mexico from 2020-01-18 to 2020-01-18, on 2020-03-05 14:54:50 via S2N.

Your data, identified as NCEI Accession Number 0209249, are now publicly accessible online via the NCEI Ocean Archive System at <https://accession.nodc.noaa.gov/0209249>. Use this link, <https://accession.nodc.noaa.gov/0209249/data/0-data>, to access the original data files in the NCEI archival information package.

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If at any time you wish to update the content of NCEI Accession Number 0209249, please send an e-mail to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov). Please remember to include the NCEI Accession Number.

No additional action is required from you at this time: This is a system-generated email notification to complete the Send2NCEI submission tracking process. Please let me know if you have any additional questions about NCEI archival activities or your archived data package. Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

Regards,  
Alexandra Grodsky  
[Alexandra.Grodsky@noaa.gov](mailto:Alexandra.Grodsky@noaa.gov)

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: A75G3E  
From: [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov)  
To: [jjd@oceansurveys.com](mailto:jjd@oceansurveys.com)

Dear Joseph DiPalma,

Thank you for submitting your data collection, titled "SOUND VELOCITY collected from RV H.F. Stout in Coastal Waters of Gulf of Mexico from 2020-01-18 to 2020-01-18", to the NOAA National Centers for Environmental Information (NCEI). Your submission package has been assigned Reference ID: A75G3E. After reviewing your data and metadata, NCEI will update you about the archival status of your submission package.

You will be notified if NCEI creates an archival information package (accession) of your data, including the unique identifier for that archival information package (the NCEI Accession number). When your data are archived, NCEI keeps an exact copy of the data and metadata you sent and will develop necessary tracking and discovery metadata. In addition, NCEI may create additional versions to ensure your data are preserved for long-term access.

Upon completion of these archival ingest actions, NCEI will publish your data online (including a copy of your original files). You will receive another email once your submission package (Reference ID: A75G3E) is published for global access. In addition, NCEI may include all or part of your data into one or more product databases, such as the World Ocean Database.

No additional action is required from you at this time: This is a system-generated email notification to complete the Send2NCEI submission tracking process. If you have any questions about NCEI archival processes, please contact [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov). Also, if at any time you wish to update your submission package, please send an e-mail to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov) with your request. Please remember to include your submission package Reference ID.

Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

NCEI Data Officer Team  
NOAA National Centers for Environmental Information  
NOAA/NESDIS  
1315 East-West Highway  
Silver Spring, MD 20910  
USA

**From:** [Joseph DiPalma](#)  
**To:** [Kelley Bostrom](#); [David Somers](#); [John R. Bean](#)  
**Subject:** Fw: [Send2NCEI] data submission confirmation for Reference ID: EF4MXG  
**Date:** Wednesday, March 18, 2020 2:52:06 PM

---

Submission for OE sheets 13 and 15

----- Forwarded Message -----

**From:** "nodc.dataofficer@noaa.gov" <nodc.dataofficer@noaa.gov>  
**To:** "jjd@oceansurveys.com" <jjd@oceansurveys.com>  
**Sent:** Wednesday, March 18, 2020, 02:45:11 PM EDT  
**Subject:** [Send2NCEI] data submission confirmation for Reference ID: EF4MXG

Dear Joseph DiPalma,

Thank you for submitting your data collection, titled "SOUND VELOCITY collected from RV Ocean Explorer in Coastal Waters of Gulf of Mexico from 2019-09-06 to 2020-03-11", to the NOAA National Centers for Environmental Information (NCEI). Your submission package has been assigned Reference ID: EF4MXG. After reviewing your data and metadata, NCEI will update you about the archival status of your submission package.

You will be notified if NCEI creates an archival information package (accession) of your data, including the unique identifier for that archival information package (the NCEI Accession number). When your data are archived, NCEI keeps an exact copy of the data and metadata you sent and will develop necessary tracking and discovery metadata. In addition, NCEI may create additional versions to ensure your data are preserved for long-term access.

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Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

NCEI Data Officer Team  
NOAA National Centers for Environmental Information  
NOAA/NESDIS  
1315 East-West Highway  
Silver Spring, MD 20910  
USA

**From:** [Joseph DiPalma](#)  
**To:** [Kelley Bostrom](#); [David Somers](#); [John R. Bean](#)  
**Subject:** Fw: [Send2NCEI] data submission confirmation for Reference ID: T4B23Y  
**Date:** Wednesday, March 18, 2020 2:54:37 PM

---

Submission for Stout sheets 13 and 15

----- Forwarded Message -----

**From:** "nodc.dataofficer@noaa.gov" <nodc.dataofficer@noaa.gov>  
**To:** "jjd@oceansurveys.com" <jjd@oceansurveys.com>  
**Sent:** Wednesday, March 18, 2020, 02:45:14 PM EDT  
**Subject:** [Send2NCEI] data submission confirmation for Reference ID: T4B23Y

Dear Joseph DiPalma,

Thank you for submitting your data collection, titled "SOUND VELOCITY collected from RV H.F. Stout in Coastal Waters of Gulf of Mexico from 2019-10-03 to 2020-03-10", to the NOAA National Centers for Environmental Information (NCEI). Your submission package has been assigned Reference ID: T4B23Y. After reviewing your data and metadata, NCEI will update you about the archival status of your submission package.

You will be notified if NCEI creates an archival information package (accession) of your data, including the unique identifier for that archival information package (the NCEI Accession number). When your data are archived, NCEI keeps an exact copy of the data and metadata you sent and will develop necessary tracking and discovery metadata. In addition, NCEI may create additional versions to ensure your data are preserved for long-term access.

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Thank you again for choosing to archive your data with the National Centers for Environmental Information (NCEI).

NCEI Data Officer Team  
NOAA National Centers for Environmental Information  
NOAA/NESDIS  
1315 East-West Highway  
Silver Spring, MD 20910  
USA



**From:** [David Somers](#)  
**To:** [survey.outlines@noaa.gov](mailto:survey.outlines@noaa.gov); [Douglas Wood - NOAA Federal](#); [Kathryn Pridgen - NOAA Federal](#); [Christina Fandel - NOAA Federal](#)  
**Cc:** [John R. Bean](#); [George Reynolds](#)  
**Subject:** Survey Outlines for OPR-K354-KR-19  
**Date:** Friday, April 3, 2020 9:02:53 AM  
**Attachments:** [H13312 Survey Outline.000](#)  
[H13313 Survey Outline.000](#)  
[H13314 Survey Outline.000](#)  
[H13315 Survey Outline.000](#)  
[H13316 Survey Outline.000](#)  
[H13317 Survey Outline.000](#)  
[H13318 Survey Outline.000](#)  
[H13319 Survey Outline.000](#)

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Good Morning,

Attached are the survey outlines for H13312, H13313, H13314, H13315, H13316, H13317, H13318, and H13319 under project number OPR-K354-KR-19.

Please let me know if there is any additional information required.

Regards,

Dave

**David Somers**  
Data Processing Manager

**OCEAN SURVEYS, INC.**  
129 Mill Rock Road East, Old Saybrook, CT 06475  
**T** 860-388-4631 x135 **M** 860-575-3361 **F** 860-388-5879  
[dts@oceansurveys.com](mailto:dts@oceansurveys.com) | [www.oceansurveys.com](http://www.oceansurveys.com)

**From:** [John R. Bean](#)  
**To:** ["Christina Fandel - NOAA Federal"](#); ["Douglas Wood - NOAA Federal"](#)  
**Cc:** ["David Somers"](#)  
**Subject:** OPR-K354-KR-19 MBES Sound speed artifact question  
**Date:** Tuesday, February 25, 2020 10:17:00 AM  
**Attachments:** [OPR-K354-KR-19 MBES-Sound-Speed-Ques.pdf](#)

---

Good morning Christy and Doug,

Some of the MBES data OSI has collected during Jan-Feb 2020 has occasional localized refraction artifacts where the outer beams rise or fall more 50cm. These data were mostly collected coincidentally during SSS splits. Steep gradients in the SOS profile were observed at or near draft depth, which impacted the multibeam; the SSS was flown below the refraction. We would like to reject MBES data in refraction areas that are beyond a selected threshold in relation to a presumed flat surface. The attached PDF has more detail.

It may be worth it to organize a brief conference call to discuss our question. Dave Somers and I can be available anytime today or Thursday.

Best Regards,

John

**John R. Bean, MS, CH**  
Manager-Hydrographic Surveys

**OCEAN SURVEYS, INC.**  
129 Mill Rock Road East, Old Saybrook, CT 06475  
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**From:** [John Bean](#)  
**To:** [douglas.wood@noaa.gov](mailto:douglas.wood@noaa.gov); [David Somers](#); [Christina Fandel - NOAA Federal](#); [Corey Allen - NOAA Federal](#)  
**Cc:** [Douglas Wood - NOAA Affiliate](#)  
**Subject:** Re: question on filtering MBES coverage in SSS Splits  
**Date:** Wednesday, February 26, 2020 1:54:28 PM

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Hi Doug,

Thank you for the clarification.

To answer your last question: the splits were done to obtain SSS coverage where outer range SSS was blocked by fish and or degraded by refraction.

Regards,

John

Sent from mobile device

On Wed, Feb 26, 2020 at 11:40, Douglas Wood - NOAA Federal  
<[douglas.wood@noaa.gov](mailto:douglas.wood@noaa.gov)> wrote:

Hi John,

thank you for reaching out to inquire about filtering out the outer MBES data in your sidescan splits. Per the complete coverage requirement for this task order (HSSD Section 5.2.2.3 Option B), "multibeam sonar data shall at least extend across the SSS gap..." As such, *if* filtering the MBES data to remove the observed refraction still provides HSSD-compliant MBES data across the SSS nadir gap, and meets all other HSSD applicable requirements, then filtering out those MBES with evidence of refraction is acceptable.

With respect to the SSS splits, as you know, it is important that any significant contacts are observed in the SSS data and are developed. Section 5.2.2.1 (Bathymetric Splits) in the HSSD places judgement on the field hydrographer to determine when it is appropriate to run splits. Can you please clarify if these bathymetric splits were run because the number of obstructions such as fish and shrimp schools obscured some of the outer mainscheme SSS? I am glad to see that you are being conscientious and being sure that you have coverage.

Doug

--

Douglas Wood  
Physical Scientist  
Hydrographic Surveys Division  
Office of Coast Survey  
National Oceanic and Atmospheric Administration

## APPROVAL PAGE

H13315

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NCEI for archive

- Descriptive Report
- Data Acquisition and Processing Report
- Collection of Bathymetric Attributed Grids (BAGs)
- Processed survey data and records
- Geospatial PDF of survey products
- Collection of backscatter mosaics

The survey evaluation and verification have been conducted according to current OCS specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: \_\_\_\_\_

**Commander Meghan McGovern, NOAA**  
Chief, Atlantic Hydrographic Branch