H13319

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

# DESCRIPTIVE REPORT

| | |
|---|---|
| Type of Survey: | Navigable Area |
| Registry Number: | H13319 |

## LOCALITY

| | |
|---|---|
| State(s): | Louisiana |
| General Locality: | Northern Gulf of Mexico |
| Sub-locality: | 6.5 NM Offshore of Joseph Harbor Bayou |

**2019**

CHIEF OF PARTY
John R. Bean

LIBRARY & ARCHIVES

Date:

| U.S. DEPARTMENT OF COMMERCE<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTRY NUMBER: |
|---|---|
| **HYDROGRAPHIC TITLE SHEET** | **H13319** |

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): | **Louisiana** |
| General Locality: | **Northern Gulf of Mexico** |
| Sub-Locality: | **6.5 NM Offshore of Joseph Harbor Bayou** |
| Scale: | **40000** |
| Dates of Survey: | **11/04/2019 to 02/23/2020** |
| Instructions Dated: | **07/25/2019** |
| Project Number: | **OPR-K354-KR-19** |
| Field Unit: | **Ocean Surveys** |
| Chief of Party: | **John R. Bean** |
| Soundings by: | **Multibeam Echo Sounder** |
| Imagery by: | **Side Scan Sonar  Multibeam Echo Sounder Backscatter** |
| Verification by: | **Atlantic Hydrographic Branch** |
| Soundings Acquired in: | **meters at Mean Lower Low Water** |

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 November 4, 2019 to February 23, 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.

***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 https://www.ncei.noaa.gov/.***

***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.***

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# Descriptive Report to Accompany Survey H13319

Project: OPR-K354-KR-19

Locality: Northern Gulf of Mexico

Sublocality: 6.5 NM Offshore of Joseph Harbor Bayou

Scale: 1:40000

November 2019 - February 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, offshore of Joseph Harbor Bayou.

## A.1 Survey Limits

Data were acquired within the following survey limits:

| Northwest Limit | Southeast Limit |
|---|---|
| 29° 32' 33.32" N<br>92° 54' 23.84" W | 29° 25' 32.72" N<br>92° 43' 14.35" 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.

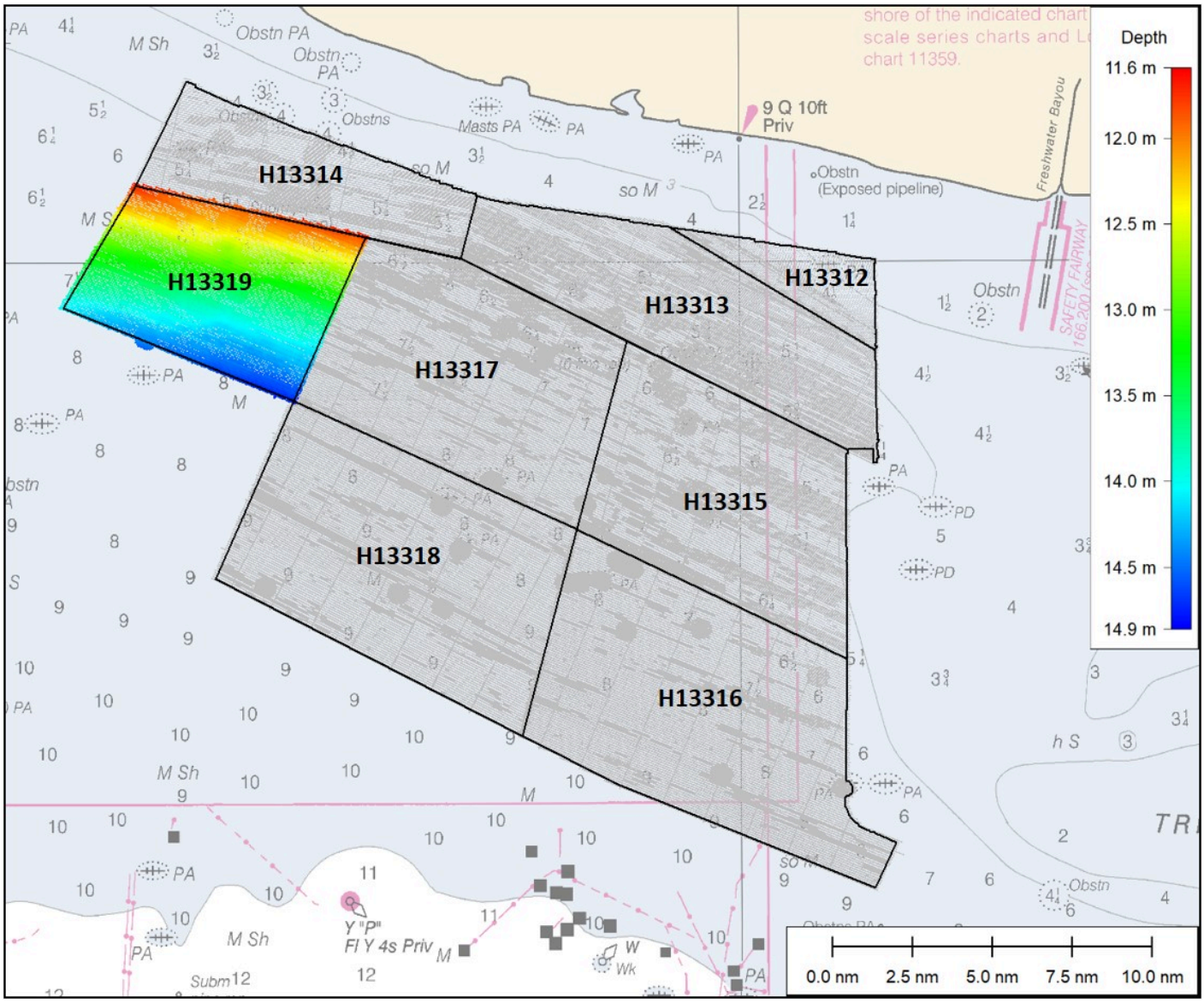


*Figure 1: H13319 MBES survey coverage within project limits for OPR-K354-KR-19*

## A.6 Survey Statistics

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

| | HULL ID | *R/V Ocean Explorer* | *Total* |
|---|---|---|---|
| **LNM** | **SBES Mainscheme** | 0 | 0 |
| | **MBES Mainscheme** | 34.38 | 34.38 |
| | **Lidar Mainscheme** | 0 | 0 |
| | **SSS Mainscheme** | 0 | 0 |
| | **SBES/SSS Mainscheme** | 0 | 0 |
| | **MBES/SSS Mainscheme** | 803.42 | 803.42 |
| | **SBES/MBES Crosslines** | 26.38 | 26.38 |
| | **Lidar Crosslines** | 0 | 0 |
| **Number of Bottom Samples** | | | 6 |
| **Number Maritime Boundary Points Investigated** | | | 0 |
| **Number of DPs** | | | 0 |
| **Number of Items Investigated by Dive Ops** | | | 0 |
| **Total SNM** | | | 39.98 |

*Table 3: Hydrographic Survey Statistics*

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

| Survey Dates | Day of the Year |
|---|---|
| 11/04/2019 | 308 |

| Survey Dates | Day of the Year |
|---|---|
| 11/05/2019 | 309 |
| 11/06/2019 | 310 |
| 11/07/2019 | 311 |
| 11/19/2019 | 323 |
| 11/20/2019 | 324 |
| 12/03/2019 | 337 |
| 12/14/2019 | 348 |
| 02/17/2020 | 48 |
| 02/18/2020 | 49 |
| 02/19/2020 | 50 |
| 02/22/2020 | 53 |
| 02/23/2020 | 54 |

*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:

| Hull ID | *R/V Ocean Explorer* | *R/V H.F. Stout* |
|---|---|---|
| **LOA** | 18 meters | 9.1 meters |
| **Draft** | 2 meters | 0.76 meters |

*Table 5: Vessels Used*

The R/V Ocean Explorer collected all of the sonar data for this survey. A smaller vessel, the R/V H.F. Stout, collected the bottom samples.

### B.1.2 Equipment

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

| Manufacturer | Model | Type |
|---|---|---|
| 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 3.15% 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 4.65% of mainscheme acquisition.

All crosslines for Survey H13319 were acquired on November 4, 2019 (DN 308), the first day 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 0.01m. Figure 3 is a histogram showing the distribution of depth differences for all comparison grid cells considered.

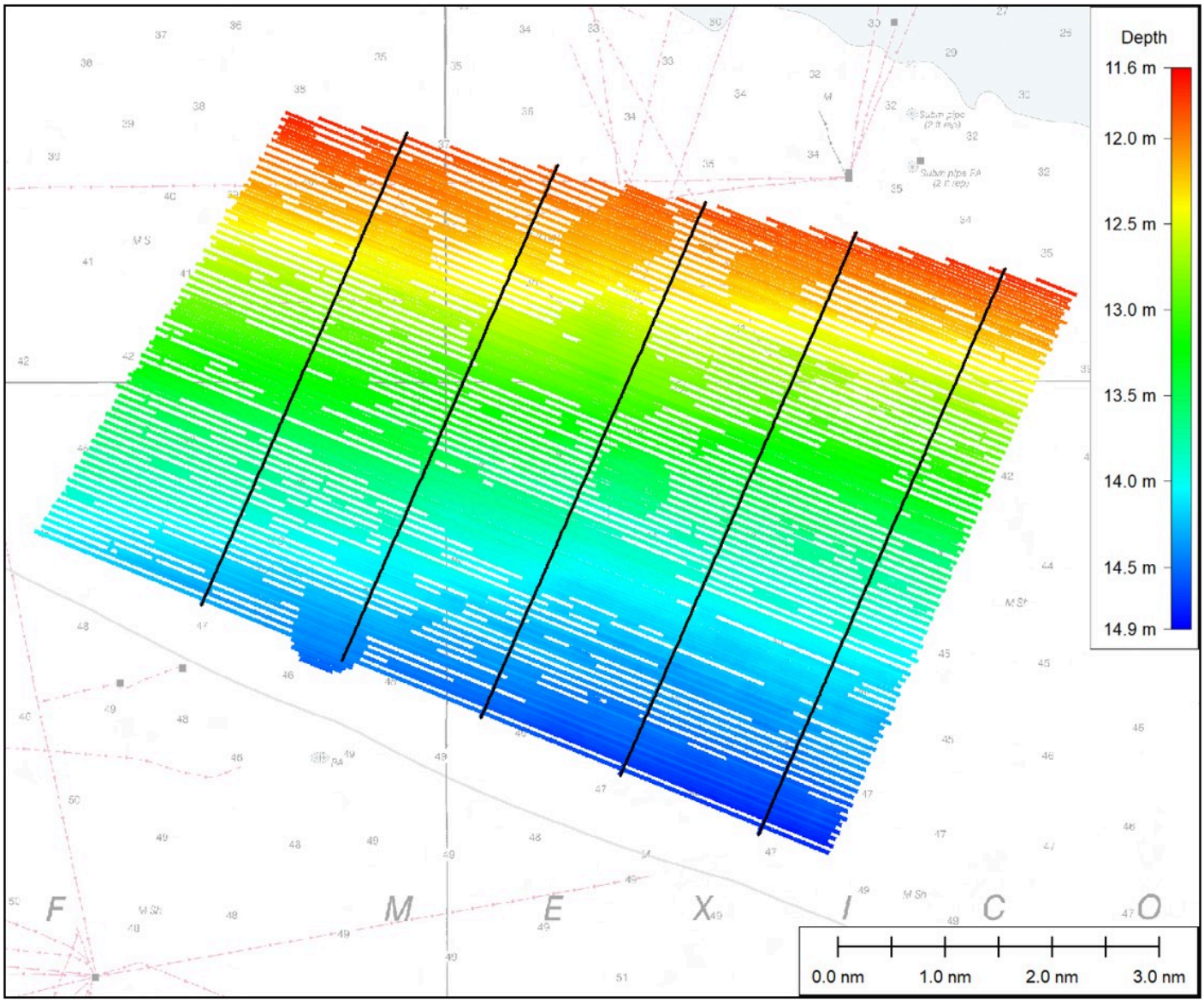


*Figure 2: H13319 MBES crosslines (black) overlain on MBES survey coverage*

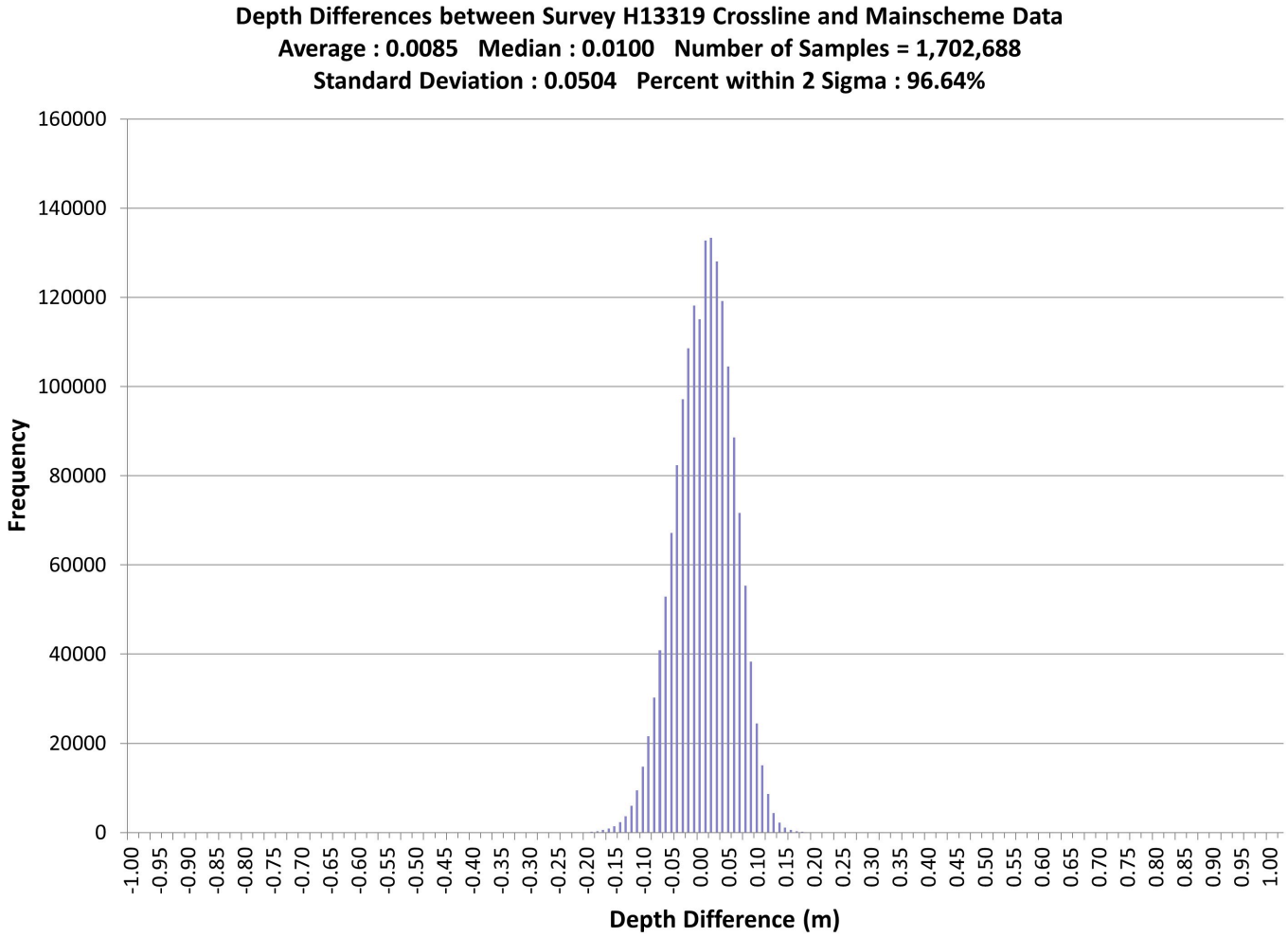


*Figure 3: H13319 MBES crossline less mainscheme comparison statistics*

### 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 |

*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 H13319 passed the uncertainty check, with 100% of nodes meeting the uncertainty standards (Figure 4).

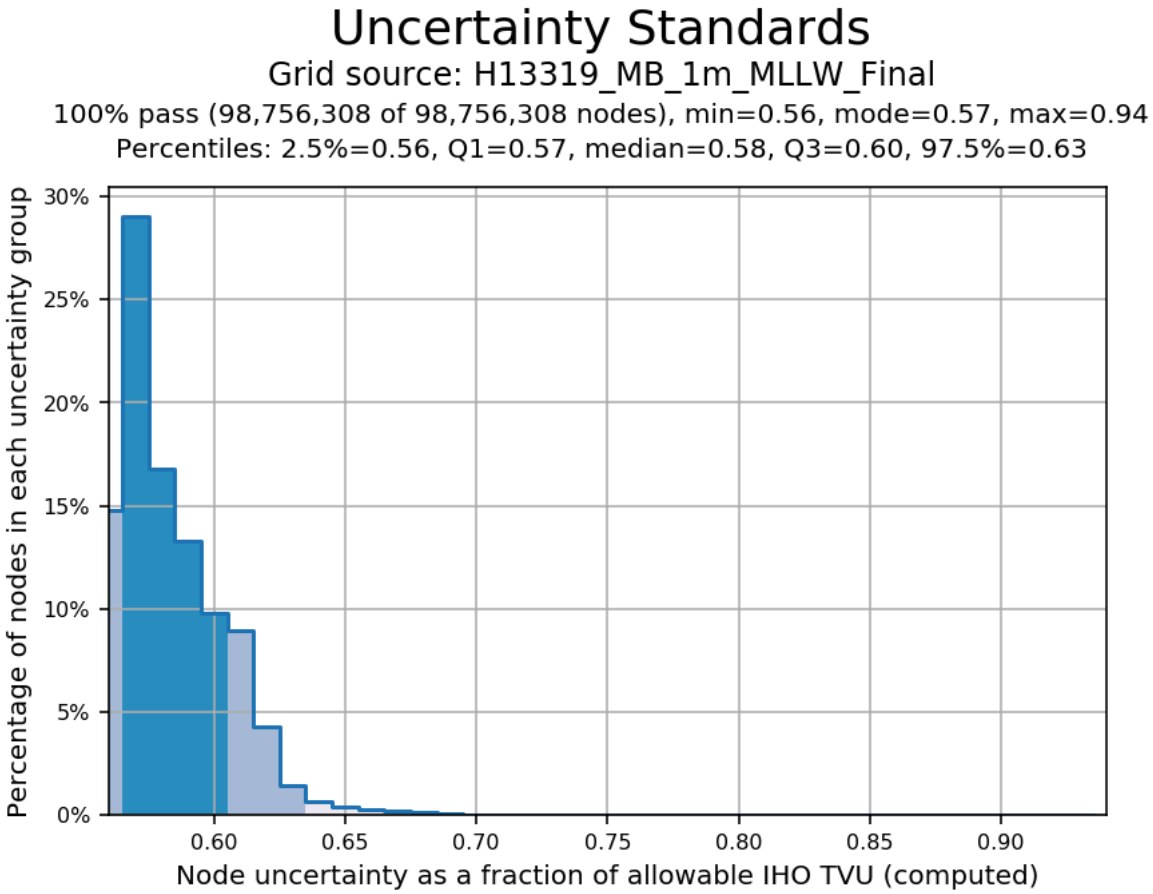


*Figure 4: H13319 MBES surface uncertainty statistics*

### B.2.3 Junctions

Two current surveys junction with Survey H13319. 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, which was 0.52m to 0.54m for the water depths in Survey H13319.

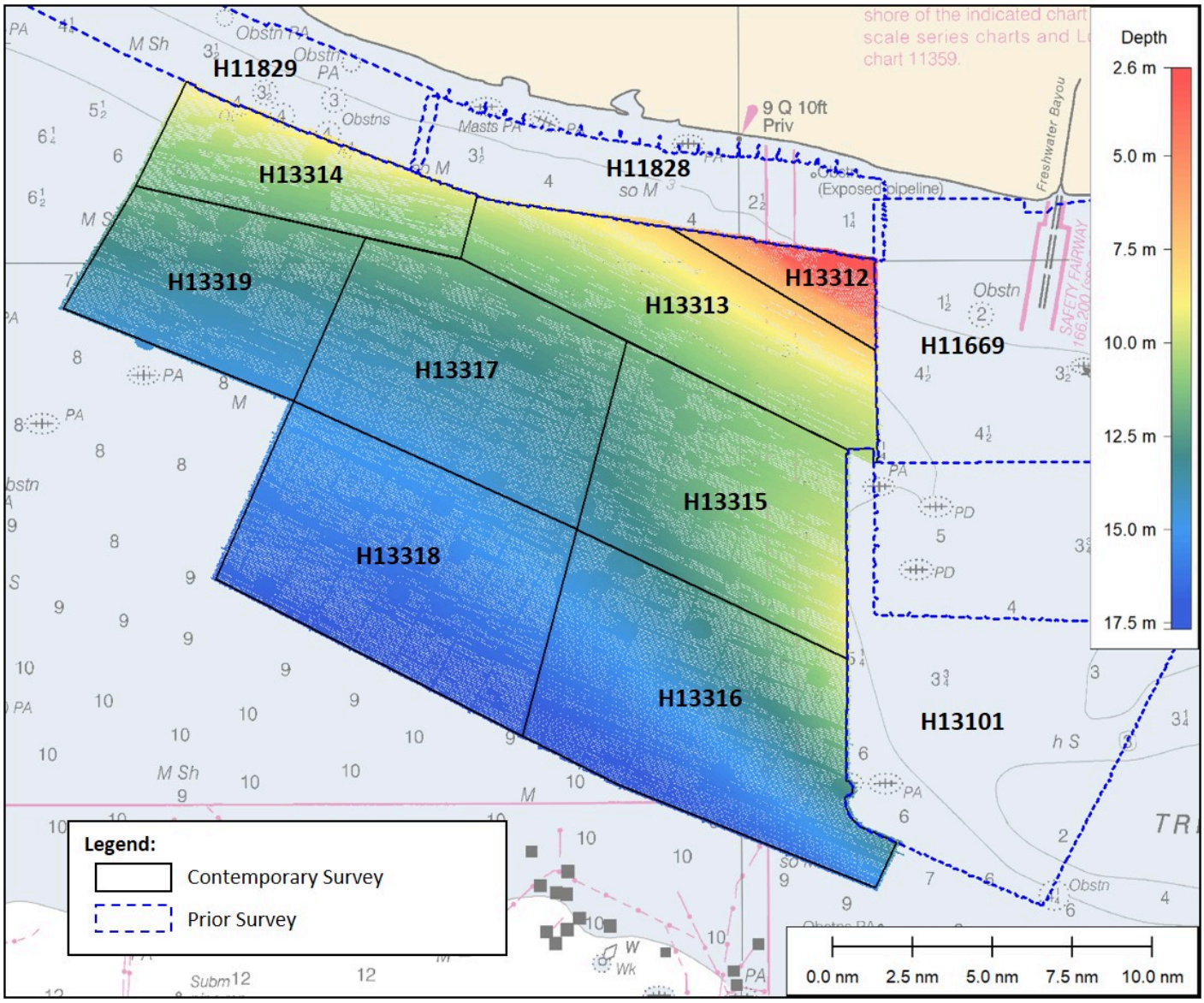


*Figure 5: Survey junctions for Project OPR-K354-KR-19*

The following junctions were made with this survey:

| Registry Number | Scale | Year | Field Unit | Relative Location |
|---|---|---|---|---|
| H13314 | 1:40000 | 2019 | Ocean Surveys, Inc. | N |
| H13317 | 1:40000 | 2019 | Ocean Surveys, Inc. | E |

*Table 9: Junctioning Surveys*

H13314

The junction between Surveys H13314 and H13319 is discussed in the DR for Survey H13314.

H13317

Current Survey H13317 junctions with the eastern border of Survey H13319, with an overlap area of approximately 10.6km long and 350m to 450m wide. Mainscheme lines of the two surveys are aligned with one another, yielding a relatively dense junction area.

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 6.

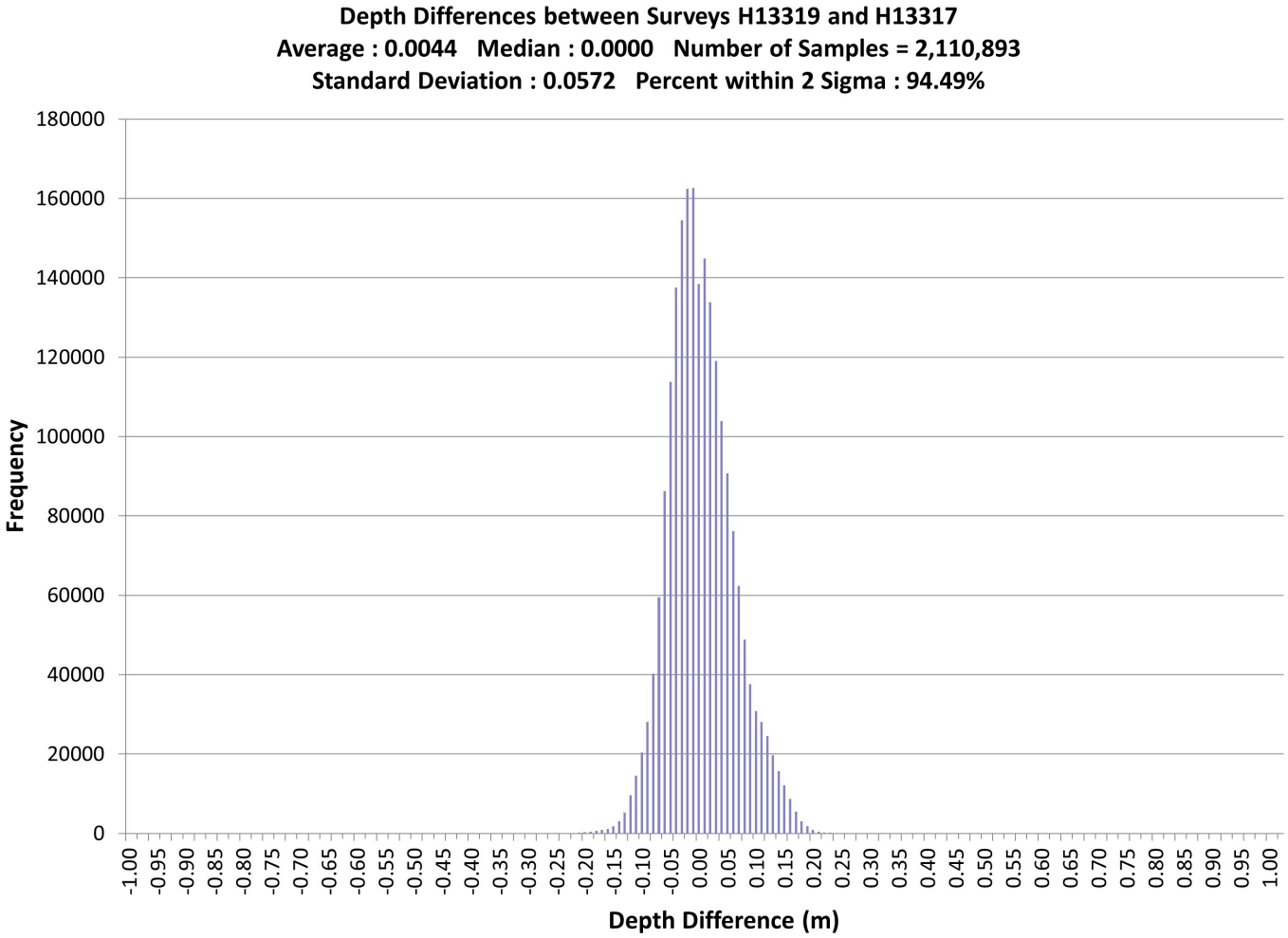


*Figure 6: H13319 MBES less H13317 junction comparison statistics*

### 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 7). 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.

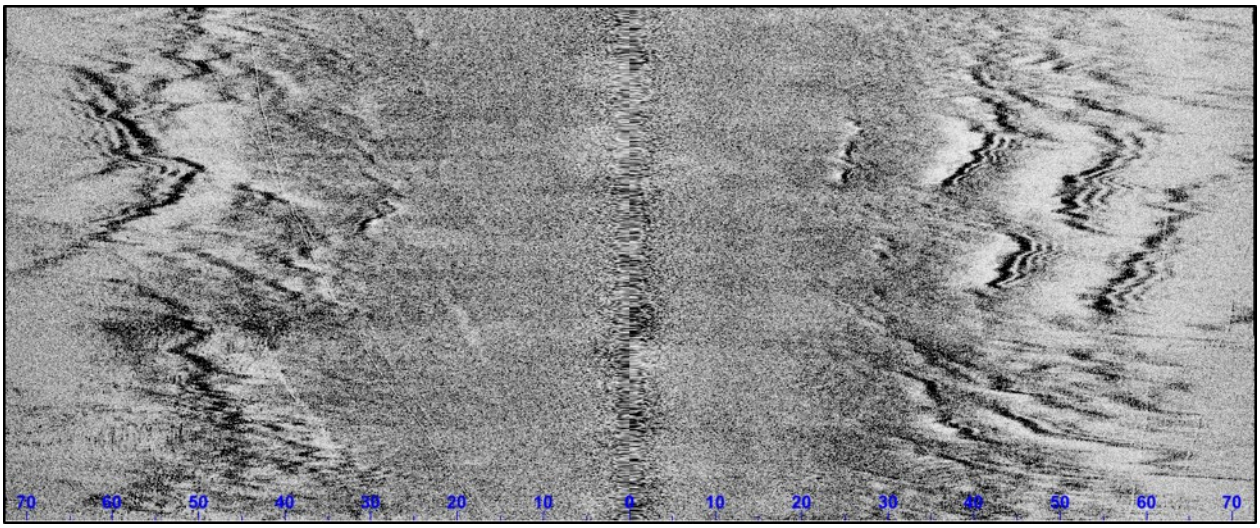


*Figure 7: SSS imagery showing refraction.*

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 8 and 9). 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.

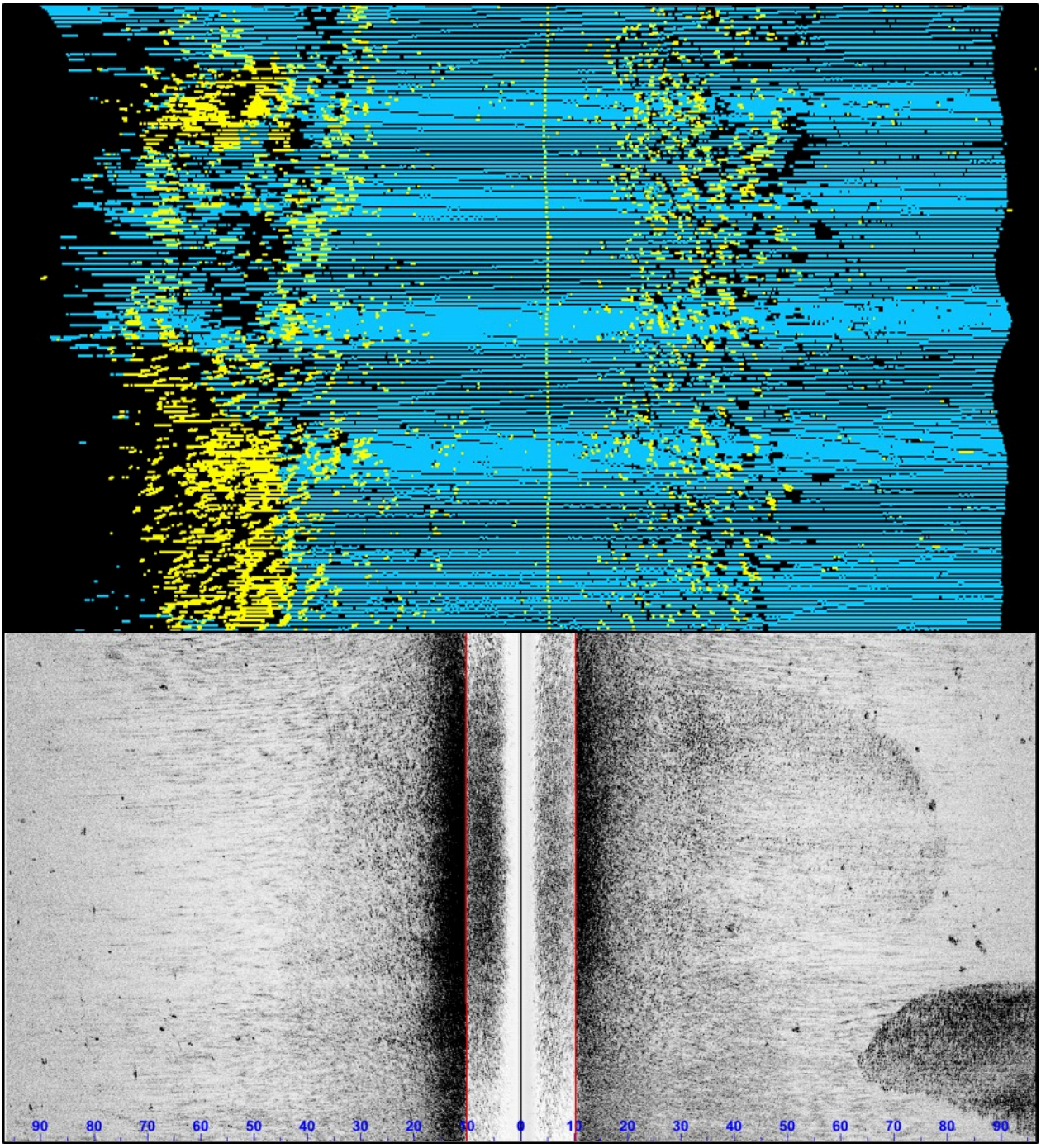


*Figure 8: MBES (top) and SSS (bottom) images showing a school of fish and the acoustic shadow it casts in each dataset. Rejected soundings are colored yellow.*

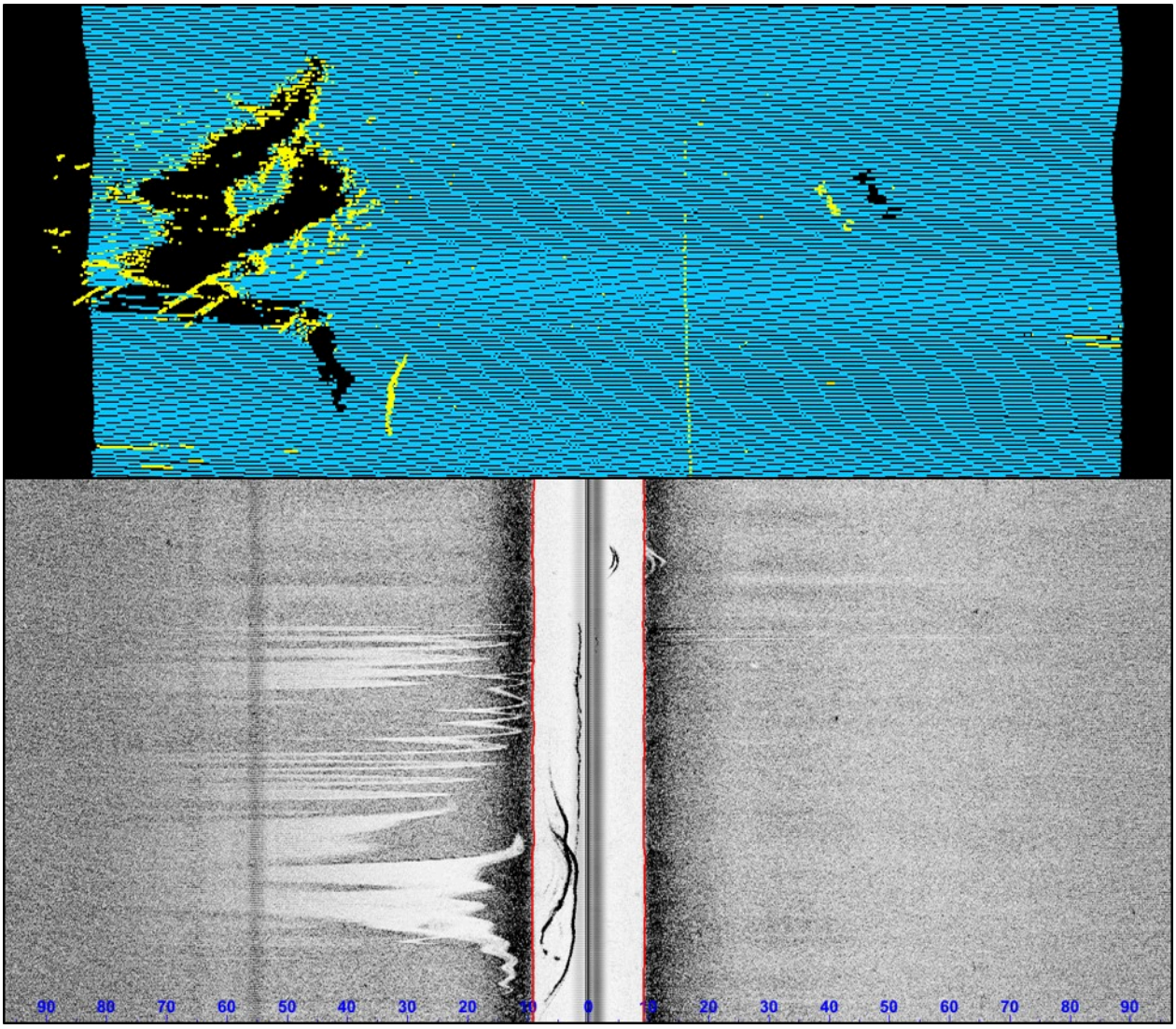


*Figure 9: MBES (top) and SSS (bottom) images showing dolphins and the acoustic shadow they cast in each dataset. Rejected soundings are colored yellow.*

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.

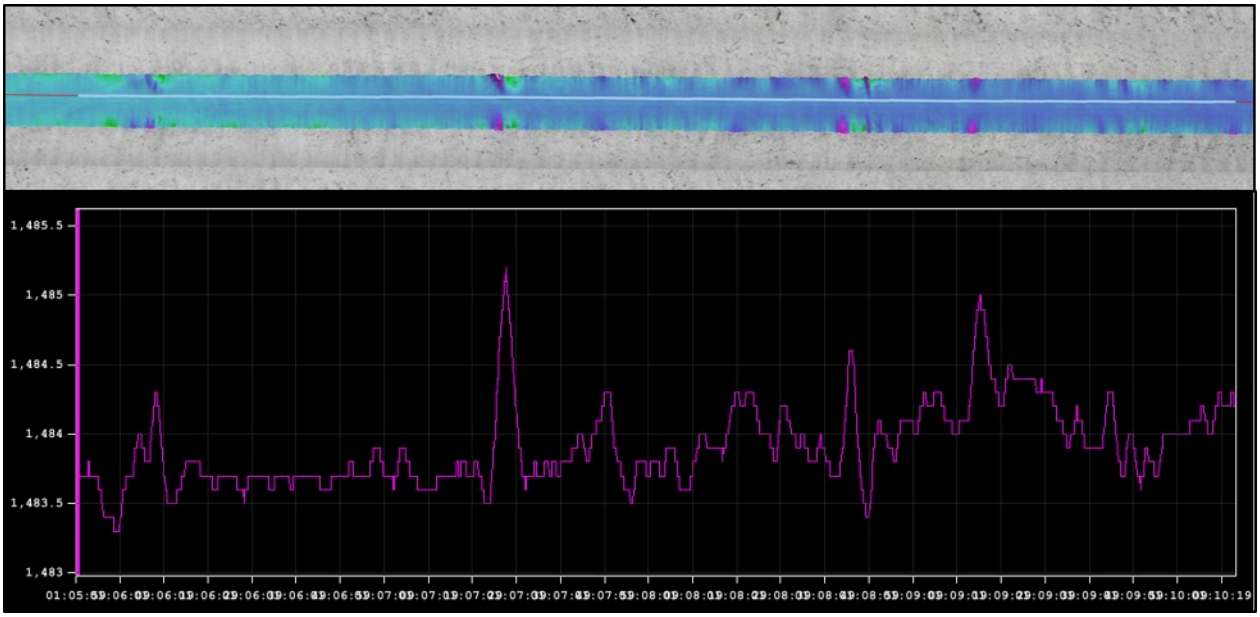


*Figure 10: Example MBES Refraction Artifacts: MBES/SSS plan view (top) with associated sound speed time series from the AML sensor at the MBES head (bottom).*

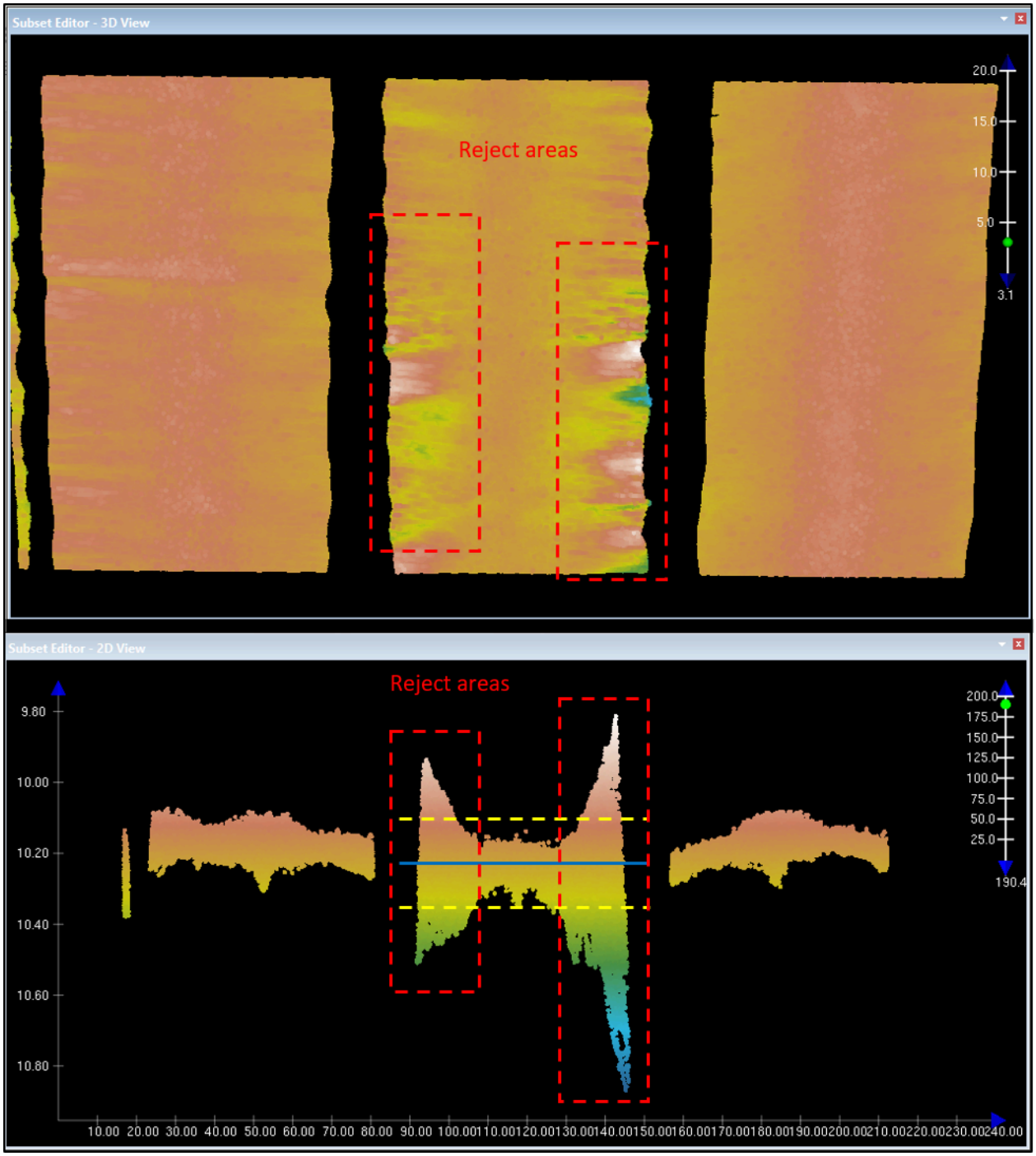


*Figure 11: Example MBES Refraction Artifacts: Plan (top) and profile (bottom) views show refraction areas where outer-beam MBES data were rejected.*

### 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 H13319 sound speed data in NetCDF format to the National Centers for Environmental Information (NCEI) on March 5, 2020 via the S2N tool. NCEI assigned the Accession Number 209252 to the data from 2019 and 209251 to the data from 2020. Correspondence regarding the NCEI data submission is included in Appendix II.

### B.2.8 Coverage Equipment and Methods

Survey H13319 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 H13319.

The HydrOffice "QC Tools" application was used to evaluate the density of the 1m finalized grid for Survey H13319. The data density plot (Figure 12) shows that the finalized surface meets the density coverage requirements, with more than 99.5% of nodes having 5 or more soundings.

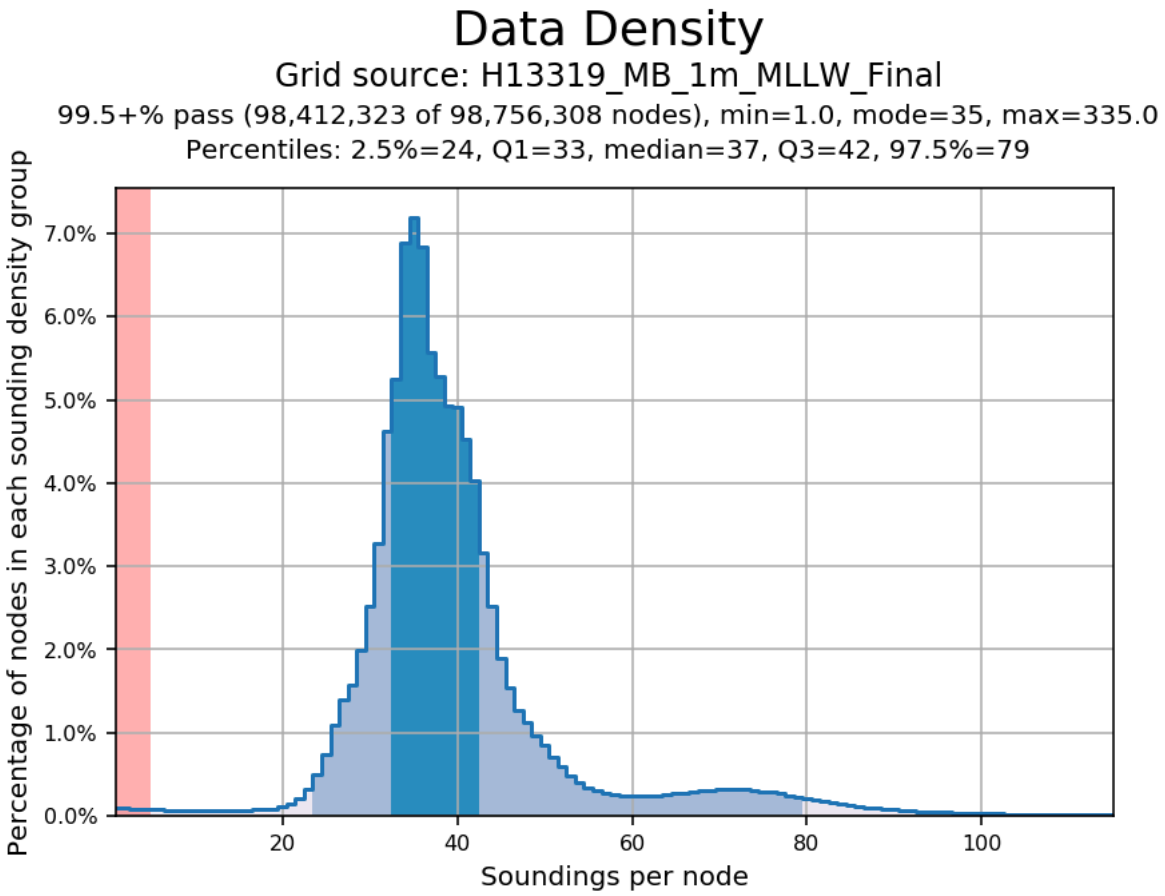


*Figure 12: H13319 MBES density statistics*

## 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 |
|---|---|---|---|---|---|
| H13319_MB_1m_MLLW_Final.csar | CARIS Raster Surface (CUBE) | 1 meters | 10.830 meters - 14.910 meters | NOAA_1m | Complete MBES |
| H13319_MB_1m_MLLW.csar | CARIS Raster Surface (CUBE) | 1 meters | 11.503 meters - 14.910 meters | NOAA_1m | Complete MBES |
| H13319_SSSAB_1m_600kHz_1of2.tif | SSS Mosaic | 1 meters | - | N/A | 100% SSS |
| H13319_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:

| HVCR Site ID | Base Station ID |
|---|---|
| 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:

| HVCR Site ID | Base Station ID |
|---|---|
| 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 13, 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, one notice was ongoing concerning a platform with an inoperable sound signal, first reported in Notice 11/13.

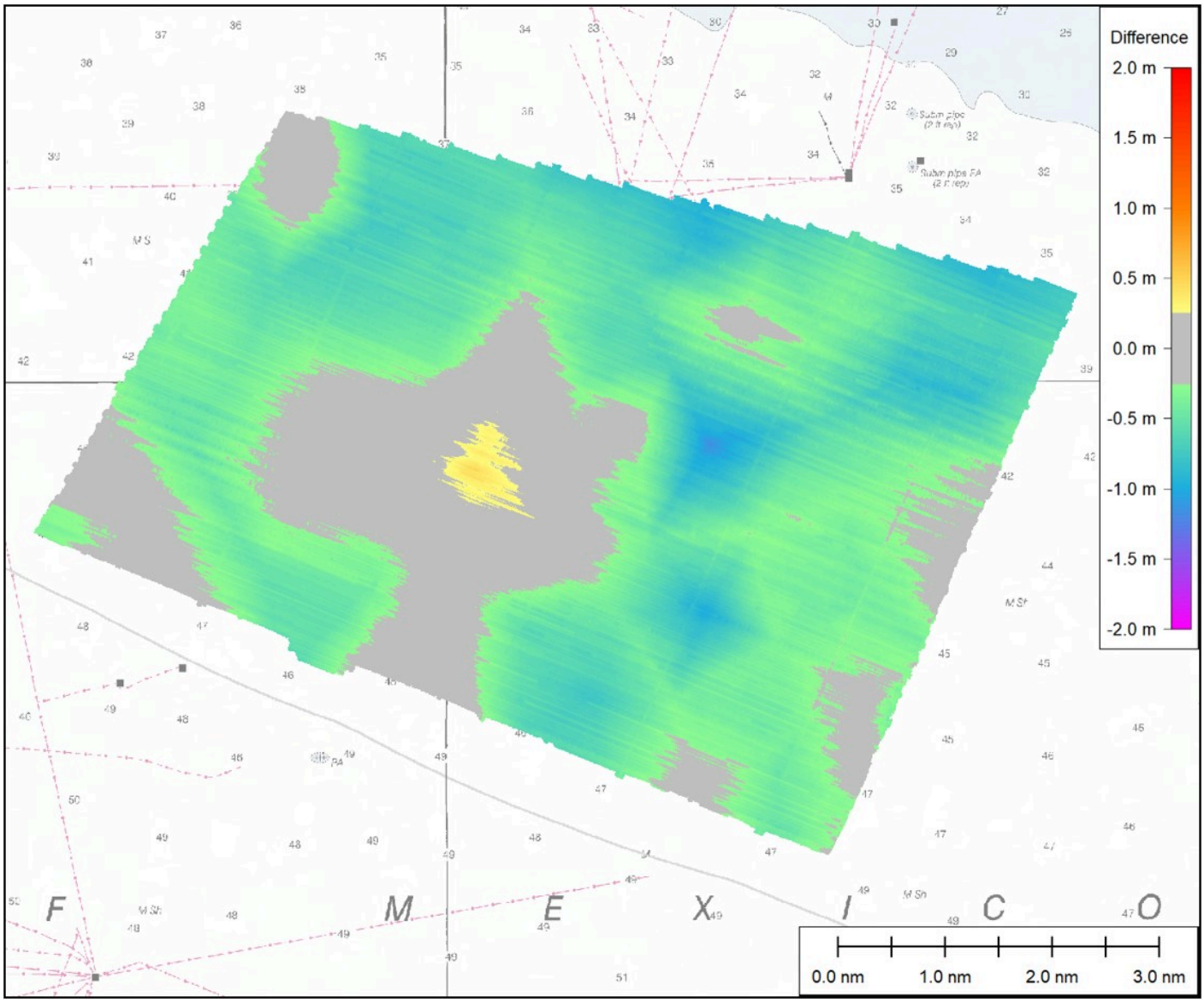


*Figure 13: H13319 MBES less ENC charted depths surface comparison*

### D.1.1 Electronic Navigational Charts

The following are the largest scale ENCs, 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 |

*Table 14: Largest Scale ENCs*

US4LA14M

ENC US4LA14M covers all of Survey H13319. Most of the survey area was slightly deeper than charted, with some areas of no significant change and a patch of shoaling near the center of the survey (Figure 13). There were no depth contours charted within Survey H13319.

### D.1.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

### D.1.3 Charted Features

There were 3 charted features assigned in the CSF for Survey H13319: 1 wreck (PA), 1 pile (labeled "Pipes"), and 1 obstruction (PA). All 3 features were disproved. See the FFF for details.

### D.1.4 Uncharted Features

There were 3 new obstructions found within Survey H13319; 1 near a disproved charted wreck, 1 near a disproved charted platform, and 1 at the intersection of 2 charted pipelines. See the FFF for details.

### D.1.5 Shoal and Hazardous Features

There was 1 DTON submitted for Survey H13319. No charted shoals exist, nor were any other hazardous features observed.

### 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 6 bottom samples collected in Survey H13319. 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 14 submarine pipeline features assigned in the CSF for Survey H13319. 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 H13319, BOEM data included 3 additional uncharted pipelines. OSI survey data included 3 segments of exposed pipe along charted pipelines, and 2 pipe arches near the end of a charted pipeline. See the Non-DTON Seep and Pipeline Report for details.

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 H13319.

### D.2.5 Platforms

The CSF for Survey H13319 included 7 assigned platforms, and a review of BOEM platform data identified an additional 10 potentially uncharted BOEM platforms. However, there were no platforms present in Survey H13319.

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 H13319.

### 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 16:31:49 -04'00' |
| David T. Somers | Data Processing Manager | 04/14/2020 | David T. Somers 2020.04.14 16:32:09 -04'00' |

# F. Table of Acronyms

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

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

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

**From:** Douglas Wood - NOAA Federal
**To:** John R. Bean
**Cc:** ocs.ndb@noaa.gov; 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> 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
>
> **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 | www.oceansurveys.com

--

Douglas Wood
Physical Scientist
Hydrographic Surveys Division

| | |
|---|---|
| **From:** | David Somers |
| **To:** | AHB Chief - NOAA Service Account; Douglas Wood - NOAA Federal; Christina Fandel - NOAA Federal; Kathryn Pridgen - NOAA Federal |
| **Cc:** | John R. Bean; George Reynolds |
| **Subject:** | H13319 DtoN #1 |
| **Date:** | Monday, March 9, 2020 9:52:53 AM |
| **Attachments:** | H13319_DTON_1_Obstn.zip |

---

Good morning,

OSI has compiled and attached a DtoN feature file along with supporting imagery for survey H13319.

H13319 DtoN 1 - Obstruction

Please let me know if OSI can provide any additional information regarding this DtoN.

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 | www.oceansurveys.com

| | |
|---|---|
| **From:** | Castle Parker - NOAA Federal |
| **To:** | OCS NDB - NOAA Service Account |
| **Cc:** | AHB Chief - NOAA Service Account; Tim Osborn - NOAA Federal; pipelines@bsee.gov; David Somers; John R. Bean; George Reynolds; Douglas Wood - NOAA Federal; Christina Fandel - NOAA Federal |
| **Subject:** | H13319 DtoN #1 Elevated Pipeline Submission to NDB |
| **Date:** | Monday, March 9, 2020 12:46:27 PM |
| **Attachments:** | H13319_DtoN_1.zip |

Good day,

Please find attached compressed file for H13319 DtoN Report #1 containing an elevated and exposed pipeline rising vertical in the water column. The obstruction is located approximately 7.61nm offshore and south of Joseph Harbor Bayou, LA. The submission to Nautical Data Branch (NDB) and Marine Chart Division (MCD) is intended for chart application. The feature's information and status has also been submitted to BOEM\BSEE.

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*
*office (757) 364-7472*

| | |
|---|---|
| **From:** | OCS NDB - NOAA Service Account |
| **To:** | Castle Parker - NOAA Federal |
| **Cc:** | AHB Chief - NOAA Service Account; Tim Osborn - NOAA Federal; pipelines@bsee.gov; David Somers; John R. Bean; George Reynolds; Douglas Wood - NOAA Federal; Christina Fandel - NOAA Federal; 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: H13319 DtoN #1 Elevated Pipeline Submission to NDB |
| **Date:** | Tuesday, March 10, 2020 11:32:49 AM |
| **Attachments:** | H13319_DtoN_1.zip |

DD-32158 has been registered as a "History Letter" by the Nautical Data Branch and will not be directed to Products Branch G for processing.

The DtoN reported is one submerged obstruction (elevated and exposed pipeline) located approximately 7.61 nm offshore and south of Joseph Harbor Bayou, LA, in the Gulf of Mexico. The obstruction is located ~40 meters from a charted pipeline.

According to the following excerpts from MCD policy for exposed submarine pipelines:

"When an obstruction (exposed pipeline) is reported to MCD in a DtoN in advance of an HSD survey, contract survey or descriptive report, the provided positions shall be used to confirm that a submarine pipeline symbol is currently charted.

If a submarine pipeline symbol is currently charted, then the reported obstruction (exposed pipeline) shall not be charted, and no further charting action shall be taken.

If any part of the Chart No. 1 obstruction symbol K.40 used to chart an obstruction (exposed pipeline) intersects a charted submarine pipeline, then that is considered within tolerance, and the obstruction symbol for the reported exposed pipeline shall not be charted."

The reported obstruction is within the tolerance specified above.

The following charts are affected:
11344 KAPP 123
11345 KAPP 47
11330 KAPP 195

The following ENCs are affected:
US4LA21M
US3LA01M

References:
H13319
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

On Mon, Mar 9, 2020 at 12:46 PM Castle Parker - NOAA Federal <castle.e.parker@noaa.gov> wrote:

> Good day,
>
> Please find attached compressed file for H13319 DtoN Report #1 containing an elevated and exposed pipeline rising vertical in the water column. The obstruction is located approximately 7.61nm offshore and south of Joseph Harbor Bayou, LA. The submission to Nautical Data Branch (NDB) and Marine Chart Division (MCD) is intended for chart application. The feature's information and status has also been submitted to BOEM\BSEE.
>
> 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*
>
> *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<br>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.**
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 | www.oceansurveys.com

**From:** Jay Nunenkamp - NOAA Federal
**To:** John R. Bean
**Cc:** 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> 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 | 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: [Send2NCEI] data submission confirmation for Reference ID: X6JDJT |
| **Date:** | Thursday, March 5, 2020 10:31:16 AM |

---

Submission for H13314, H13316, H13317, H13318, H13319 (RV Ocean Explorer 2019)

----- Forwarded Message -----
**From:** NODC.DataOfficer@noaa.gov <nodc.dataofficer@noaa.gov>
**To:** "jjd@oceansurveys.com" <jjd@oceansurveys.com>
**Sent:** Thursday, March 5, 2020, 10:15:10 AM EST
**Subject:** [Send2NCEI] data submission confirmation for Reference ID: X6JDJT

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. Also, if at any time you wish to update your submission package, please send an e-mail to 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: P46AC9 |
| **Date:** | Thursday, March 5, 2020 10:34:41 AM |

---

Submission for H13314, H13317, H13318, H13319 (RV Ocean Explorer 2020)

----- Forwarded Message -----
**From:** "nodc.dataofficer@noaa.gov" <nodc.dataofficer@noaa.gov>
**To:** "jjd@oceansurveys.com" <jjd@oceansurveys.com>
**Sent:** Thursday, March 5, 2020, 10:30:15 AM EST
**Subject:** [Send2NCEI] data submission confirmation for Reference ID: P46AC9

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. Also, if at any time you wish to update your submission package, please send an e-mail to 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; John R. Bean; David Somers |
| **Subject:** | Fw: NCEI acceptance confirmation for Reference ID: P46AC9 |
| **Date:** | Monday, March 9, 2020 2:08:11 PM |

---

----- 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 9, 2020, 01:57:13 PM EDT
**Subject:** NCEI acceptance confirmation for Reference ID: P46AC9

Dear Joseph DiPalma:

Thank you for sending your data and metadata files to 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.

After reviewing your submission package (metadata and data), I assigned your submission an NCEI Accession Number 0209251. This number is a tracking identifier for the NCEI Ocean Archive. Please reference this number when corresponding with NCEI about these data.

You can find information about these archived data at https://accession.nodc.noaa.gov/0209251.

After further reviewing your data, creating any additional representations of these data in a format that is more preservable in the NCEI Ocean Archive, and developing necessary tracking metadata, NCEI will publish these archived data online. You may access the archival copy of your original data via the link listed above.

In addition to creating an archival copy of these data, 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. Please let me know if you have any questions or if you have additional data and documentation that you would like to archive with these data.

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

Regards,
Alexandra Grodsky
Alexandra.Grodsky@noaa.gov

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: P46AC9
From: NODC.DataOfficer@noaa.gov
To: 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. Also, if at any time you wish to update your submission package, please send an e-mail to 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; John R. Bean; David Somers |
| **Subject:** | Fw: NCEI acceptance confirmation for Reference ID: X6JDJT |
| **Date:** | Monday, March 9, 2020 2:08:23 PM |

---

----- 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 9, 2020, 01:57:51 PM EDT
**Subject:** NCEI acceptance confirmation for Reference ID: X6JDJT

Dear Joseph DiPalma:

Thank you for sending your data and metadata files to 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.

After reviewing your submission package (metadata and data), I assigned your submission an NCEI Accession Number 0209252. This number is a tracking identifier for the NCEI Ocean Archive. Please reference this number when corresponding with NCEI about these data.

You can find information about these archived data at https://accession.nodc.noaa.gov/0209252.

After further reviewing your data, creating any additional representations of these data in a format that is more preservable in the NCEI Ocean Archive, and developing necessary tracking metadata, NCEI will publish these archived data online. You may access the archival copy of your original data via the link listed above.

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

Regards,
Alexandra Grodsky
Alexandra.Grodsky@noaa.gov

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: X6JDJT
From: NODC.DataOfficer@noaa.gov
To: 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. Also, if at any time you wish to update your submission package, please send an e-mail to 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 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. 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

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: P46AC9
From: NODC.DataOfficer@noaa.gov
To: 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. Also, if at any time you wish to update your submission package, please send an e-mail to 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. 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

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: X6JDJT
From: NODC.DataOfficer@noaa.gov
To: 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.

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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: 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.

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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

# NCEI acceptance confirmation for Reference ID: EF4MXG

From: alexandra.grodsky@noaa.gov

To: jjd@oceansurveys.com

Cc: alexandra.grodsky@noaa.gov

Date: Wednesday, March 25, 2020, 05:46 PM EDT

Dear Joseph DiPalma:

Thank you for sending your data and metadata files to 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 2020-03-11, on 2020-03-18 18:37:37 via S2N.

After reviewing your submission package (metadata and data), I assigned your submission an NCEI Accession Number 0209229. This number is a tracking identifier for the NCEI Ocean Archive. Please reference this number when corresponding with NCEI about these data.

You can find information about these archived data at https://accession.nodc.noaa.gov/0209229.

After further reviewing your data, creating any additional representations of these data in a format that is more preservable in the NCEI Ocean Archive, and developing necessary tracking metadata, NCEI will publish these archived data online. You may access the archival copy of your original data via the link listed above.

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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. Please let me know if you have any questions or if you have additional data and documentation that you would like to archive with these data.

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

Regards,
Alexandra Grodsky
Alexandra.Grodsky@noaa.gov

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: EF4MXG
From: NODC.DataOfficer@noaa.gov
To: 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 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.

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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. Also, if at any time you wish to update your submission package, please send an e-mail to 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

# NCEI acceptance confirmation for Reference ID: T4B23Y

From: alexandra.grodsky@noaa.gov

To: jjd@oceansurveys.com

Cc: alexandra.grodsky@noaa.gov

Date: Wednesday, March 25, 2020, 05:45 PM EDT

Dear Joseph DiPalma:

Thank you for sending your data and metadata files to 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 2019-10-03 to 2020-03-10, on 2020-03-18 18:39:05 via S2N.

After reviewing your submission package (metadata and data), I assigned your submission an NCEI Accession Number 0209228. This number is a tracking identifier for the NCEI Ocean Archive. Please reference this number when corresponding with NCEI about these data.

You can find information about these archived data at https://accession.nodc.noaa.gov/0209228.

After further reviewing your data, creating any additional representations of these data in a format that is more preservable in the NCEI Ocean Archive, and developing necessary tracking metadata, NCEI will publish these archived data online. You may access the archival copy of your original data via the link listed above.

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

Regards,
Alexandra Grodsky
Alexandra.Grodsky@noaa.gov

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: T4B23Y
From: NODC.DataOfficer@noaa.gov
To: 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 2019-10-03 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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access. In addition, NCEI may include all or part of your data into one or more product databases, such as the World Ocean Database.

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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

# NCEI online publication confirmation of NCEI Accession 0209229

From: alexandra.grodsky@noaa.gov

To: jjd@oceansurveys.com

Cc: alexandra.grodsky@noaa.gov

Date: Friday, March 27, 2020, 03:00 PM EDT

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 2020-03-11, on 2020-03-18 18:37:37 via S2N.

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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 0209229, please send an e-mail to 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

---

Subject: [Send2NCEI] data submission confirmation for Reference ID: EF4MXG
From: NODC.DataOfficer@noaa.gov
To: 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 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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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. Also, if at any time you wish to update your submission package, please send an e-mail to 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:** | John R. Bean |
| **To:** | "pipelines@bsee.gov" |
| **Cc:** | "Douglas Wood - NOAA Federal"; "Christy Fandel - NOAA Federal"; "Tim Osborn - NOAA Federal" |
| **Subject:** | OPR-K354-KR-19_Seep and pipeline Reports: H13312, H13313, H13314, H13316, H13319 |
| **Date:** | Friday, March 13, 2020 1:13:00 PM |
| **Attachments:** | H13314_Non-DTON_Seep_and_Pipeline_Report.pdf<br>H13316_Non-DTON_Seep_and_Pipeline_Report.pdf<br>H13319_Non-DTON_Seep_and_Pipeline_Report.pdf<br>H13312_Non-DTON_Seep_and_Pipeline_Report.pdf<br>H13313_Non-DTON_Seep_and_Pipeline_Report.pdf |

---

Good afternoon,

Please see the attached Seep and Pipeline Reports for sheets H13312, 13, 14, 16, and 19 for project OPR-K354-KR-19 Approaches to Louisiana Coast. Please let me know if you have any questions.

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 | www.oceansurveys.com

**From:** Douglas Wood - NOAA Federal
**To:** John R. Bean; Christina Fandel - NOAA Federal; David Somers
**Subject:** Re: OPR-K354-KR-19_Seep and pipeline Reports: H13312, H13313, H13314, H13316, H13319
**Date:** Friday, April 3, 2020 2:51:48 PM

---

Hi John,

we received the non-DtoN pipeline report and it appears that you also submitted to the navigation manager and *pipelines@bsee*.gov per the instruction in HSSD 1.7.

Thank you.

Doug

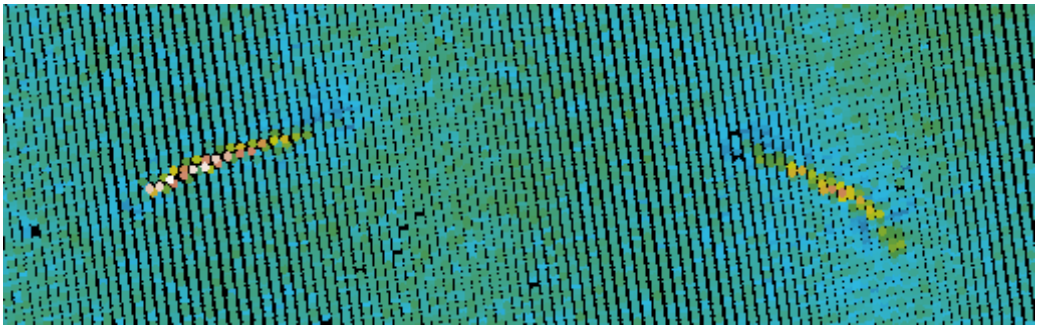
On Fri, Mar 13, 2020 at 1:15 PM John R. Bean <jrb@oceansurveys.com> wrote:

> Good afternoon,
>
> Please see the attached Seep and Pipeline Reports for sheets H13312, 13, 14, 16, and 19 for project OPR-K354-KR-19 Approaches to Louisiana Coast. Please let me know if you have any questions.
>
> 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 | www.oceansurveys.com

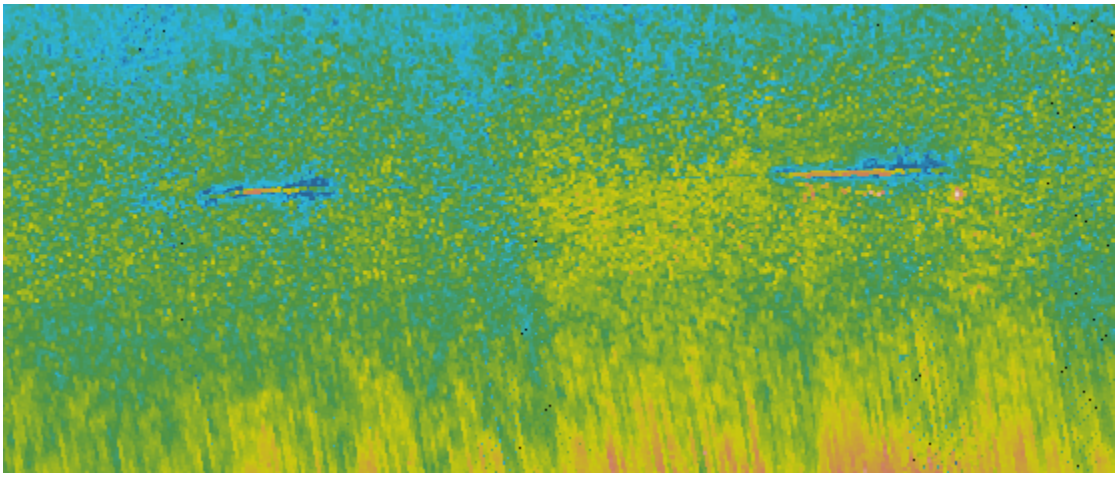
--
Douglas Wood
Physical Scientist
Hydrographic Surveys Division
Office of Coast Survey

| Figure Number | Exposed Pipeline or Seep (Latitude) | Exposed Pipeline or Seep (Longitude) | Distance to Charted Pipeline or Platform | Approx. Length of Exposed Pipeline | Date/Time of Observation (UTC) | Approx. Water Depth Near Feature | Height Above Bottom | Comment |
|---|---|---|---|---|---|---|---|---|
| Figure 1 | 29.5181740 N | 92.8222092 W | 66 m from charted pipeline | 3.6 m<br>4.0 m | Feb 19, 2020 03:15 | 12.3 m | 0.2 m<br>0.3 m | Two pipe arches near the end of a charted pipeline |
| Figure 2 | 29.5311583 N | 92.8216370 W | 0 m from charted pipeline | 8.7 m<br>9.9 m | Feb 19, 2020 05:20 | 11.9 m | 0.1 m<br>0.1 m | Two segments of exposed pipe separated by approximately 30 m |
| Figure 3 | 29.4888890 N | 92.7883392 W | 0 m from charted pipeline | 5.5 m | Feb 18, 2020 15:25 | 13.2 m | 0.15 m | Exposed pipe |

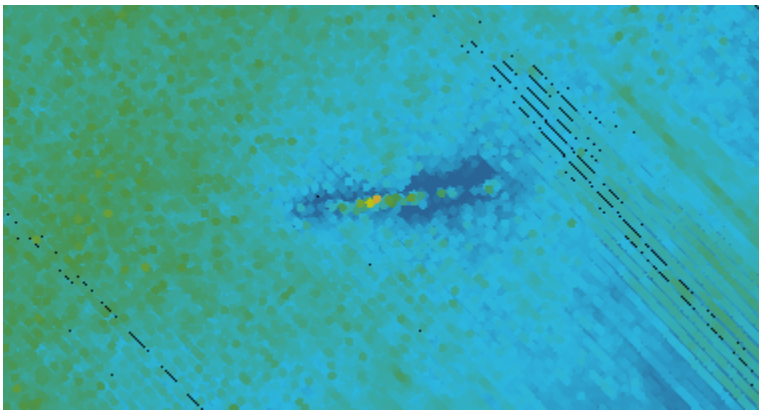
H13319 Non-DTON Seep and Pipeline Report Figure 1



H13319 Non-DTON Seep and Pipeline Report Figure 2



H13319 Non-DTON Seep and Pipeline Report Figure 3



| | |
|---|---|
| **From:** | David Somers |
| **To:** | 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<br>H13313_Survey_Outline.000<br>H13314_Survey_Outline.000<br>H13315_Survey_Outline.000<br>H13316_Survey_Outline.000<br>H13317_Survey_Outline.000<br>H13318_Survey_Outline.000<br>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.**
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**From:** Douglas Wood - NOAA Federal
**To:** John R. Bean; Christina Fandel - NOAA Federal
**Subject:** Re: OPR-K354-KR-19 Approaches to Louisiana Coast Monthly Progress Report for March 2020
**Date:** Friday, April 3, 2020 1:50:45 PM

---

Hi John,

Thank you. I checked this out as well as the survey outlines received earlier.

Doug

On Fri, Apr 3, 2020 at 1:47 PM John R. Bean <jrb@oceansurveys.com> wrote:

> Good afternoon,
>
> Our monthly progress report for March 2020 is attached. The report has also been posted to TOMIS.
>
> 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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>
> jrb@oceansurveys.com | www.oceansurveys.com

--
Douglas Wood
Physical Scientist

Hydrographic Surveys Division
Office of Coast Survey
National Oceanic and Atmospheric Administration
1315 East West Highway
Silver Spring, MD 20910
240-533-0042 -
(Teleworking until further notice, office phone will not be answered)

Click here for a StoryMap of the 2020 NOAA Hydrographic Surveys
Find us on Facebook, Twitter and the NOAA Coast Survey blog

**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

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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 coincidently 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

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**From:** John Bean
**To:** 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

---

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> 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

H13319

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: Meghan Mcgovern Digitally signed by MCGOVERN.MEGHAN.ELIZABET H.1284020495 Date: 2021.06.04 10:16:20 -04'00'

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