H13266

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

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area
Registry Number:	H13266

LOCALITY

State(s):	Louisiana
General Locality:	Chandeleur Islands, Louisiana
Sub-locality:	27 NM ESE of Freemason Islands

2019

CHIEF OF PARTY
Jonathan L. Dasler, PE, PLS, CH

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H13266**

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:	**Chandeleur Islands, Louisiana**
Sub-Locality:	**27 NM ESE of Freemason Islands**
Scale:	**40000**
Dates of Survey:	**09/18/2019 to 01/14/2020**
Instructions Dated:	**06/19/2019**
Project Number:	**OPR-J311-KR-19**
Field Unit:	**David Evans and Associates, Inc.**
Chief of Party:	**Jonathan L. Dasler, PE, PLS, CH**
Soundings by:	**Multibeam Echo Sounder**
Imagery by:	**Multibeam Echo Sounder Backscatter & Side Scan Sonar**
Verification by:	**Atlantic Hydrographic Branch**
Soundings Acquired in:	**meters at Mean Lower Low Water**

Remarks:

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 16N, 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 H13266

Project: OPR-J311-KR-19

Locality: Chandeleur Islands, Louisiana

Sublocality: 27 NM ESE of Freemason Islands

Scale: 1:40000

September 2019 - January 2020

David Evans and Associates, Inc.

Chief of Party: Jonathan L. Dasler, PE, PLS, CH

A. Area Surveyed

David Evans and Associates, Inc. (DEA) conducted a hydrographic survey of the assigned area in the Chandeleur Islands. Survey H13266 was conducted in accordance with the May 21, 2019 Statement of Work and Hydrographic Survey Project Instructions June 19, 2019.

The Hydrographic Survey Project Instructions reference the National Ocean Service (NOS) Hydrographic Surveys Specifications and Deliverables Manual (HSSD) (March 2019) as the technical requirements for this project.

A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
29° 47' 21.91" N 88° 35' 31.85" W	29° 32' 11.6" N 88° 21' 56.26" W

Table 1: Survey Limits

Survey Limits were surveyed in accordance with the requirements in the Project Instructions and the HSSD.

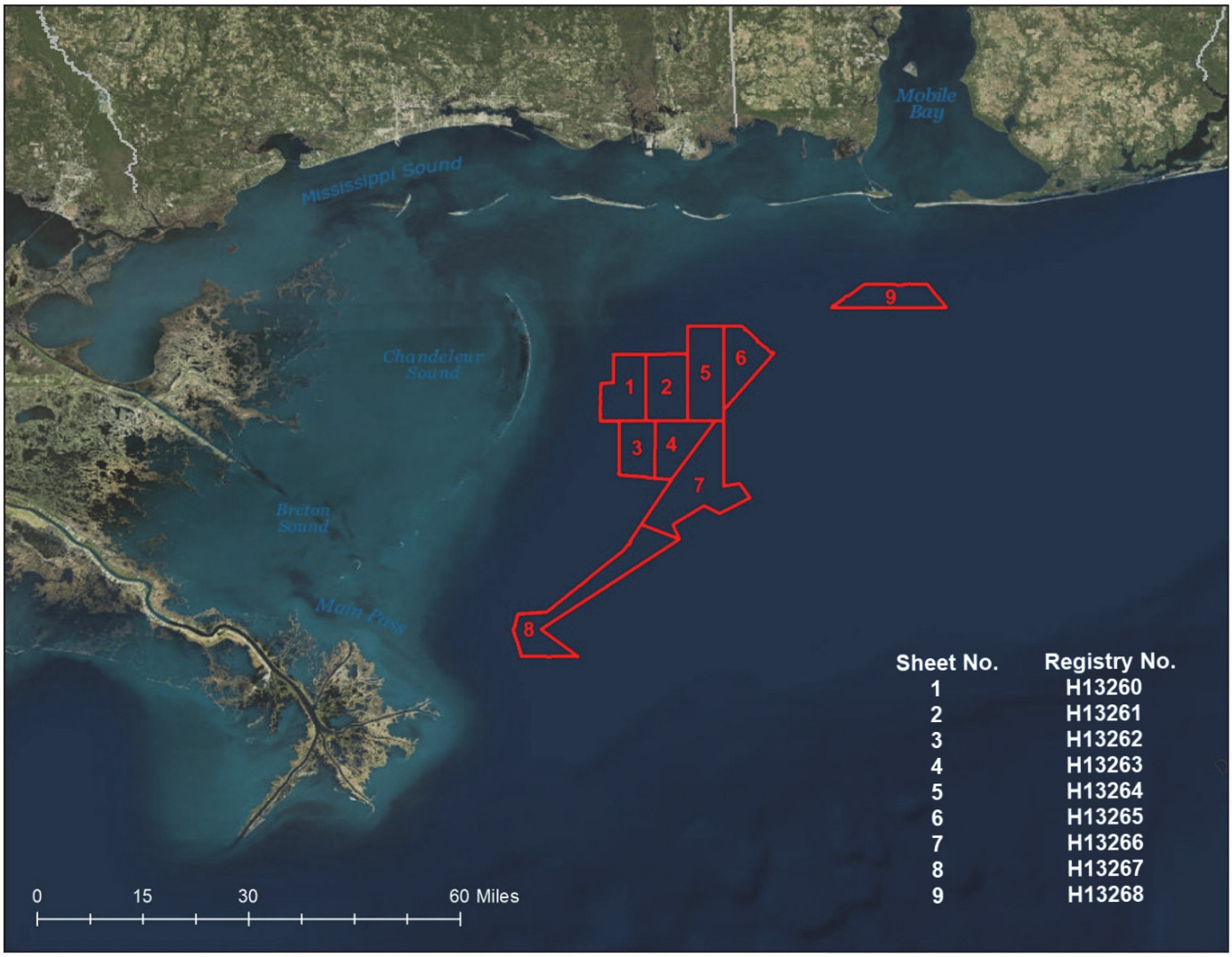


Figure 1: OPR-J311-KR-19 Assigned Survey Areas

A.2 Survey Purpose

The project's survey purpose for all surveys, which was defined in the Project Instructions, is "The Chandeleur Islands is an active oil and gas exploration area, as well as a popular fishing grounds and includes the Breton National Wildlife Refuge.*1 The Chandeleur Islands were also severely impacted by recent hurricanes like Dennis and Katrina, which resulted in major erosion of the islands. Erosion, sea level rise, and sediment influx from the Mississippi River have endangered the future of these islands.*2

This area also supports a wide variety of vessel traffic and commercial and sport fishing traffic near the Mississippi Entrance Channel and includes a major portion of the safety fairway. Due to the high traffic, this project has been planned as one of a multi-year approach to update charts in this area. Before this project, this area was last surveyed by the Office of Coast Survey in 1922 and 1940. This survey will allow vessel traffic safe passage to offshore Gulf of Mexico.

The purpose of this project is to provide contemporary surveys to update National Ocean Service (NOS) nautical charting products, this project will address numerous approximately charted hazards, reducing the risk to navigation. Survey data from this project is intended to supersede all prior survey data in the common area."

*1 Breton National Wildlife Refuge. Wikipedia. Retrieved 27 February 2019
*2 Moore, Laura J.; Patch, Kiki; List, Jeffery H.; Williams, S. Jeffress (2014). "The potential for sea-level-rise-induced barrier island loss: Insights from the Chandeleur Islands, Louisiana, USA". Marine Geology. 355: 244-259. doi:10.1016/j.margeo.2014.05.022. ISSN 0025-3227

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 (Refer to HSSD Section 5.2.2.3)

Table 2: Survey Coverage

Multibeam echosounder (MBES) data with time series backscatter was collected concurrently with side scan sonar (SSS) data to obtain complete coverage in all waters in the survey area. This coverage type follows Option B of the Complete Coverage requirement specified in Section 5.2.2 of the 2019 HSSD.

Surveyed contacts and features were developed at complete coverage resolution as required by the coverage classification. Complete coverage multibeam was also obtained within the search radii for all feature disapprovals. All charted depths shallower than adjacent surveyed soundings were verified or disproved by conducting bathymetric splits to comply with section 5.2.2.1 in the 2019 HSSD. Survey coverage was obtained within the survey area depicted in the Project Reference File (PRF) OPR-J311-KR-19_PRF_FINAL.000. Figure 2 depicts the survey outline that was obtained for H13266.

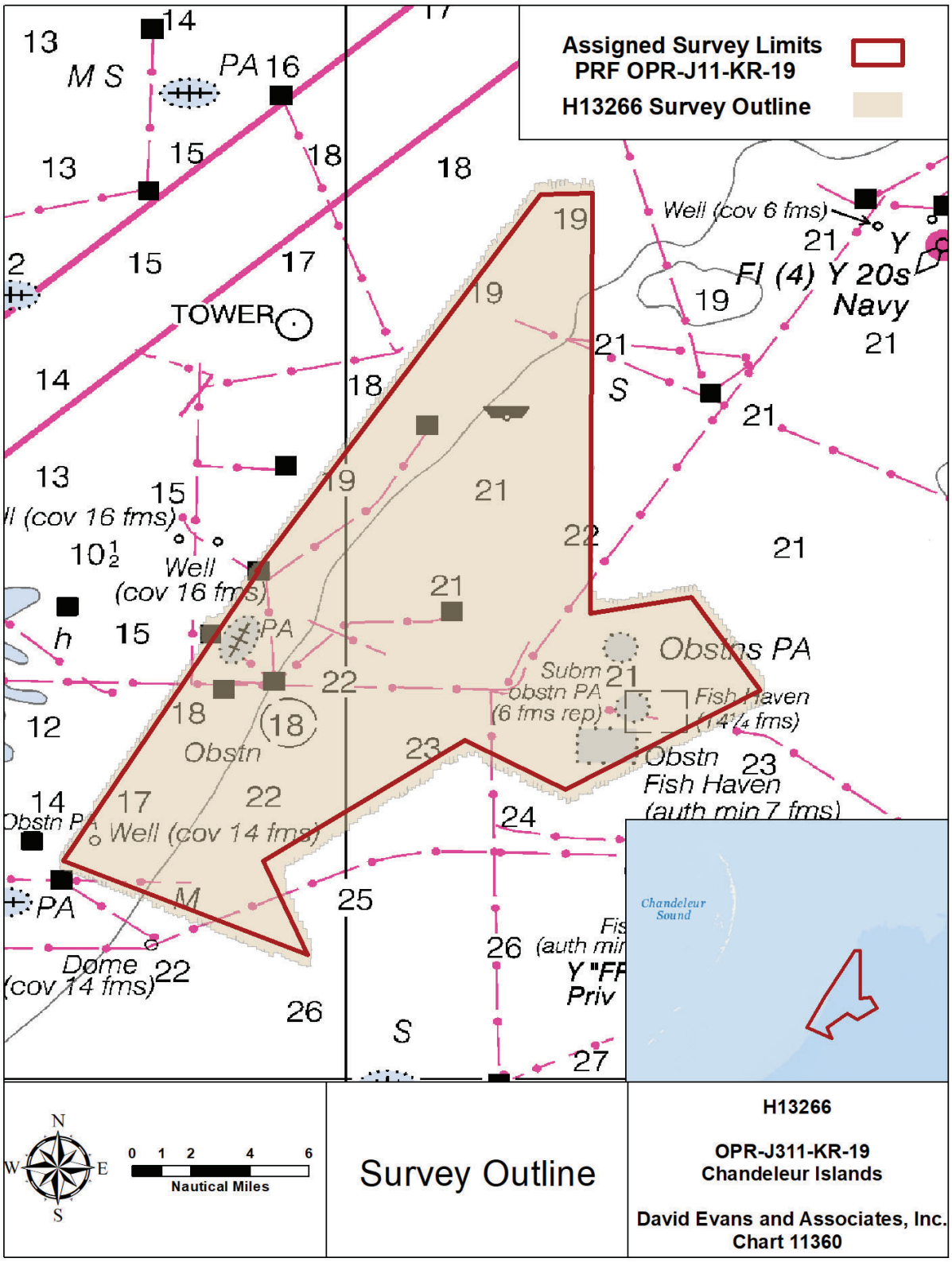


Figure 2: H13266 Survey Outline

A.5 Survey Statistics

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

	HULL ID	*S/V Blake*	*Total*
LNM	**SBES Mainscheme**	0	0
	MBES Mainscheme	214.84	214.84
	Lidar Mainscheme	0	0
	SSS Mainscheme	17.13	17.13
	SBES/SSS Mainscheme	0	0
	MBES/SSS Mainscheme	1006.24	1006.24
	MBES Crosslines	56.67	56.67
	Lidar Crosslines	0	0
Number of Bottom Samples			5
Number Maritime Boundary Points Investigated			0
Number of DPs			0
Number of Items Investigated by Dive Ops			0
Total SNM			71.70

Table 3: Hydrographic Survey Statistics

The OPR-J311-KR-19 Project Instructions contained an error where the estimated area for each survey sheet reported square statute miles though the values were labeled as square nautical miles (SNM). When comparing the area surveyed reported in Table 3 of this Descriptive Report (square nautical miles) to the estimated area listed in the Project Instructions (square statute miles), it will appear that the survey did not meet the required area metric. The survey did meet the required coverage area and the coverage metric is reported as square nautical miles (SNM) in this report.

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

Survey Dates	Day of the Year
09/18/2019	261
09/19/2019	262
09/24/2019	267
09/25/2019	268
09/26/2019	269
09/27/2019	270
09/28/2019	271
10/05/2019	278
10/06/2019	279
10/10/2019	283
10/12/2019	285
10/13/2019	286
10/17/2019	290
11/18/2019	322
11/19/2019	323
12/15/2019	349
01/08/2020	8
01/13/2020	13
01/14/2020	14

Table 4: Dates of Hydrography

B. Data Acquisition and Processing

B.1 Equipment and Vessels

The OPR-J311-KR-19 Data Acquisition and Processing Report (DAPR), previously submitted with survey H13260, details equipment and vessel information as well as data acquisition and processing procedures. There were no vessel or equipment configurations used during data acquisition that deviated from those described in the DAPR.

B.1.1 Vessels

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

Hull ID	***S/V Blake***
LOA	82 feet
Draft	4.5 feet

Table 5: Vessels Used

Figure 3: S/V Blake

B.1.2 Equipment

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

Manufacturer	Model	Type
Teledyne RESON	7101	MBES
EdgeTech	4200-HF	SSS
Applanix	POS MV 320 v5	Positioning and Attitude System
AML Oceanographic	MVP30-350 with AML Micro SVP&T	Primary Sound Speed Profiler
AML Oceanographic	Micro SV Xchange	Surface Sound Speed
AML Oceanographic	BaseX2	Secondary Sound Speed Profiler
Sea-Bird Electronics, Inc	SBE 19 SeaCAT	Secondary Sound Speed Profiler
Trimble	SPS851	Secondary Positioning System
CSI Wireless	MBX-3S	DGPS/Beacon Receiver
Trimble	CenterPoint RTX	DGPS/GNSS Correction Service

Table 6: Major Systems Used

B.2 Quality Control

B.2.1 Crosslines

Multibeam crosslines acquired for this survey totaled 4.64% of mainscheme acquisition.

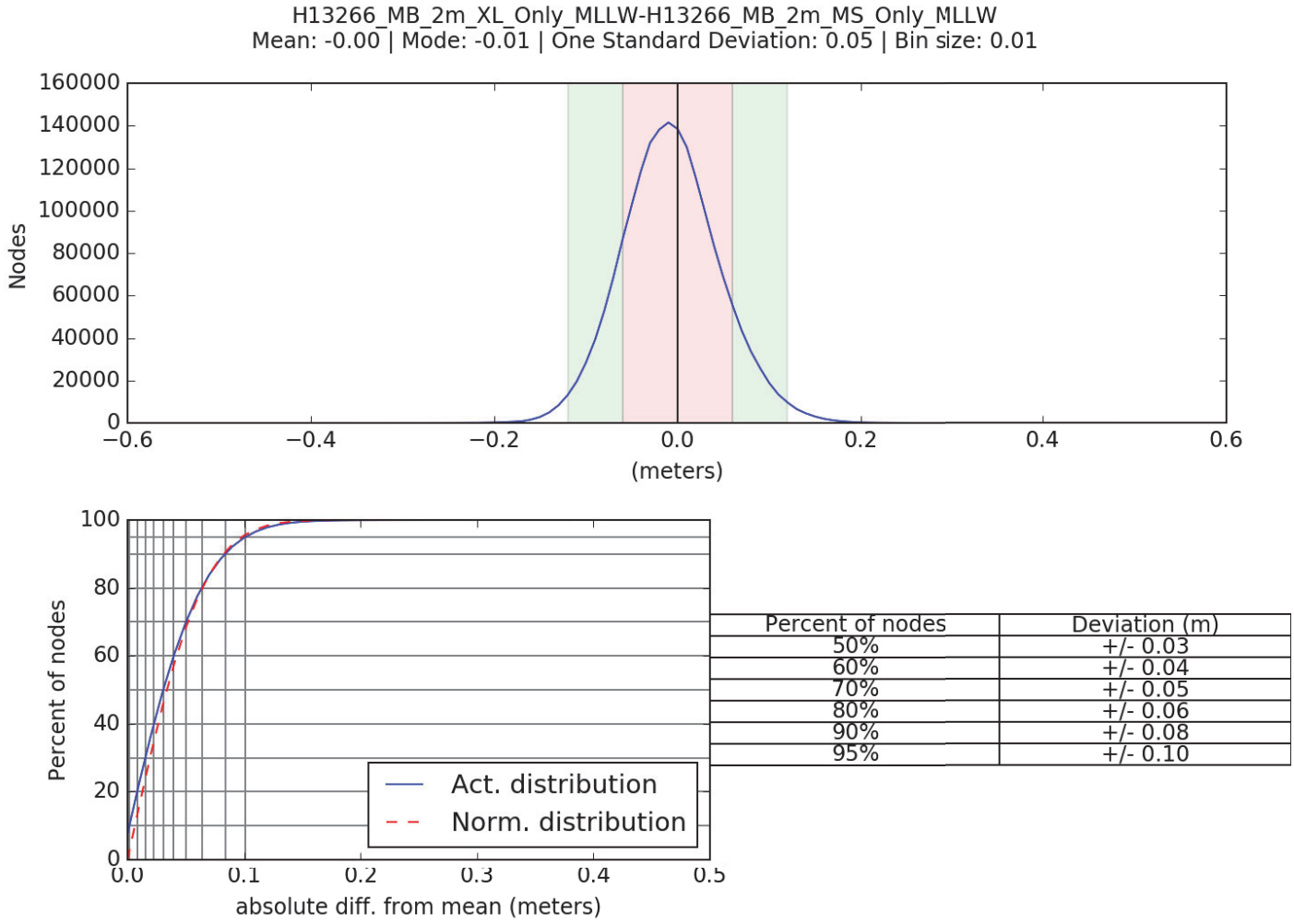
Multibeam crosslines were run across the entire survey area to provide a varied spatial and temporal distribution for analysis of internal consistency within the survey data.

Crossline analysis was performed using the CARIS Hydrographic Information Processing System (HIPS) Quality Control (QC) Report tool, which compares crossline data to a gridded surface and reports results by beam number. Crosslines were compared to a 2-meter CUBE surface encompassing mainscheme, fill, and investigation data for the entire survey area. The QC Report tabular output and plots are included in Separate II Crossline Comparison.

Several outer beams (port and starboard) from the multibeam sonar did not meet the 95% IHO Order 1 acceptance threshold for the QC Report. These beams had an extremely low beam count (number of samples used in the comparison) which had a significant impact on the overall per beam results. The soundings failed the QC Report test because they were compared to gridded depths of the 2-meter CUBE surface at

the location of objects on the seafloor where the gridded depth of the mainscheme only surface did not accurately portray the depth that was captured by the crossline soundings. Crossline soundings using these outer beams were reviewed and found to be valid.

DEA performed an additional crossline analysis using the NOAA Pydro Compare Grids tool to analyze the differences between gridded mainscheme depths and gridded crossline depths. Input grids were 2-meter resolution CUBE surfaces of mainscheme and crossline depths. Results from the crossline to mainscheme difference analysis are depicted in Figure 4, units are represented in meters.



Percent of nodes	Deviation (m)
50%	+/- 0.03
60%	+/- 0.04
70%	+/- 0.05
80%	+/- 0.06
90%	+/- 0.08
95%	+/- 0.10

Figure 4: H13266 Crossline Difference

B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

Method	Measured	Zoning
ERS via VDATUM	0.05 meters	0.168 meters

Table 7: Survey Specific Tide TPU Values.

Hull ID	Measured - CTD	Measured - MVP	Surface
S/V Blake	1.0 meters/second	1.0 meters/second	0.5 meters/second

Table 8: Survey Specific Sound Speed TPU Values.

Additional discussion of these parameters is included in the DAPR.

During surface finalization in HIPS, the "Greater of the two values" option was selected, where the calculated uncertainty from Total Propagated Uncertainty (TPU) is compared to the standard deviation of the soundings influencing the node, and where the greater value is assigned as the final uncertainty of the node. The uncertainty of the finalized surfaces increased for nodes, where the standard deviation of the node was greater than the TPU. To determine if the surface grid nodes met IHO Order 1 specification, a ratio of the final node uncertainty to the allowable uncertainty at that depth was determined. As a percentage, this value represents the amount of error budget utilized by the total vertical uncertainty (TVU) at each node. Values greater than 100% indicate nodes exceeding the allowable IHO uncertainty. The resulting calculated TVU values of all nodes in the submitted finalized surfaces are shown in Figures 5 and 6.

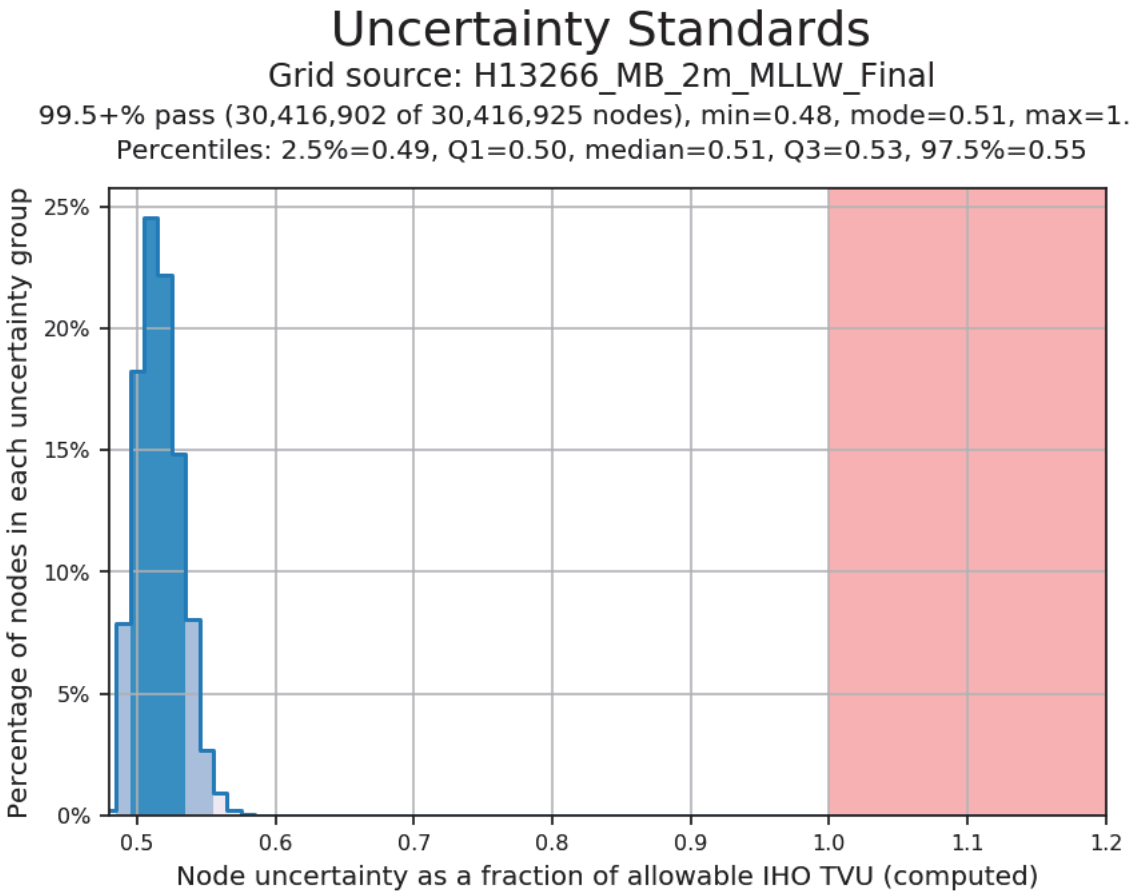


Figure 5: Node TVU statistics - 2m finalized

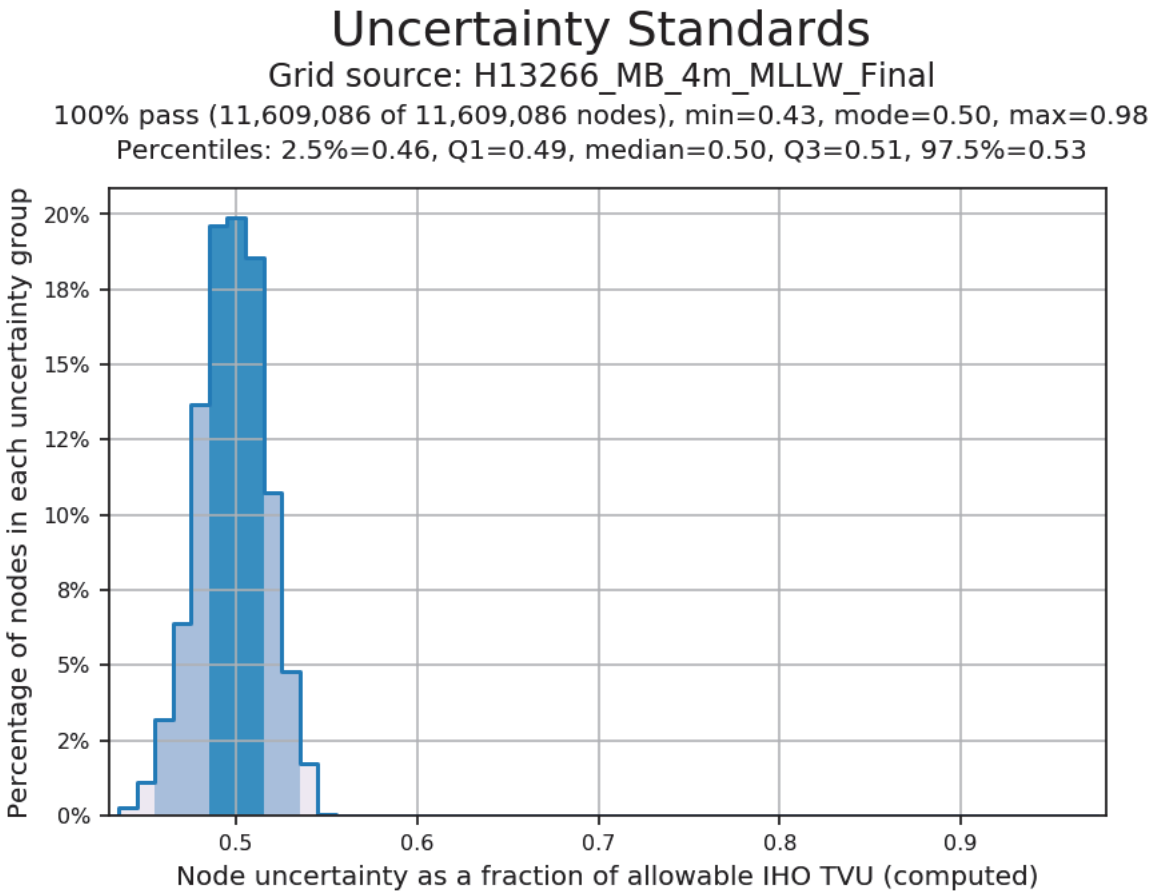


Figure 6: Node TVU statistics - 4m finalized

B.2.3 Junctions

Survey H13266 junctions with current surveys H13263, H13264, H13267. Prior survey H13135 was specified as a junction in the Project Instructions for survey H13266. Figure 7 depicts H13266 and the junctioning surveys.

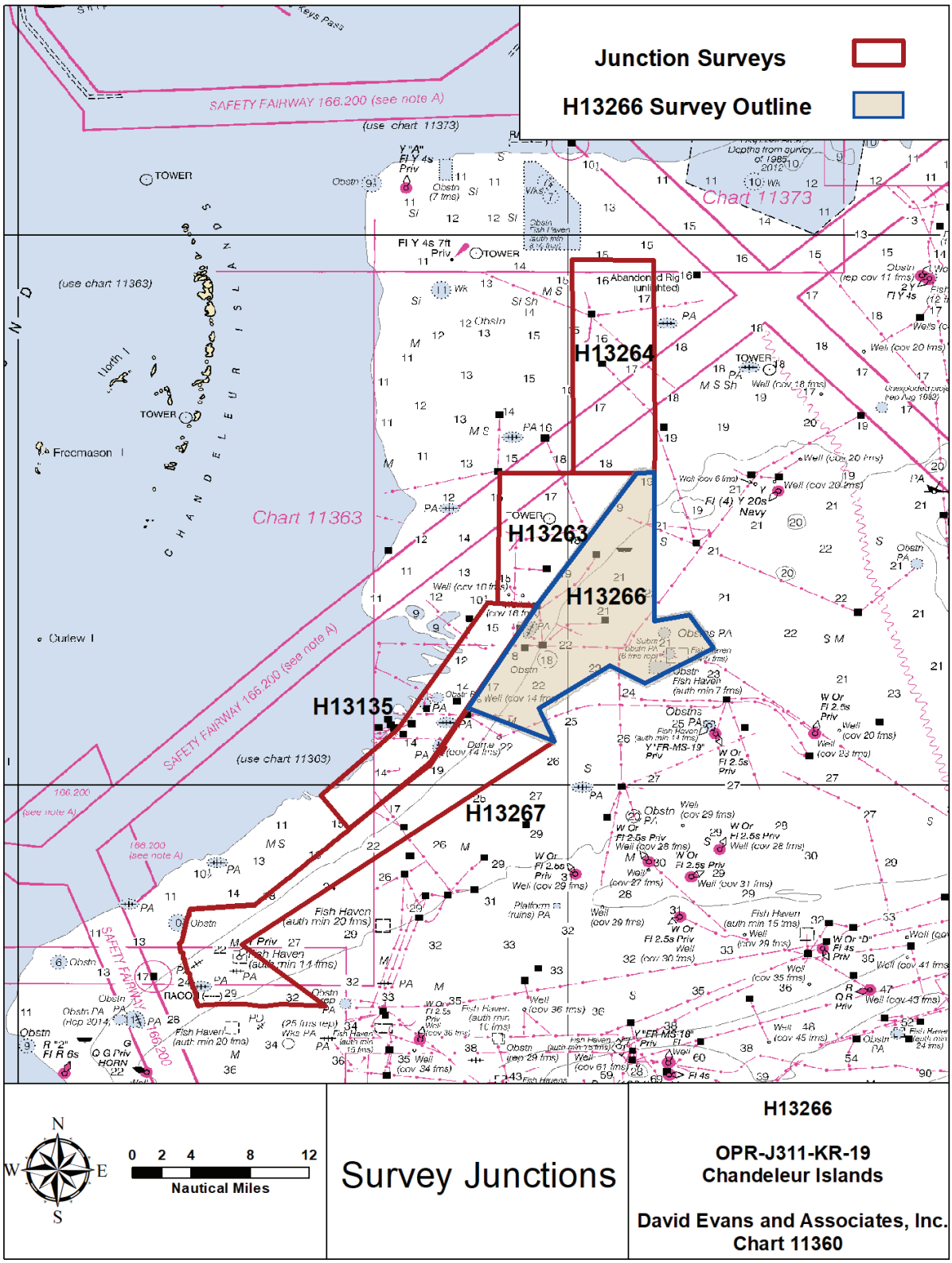


Figure 7: Survey junctions with registry number H13266

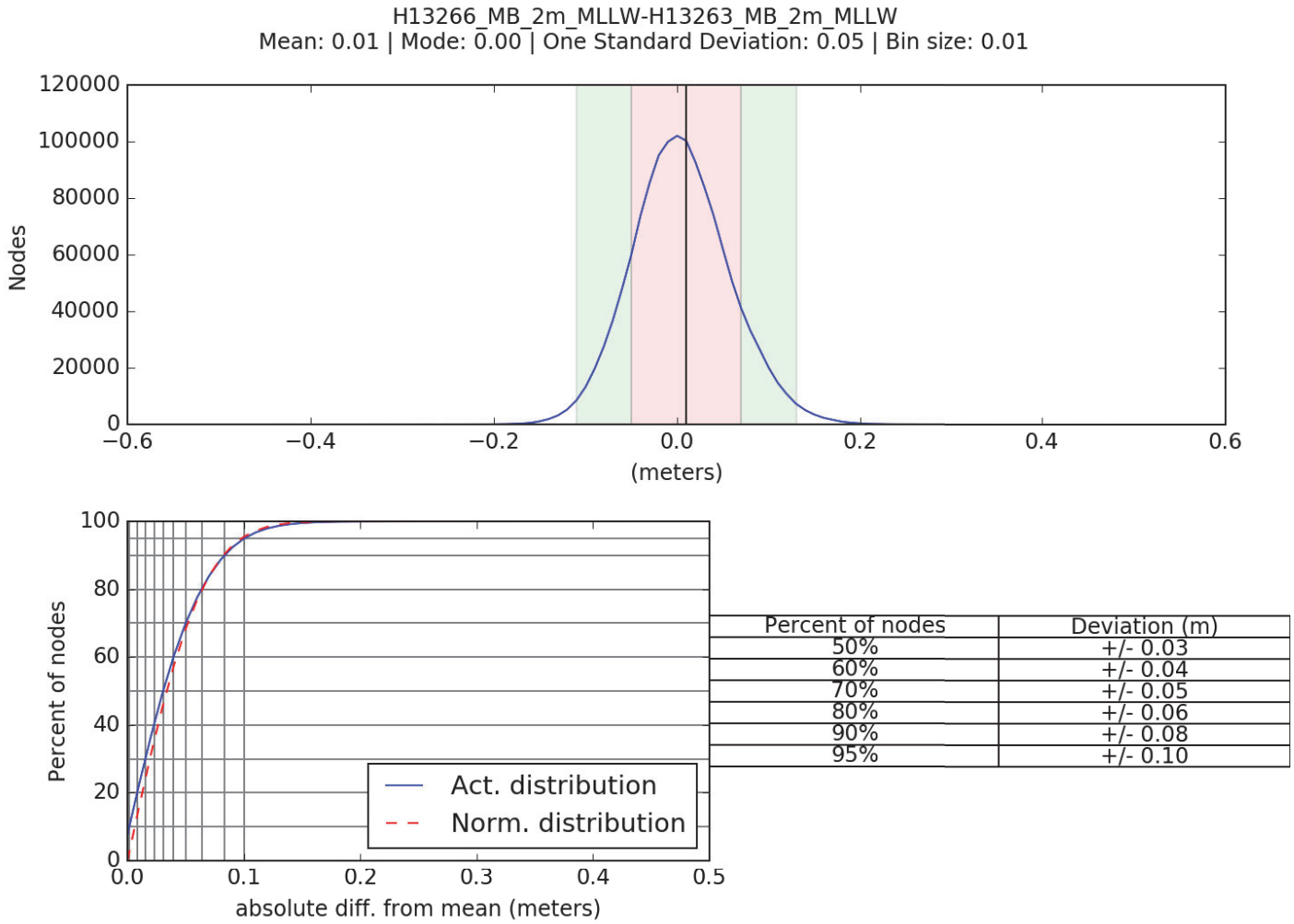
The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H13263	1:40000	2019	David Evans & Associates, Inc.	W
H13264	1:40000	2019	David Evans & Associates, Inc.	N
H13267	1:40000	2019	David Evans & Associates, Inc.	S
H13135	1:40000	2018	Leidos	W

Table 9: Junctioning Surveys

H13263

The mean difference between H13266 and H13263 survey depths is 1 centimeter (H13266 shoaler than H13263), shown in Figure 8.

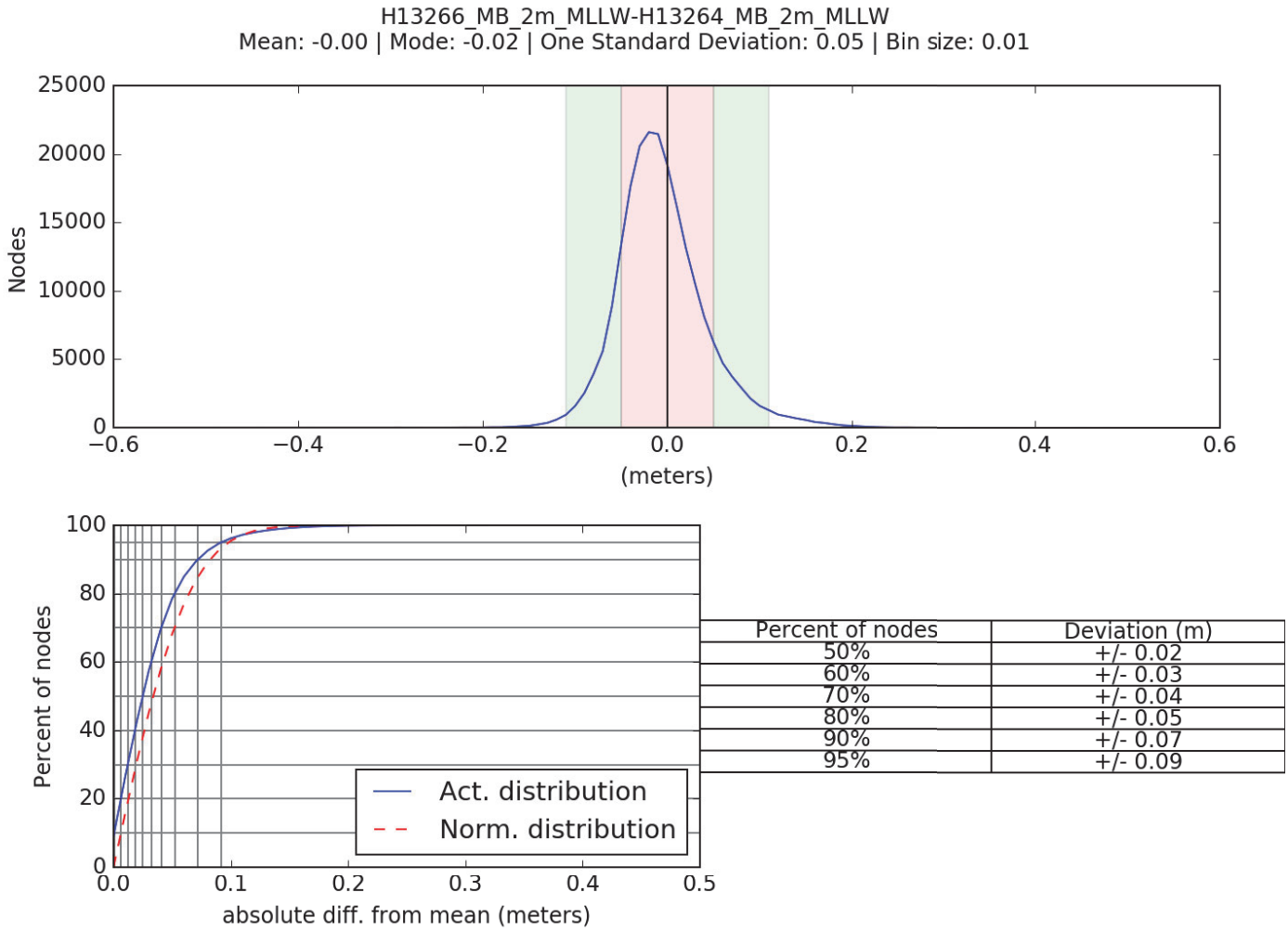


Percent of nodes	Deviation (m)
50%	+/- 0.03
60%	+/- 0.04
70%	+/- 0.05
80%	+/- 0.06
90%	+/- 0.08
95%	+/- 0.10

Figure 8: Distribution summary plot of survey H13266 2-meter vs H13263 2-meter

H13264

The mean difference between H13266 and H13264 survey depths is 0 centimeters, shown in Figure 9.



Percent of nodes	Deviation (m)
50%	+/- 0.02
60%	+/- 0.03
70%	+/- 0.04
80%	+/- 0.05
90%	+/- 0.07
95%	+/- 0.09

Figure 9: Distribution summary plot of survey H13266 2-meter vs H13264 2-meter

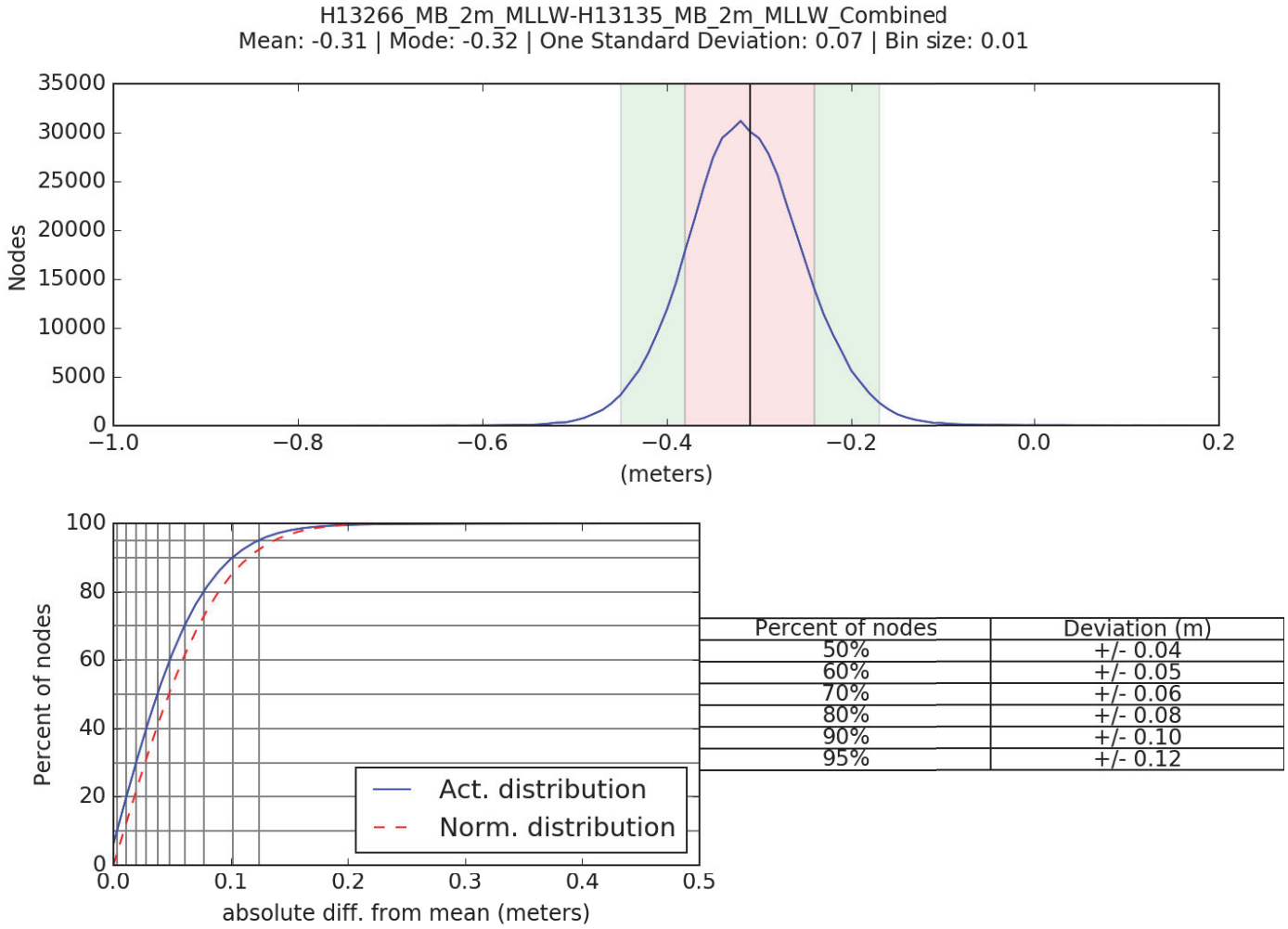
H13267

At the time of writing, data from survey H13267 was still being processed. The Descriptive Report for H13267 will include the junction analysis with H13266.

H13135

The mean difference between H13266 and H13135 survey depths is 31 centimeters (H13266 deeper than H13135), shown in Figure 10. Major differences are representative of surveys impacted by subsidence over a one year period and the use of varying tidal application methods. According to the Descriptive Report for the prior survey, H13135 used ERS with Poor Mans VDATUM for Vertical Control methods where survey H13266 used ERS methods relying on the published VDATUM model for the area. Using prior data available on the National Centers for Environmental Information (NCEI) website, the separation model used

for survey H13135 was recreated and compared to the separation model used for survey H13266. The prior model was reconstructed by computing a difference surface between the combined MLLW and ellipsoid bathymetry grids available for survey H13135. The hydrographer found up to a 15-centimeter difference between the two models at the survey junction.



Percent of nodes	Deviation (m)
50%	+/- 0.04
60%	+/- 0.05
70%	+/- 0.06
80%	+/- 0.08
90%	+/- 0.10
95%	+/- 0.12

Figure 10: Distribution summary plot of survey H13266 2-meter vs H13135 4-meter

B.2.4 Sonar QC Checks

Quality control is discussed in detail in Section B of the DAPR. Results from weekly position checks and weekly multibeam bar checks are included in Separate I Acquisition and Processing Logs of this report. Sound speed checks can be found in Separate II Sound Speed Data Summary of this report.

Multibeam data were reviewed at multiple levels of data processing including: CARIS HIPS conversion, subset editing, and analysis of anomalies revealed in CUBE surfaces.

B.2.5 Equipment Effectiveness

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

B.2.6 Factors Affecting Soundings

There were no other factors that affected corrections to soundings.

B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: Approximately 20 minute intervals

An AML Oceanographic Moving Vessel Profiler (MVP) was the primary instrument used to acquire sound speed readings during multibeam operations. Additional discussion of sound speed methods can be found in the DAPR.

For H13266 survey operations, casts were distributed both temporally and spatially based on observed changes in sound speed profiles. Sound speed readings were applied in CARIS using the nearest in distance within a one-hour interval based on consistent profiles observed throughout the survey. All sound speed measurements were made within 500 meters of the survey limits.

B.2.8 Coverage Equipment and Methods

Survey speeds were maintained to meet or exceed along-track sounding density requirements and side scan sonar ensonification requirements.

Multibeam data and side scan mosaics were thoroughly reviewed for holidays and areas of poor-quality coverage due to biomass, vessel wakes, or other factors. Side scan sonar contacts were developed with multibeam sonar to obtain a least depth of the contact using Complete Coverage requirements.

Complete coverage multibeam was acquired inside the disproval radii for assigned charted features and over all new features. Additional discussion of coverage methods can be found in the DAPR.

B.2.9 Density

The sounding density requirement of 95% of all nodes, populated with at least five soundings per node, was verified by analyzing the density layer of each finalized surface. Individual surface results are stated in Figures 11 and 12.

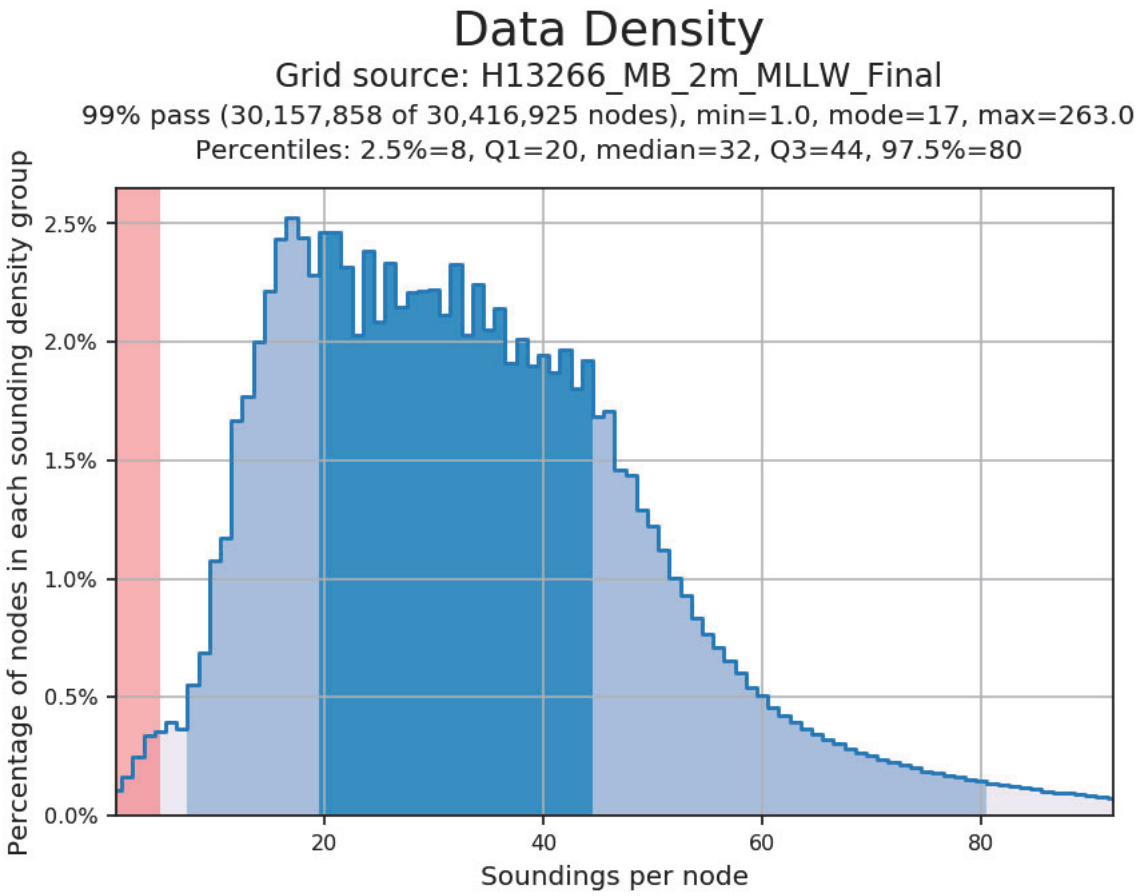


Figure 11: Node density statistics - 2m finalized

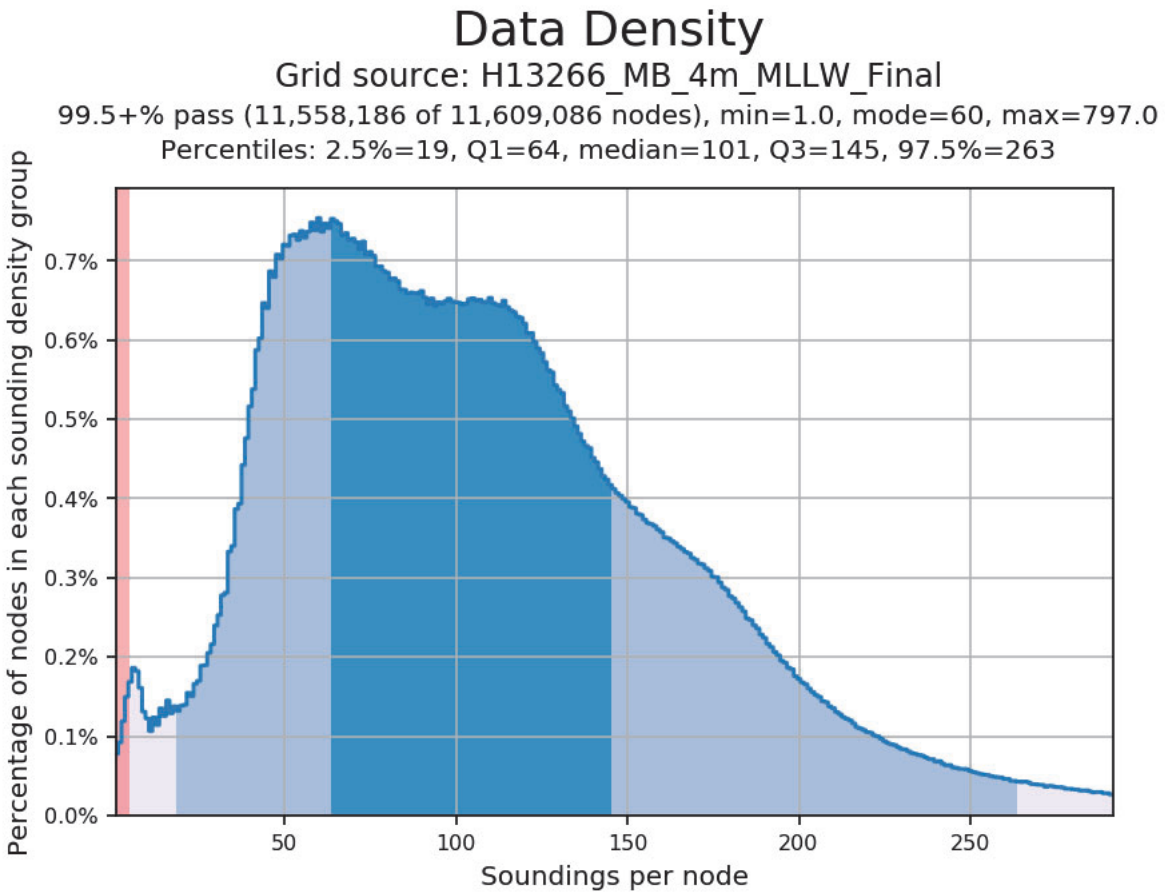


Figure 12: Node density statistics - 4m finalized

B.3 Echo Sounding Corrections

B.3.1 Corrections to Echo Soundings

Data reduction procedures for survey H13266 are detailed in the DAPR. Summary multibeam and side scan sonar processing logs are included in Separate I of this report.

B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

B.4 Backscatter

Multibeam backscatter was logged in Hypack 7k format and included with the H13266 digital deliverables. Data were processed periodically in CARIS HIPS to evaluate backscatter quality, but the processed data is not included with the deliverables. For data management purposes, the names of multibeam crosslines have been appended with the suffix XL. This change was made to HIPS files only. The original file names of raw data files (Hypack HSX and 7k) have been retained.

B.5 Data Processing

B.5.1 Primary Data Processing Software

The following software program was the primary program used for bathymetric data processing:

Manufacturer	Name	Version
CARIS	HIPS/SIPS	10.4.5

Table 10: Primary bathymetric data processing software

The following software program was the primary program used for imagery data processing:

Manufacturer	Name	Version
Chesapeake Technology, Inc.	SonarWiz	7.04.01

Table 11: Primary imagery data processing software

The following Feature Object Catalog was used: NOAA Profile Version 5.7.

A detailed listing of all data processing software is included in the OPR-J311-KR-19 DAPR.

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
H13266_MB_2m_MLLW	CARIS Raster Surface (CUBE)	2 meters	26.529 meters - 49.845 meters	NOAA_2m	Complete MBES
H13266_MB_2m_MLLW_Final	CARIS Raster Surface (CUBE)	2 meters	26.529 meters - 40.000 meters	NOAA_2m	Finalized Complete MBES
H13266_MB_4m_MLLW	CARIS Raster Surface (CUBE)	4 meters	26.547 meters - 49.434 meters	NOAA_4m	Complete MBES
H13266_MB_4m_MLLW_Final	CARIS Raster Surface (CUBE)	4 meters	36.000 meters - 49.434 meters	NOAA_4m	Finalized Complete MBES
H13266_SSSAB_1m_600kHz_1of1	SSS Mosaic	1 meters	0 meters - 0 meters	N/A	100% SSS

Table 12: Submitted Surfaces

Bathymetric grids were created relative to Mean Lower Low Water (MLLW) in CUBE format using Complete Coverage resolution requirements as specified in the HSSD.

B.5.3 Designated Soundings

A total of two soundings in H13266 were designated in bathymetric data to facilitate feature management for inclusion in the H13266 Final Feature File (FFF). There was one sounding designated to override the gridded surface model.

B.5.4 CARIS HDCS Navigation Sources

During processing of HDCS lines, navigation information was imported from SBET.out files while importing motion and associated RMS values. This navigation source, Applanix.SBET, is automatically applied at merge when it exists. However, when a CARIS project file is rebuilt, CARIS will report that the navigation source is the HDCSNav. This is a display issue only and does not change the navigation source.

Additionally, when a line is renamed, such as with the suffix _XL, the HDCSNav source disappears from the metadata display. Again, this appears to be a display issue only and does not change any navigation sources.

All HDCS lines were processed using the SBET.out files and the navigation source is Applanix.SBET for this survey. Additional processing information is detailed in the DAPR.

C. Vertical and Horizontal Control

A summary of the horizontal and vertical control for survey H13266 follows.

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-J311-KR-19_VDatum2_xyNAD83-MLLW_geoid12b.csar

Table 13: ERS method and SEP file

The separation model listed in Table 13 was provided with the Project Instructions and used for sounding correction within the assigned survey area. Realtime navigation for all MBES survey lines were overwritten with post-processed navigation solutions in SBET format. Post-processed solutions were generated using Applanix POSPac MMS using the Trimble CenterPoint RTX option which relies on precise satellite orbit and timing information to create centimeter level positioning and elevation without the use of traditional local base stations. Information on survey control is detailed in the DAPR.

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 16.

DGPS

The following DGPS Stations were used for horizontal control:

DGPS Stations
English Turn, LA (293 kHz)

Table 14: USCG DGPS Stations

Real-time positioning for side scan sonar operations was provided by differential GPS using corrections received from the US Coast Guard National Differential GPS (NDGPS) coverage network from differential beacons at English Turn, LA (293 kHz).

WAAS

The Federal Aviation Administration Wide Area Augmentation System (FAA WAAS) was enabled to be active if the English Turn station experienced periods of down time.

D. Results and Recommendations

D.1 Chart Comparison

The chart comparison was performed by comparing H13266 survey depths to a digital surface generated from electronic navigational charts (ENCs) covering the survey area. A 50-meter product surface was generated from a triangular irregular network (TIN) created from the ENC's soundings, depth contours, and depth features. The 50-meter HIPS product surface of the entire survey area was generated from the 2-meter CUBE surface. The chart comparison was conducted by creating and reviewing a difference surface using the ENC surface and survey surface as inputs. The chart comparison also included a review of all assigned charted features within the survey area. The results of the comparison are detailed below. The relevant charts used during the comparison were reviewed to check that all US Coast Guard (USCG) Local Notice to Mariners (LNMs) issued during survey acquisition, and impacting the survey area, were applied and addressed by this survey.

A charted fish haven (authorized min 14 fms) was located within the survey area. Numerous items associated with the fish haven were present on the seafloor within the charted obstruction area. Side scan sonar contacts were generated for these items when the height above bottom exceeded the HSSD contact height requirement. No features were identified that exceed the charted minimum authorized depth for the fish haven. As such, no new features were generated for these contacts. This fish haven is part of the Mississippi Department of Marine Resources' (MDMR) Artificial Reef Program and has been designated as FH-7. The general extents of the charted fish haven correspond to the fish haven boundary published by MDMR. There is another charted fish haven (authorized min 7 fms) adjacent to the southern border of FH-7 which

MDMR does not list as one of their fish havens, shown in Figure 13. The hydrographer finds the proximity of this fish haven to FH-7 suspicious and recommends that the source of the second fish haven is verified to ensure that FH-7 has not been misapplied to the charts at a second location. No objects were observed in the MBES or SSS data on the seafloor within the extents of this fish haven. The Obstruction PA (Position Approximate) (6 fms rep) charted inside FH-7 and visible in Figure 13 was disproved by the survey.

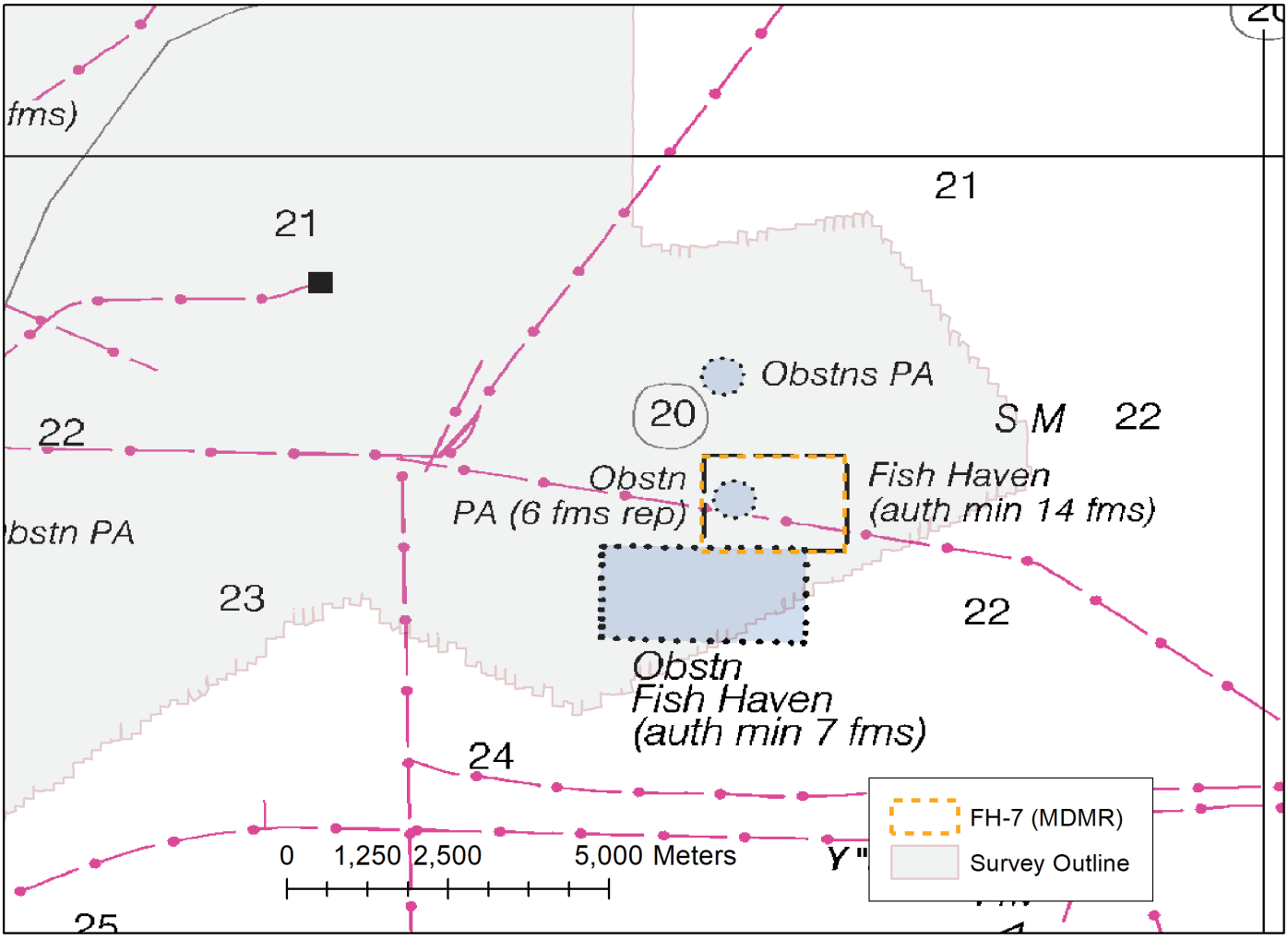


Figure 13: MDMR FH-7 and questionable adjacent fish haven

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?
US3GC04M	1:250000	63	08/01/2019	11/19/2019	NO

Table 15: Largest Scale ENCs

US3GC04M

ENC US3GC04M covered the entire extents of survey H13266. Figure 14 shows the magnitude of difference for the comparison area.

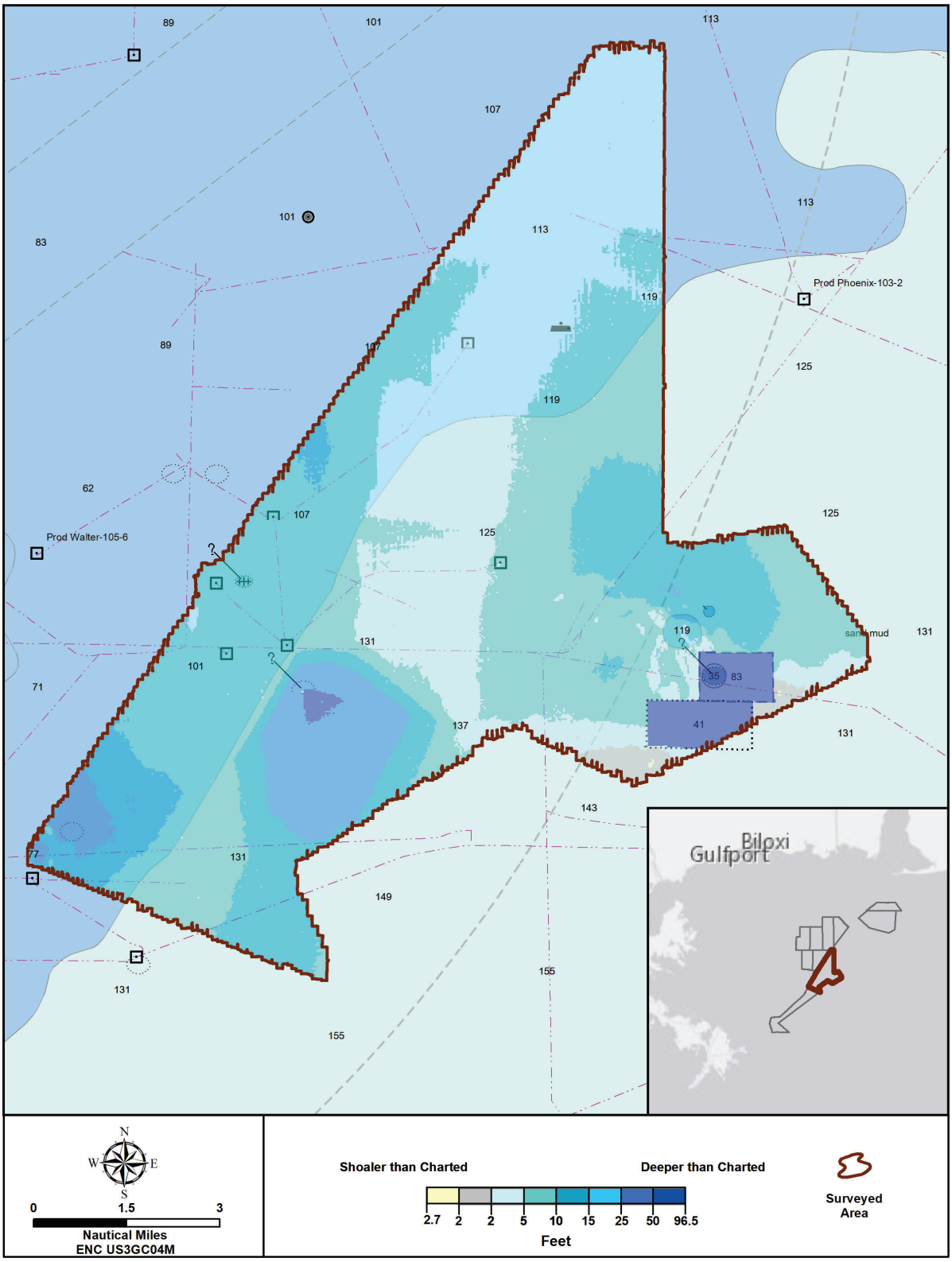


Figure 14: Depth difference between H13266 and charts US3GC04M

D.1.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

D.1.3 Charted Features

This survey contains four assigned charted features labeled PA.

The charted wreck (PA) with depth unknown near the western extents of the survey area was disproved inside an assigned disproval radius with 100% MBES coverage. The charted wreck has been included in the FFF with a description of ‘Delete’.

The charted obstruction (PA) with least depth known in the central vicinity of the survey extents was disproved inside an assigned disproval radius with 100% MBES coverage. The charted obstruction has been included in the FFF with a description of ‘Delete’.

The charted obstruction (PA) with depth unknown in the eastern vicinity of the survey extents was disproved inside an assigned disproval radius with 100% MBES coverage. The charted obstruction has been included in the FFF with a description of ‘Delete’.

The charted obstruction (PA (6 fms rep)) with value reported (not confirmed) in the eastern vicinity of the survey extents inside a charted fish haven was disproved inside an assigned disproval radius with 100% MBES coverage. The charted obstruction has been included in the FFF with a description of ‘Delete’.

D.1.4 Uncharted Features

All uncharted features are portrayed in the FFF as surveyed and attributed with the description of ‘New’.

D.1.5 Shoal and Hazardous Features

No Dangers to Navigation (DtoNs) were submitted for this survey.

D.1.6 Channels

There are no precautionary areas, safety fairways, traffic separation schemes, or pilot boarding areas within the survey limits.

D.1.7 Bottom Samples

Five bottom samples were acquired on December 15, 2019 (DN349). The bottom sampling plan followed suggested sample locations included in the Project Reference File (PRF) provided. Minor adjustments were made to the recommended sampling locations in order to sample the varying bottom types observed in the side scan data. This modification was approved by the Contracting Officer's Representative (COR). Correspondence is included in Appendix II Supplemental Survey Records & Correspondence of this report.

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

One mooring buoy was charted within the survey area. The feature has been disproved by the survey with complete coverage MBES and visual observations and has been included in the FFF with description 'Delete'. This buoy was included in the CSF as an assigned feature; however, a disproval radius for this feature was not included the PRF. After the buoy was not visually observed by the field party, DEA inquired about the missing disproval search radius. The NOAA project manager for this survey directed DEA to use a 480-meter radius, similar to other disproval radii used for the project. A copy of correspondence related to this issue is included in Appendix II of this report.

D.2.3 Overhead Features

No overhead features exist for this survey.

D.2.4 Submarine Features

There are 16 assigned submerged pipelines in the survey extents for H13266. These features were carefully reviewed for any portion of pipeline that was exposed or posed a risk to navigation. These pipelines are included in the FFF with a description of 'Retain' due to the inability of the field unit to determine if pipelines are buried.
A pipeline report included in Appendix II, was submitted to the BSEE on February 11, 2020, reporting the sections of exposed or unburied pipeline visible in the MBES and SSS data. The report indicates the positions of the start and end points of sections of what appear to be exposed pipelines based on interpretation of multibeam data. Due to the inability to accurately depict the location and orientation of all exposed pipelines with a single line segment, these features have been included in the FFF with a description of 'New', should further action be required after survey submittal. It is not the hydrographer's intention that these pipeline features be used as source information for charting without further validation of origin.

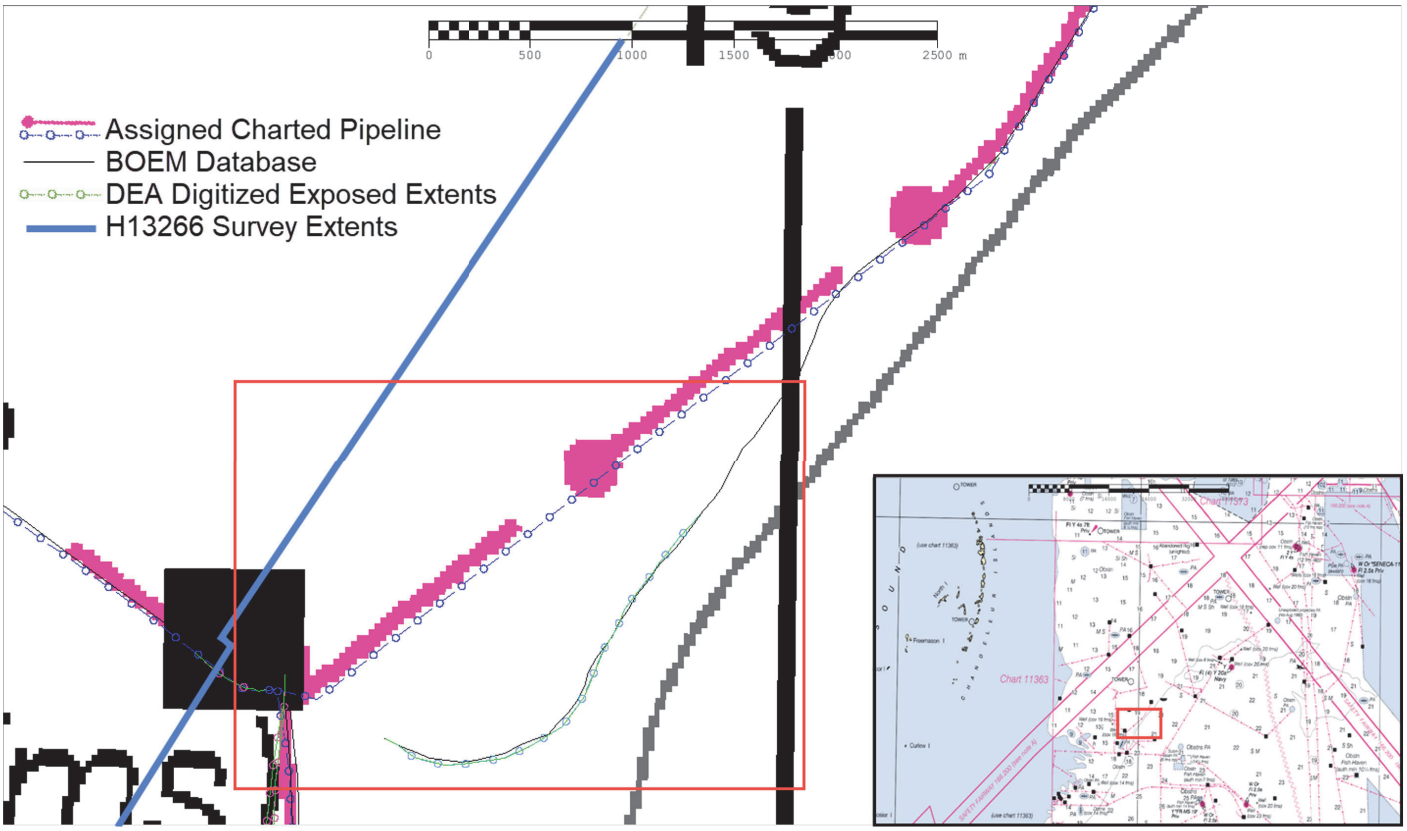


Figure 15: H13266 Bureau of Ocean Energy Management (BOEM) database in comparison to chart.

D.2.5 Platforms

There are charted platforms with the survey area of H13266.

All six of the production platforms were disproved according to the HSSD (2019) and are included in the FFF with a description 'Delete'. The hydrographer recommends removing these platforms from the charts.

There is an assigned wellhead, Well (cov 14 fms), with least depth known was not observed inside an assigned disproval radius with 100% MBES coverge. The charted obstruction has been included in the FFF with a description of 'Delete'.

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 and Specifications Deliverables, Field Procedures Manual, Letter 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.

Report Name	Report Date Sent
Data Acquisition and Processing Report	2020-02-18

Approver Name	Approver Title	Approval Date	Signature
Jonathan L. Dasler, PE, PLS, CH	NSPS/THSOA Certified Hydrographer, Chief of Party	03/20/2020	Jon L. Dasler 2020.03.20 12:26:27 -07'00' 2020.006.20042
Jason Creech, CH	NSPS/THSOA Certified Hydrographer, Charting Manager / Project Manager	03/20/2020	Digitally signed by Jason Creech Date: 2020.03.20 12:27:11 -07'00'
Callan McGriff, EIT	IHO Cat-A Hydrographer, Lead Hydrographer	03/20/2020	Digitally signed by Callan McGriff Date: 2020.03.20 12:28:42 -07'00'
Steven Loy	IHO Cat-A Hydrographer, Lead Hydrographer	03/20/2020	Digitally signed by Steven Loy Date: 2020.03.20 12:32:24 -07'00'

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

Jason Creech

From: Jason Creech
Sent: Friday, January 24, 2020 9:18 AM
To: 'survey.outlines@noaa.gov'
Cc: Kathryn Pridgen - NOAA Federal
Subject: OPR-J311-KR-19 Survey Outlines
Attachments: H13268_survey_outline.000; H13267_survey_outline.000; H13266_survey_outline.000; H13264_survey_outline.000; H13262_survey_outline.000

Good Morning

I have attached the last of the survey outlines for project OPR-J311-KR-19. This includes surveys

H13262
H13264
H13266
H13267
H13268

Please let me know if you have any feedback or questions on these outlines. All outlines for OPR-J311-KR-19 are now submitted.

Thanks,
Jason

Jason Creech, CH | Vice President, Nautical Charting Program Manager
David Evans and Associates, Inc.
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t: 804.806.4440 | c: 804.516.7829 | jasc@deainc.com

ENERGY | LAND DEVELOPMENT | MARINE SERVICES | SURVEYING AND GEOMATICS | TRANSPORTATION | WATER AND ENVIRONMENT

Jason Creech

From: Jason Creech
Sent: Tuesday, February 11, 2020 9:36 AM
To: pipelines@bsee.gov
Cc: Angie Gobert (angie.gobert@bsee.gov); Pelous, Steven A; Diphicyl, Forna N; Christina Fandel - NOAA Federal; 'Tim Osborn (Tim.Osborn@noaa.gov)'
Subject: Gulf of Mexico Unburied Pipelines H13266
Attachments: H13266_Exposed_Pipelines_for_BSEE.xlsx; H13266_Pipeline_Images.zip

Good morning

While performing hydrographic surveys of the Gulf of Mexico for NOAA Office of Coast Survey, David Evans and Associates, Inc. has discovered what appear to multiple segments of unburied pipelines. Attached is a spreadsheet containing the locations of the start and end points of the segments and a zip file containing screen shots from the multibeam and side scan sonar data as well as overview maps of each exposure. All coordinates are relative to NAD83(2011) and listed in degrees minutes seconds (DMS). This report is based on interpretation of sonar data with all reported exposures having the signature of a linear pipeline.

Please let me know if you have any questions or require additional information. Christy Fandel, the NOAA Project Manager for this survey, and Tim Osborn, the NOAA Central Gulf Coast Regional Navigation Manager have been copied on this email.

H13266_Pipeline_01a is a segment of exposed pipeline approximately 4973 feet in length with starting coordinates 29 39 30.909N, 88 30 50.057W and ending at 29 40 9.177N, 88 30 16.708W. The exposed segment has a bearing of 31 degrees and was identified in acoustic data acquired on September 25, 2019 (DN 268). This segment is located near a charted pipeline and appears to be unburied with no discernable height above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_01b is a segment of exposed pipeline approximately 280 feet in length with starting coordinates 29 41 5.083N, 88 29 25.15W and ending at 29 41 7.223N, 88 29 23.137W. The exposed segment has a bearing of 40 degrees and was identified in acoustic data acquired on September 26, 2019 (DN 269). This segment is located near a charted pipeline and appears to be unburied with no discernable height above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_01c is a segment of exposed pipeline approximately 121 feet in length with starting coordinates 29 41 12.791N, 88 29 18.819W and ending at 29 41 13.805N, 88 29 18.079W. The exposed segment has a bearing of 33 degrees and was identified in acoustic data acquired on September 26, 2019 (DN 269). This segment is located near a charted pipeline and appears to be unburied with no discernable height above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_01d is a segment of exposed pipeline approximately 67 feet in length with starting coordinates 29 42 3.13N, 88 28 43.728W and ending at 29 42 3.611N, 88 28 43.198W. The exposed segment has a bearing of 45 degrees and was identified in acoustic data acquired on September 27, 2019 (DN 270). This segment is located near a charted pipeline and appears to be unburied with no discernable height above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_01e is a segment of exposed pipeline approximately 78 feet in length with starting coordinates 29 42 23.014N, 88 28 29.342W and ending at 29 42 23.658N, 88 28 28.864W. The exposed segment has a bearing of 34 degrees and was identified in acoustic data acquired on September 27, 2019 (DN 270). This segment is located near a charted pipeline and appears to be unburied with no discernable height above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_02 is a segment of exposed pipeline approximately 182 feet in length with starting coordinates 29 42 1.734N, 88 28 17.439W and ending at 29 42 2.207N, 88 28 15.465W. The exposed segment has a bearing of 75 degrees and was identified in acoustic data acquired on September 27, 2019 (DN 270). This segment is 2100 feet from a charted pipeline and sits in a depression below the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is 2100 feet from a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_03 is a segment of exposed pipeline approximately 1346 feet in length with starting coordinates 29 39 46.138N, 88 31 48.801W and ending at 29 39 40.47N, 88 31 35.841W. The exposed segment has a bearing of 117 degrees and was identified in acoustic data acquired on September 25, 2019 (DN 268). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_04 is a segment of exposed pipeline approximately 12100 feet in length with starting coordinates 29 39 37.788N, 88 31 32.634W and ending at 29 37 40.108N, 88 31 20.595W. The exposed segment has a bearing of 176 degrees and was identified in acoustic data acquired on September 19, 2019 (DN 262). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_05 is a segment of exposed pipeline approximately 12286 feet in length with starting coordinates 29 39 42.808N, 88 31 32.34W and ending at 29 37 42.466N, 88 31 25.582W. The exposed segment has a bearing of 178 degrees and was identified in acoustic data acquired on September 25, 2019 (DN 268). The segment is located near a charted pipeline and rises approximately 2 feet above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_06a is a segment of exposed pipeline approximately 402 feet in length with starting coordinates 29 38 28.65N, 88 28 41.415W and ending at 29 38 26.964N, 88 28 45.547W. The exposed segment has a bearing of 246 degrees and was identified in acoustic data acquired on September 27, 2019 (DN 270). The segment is located 2050 feet from a charted pipeline and sits in a depression below the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is 2050 feet from a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_06b is a segment of exposed pipeline approximately 92 feet in length with starting coordinates 29 38 36.178N, 88 28 25.235W and ending at 29 38 34.625N, 88 28 28.163W. The exposed segment has a bearing of 59 degrees and was identified in acoustic data acquired on September 27, 2019 (DN 270). The segment is located 1260 feet from a charted pipeline and sits in a depression below the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is 1260 feet from a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_06c is a segment of exposed pipeline approximately 1954 feet in length with starting coordinates 29 38 57.13N, 88 27 54.429W and ending at 29 38 44.722N, 88 28 11.415W. The exposed segment has a bearing of 231

degrees and was identified in acoustic data acquired on September 27, 2019 (DN 270). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_07a is a segment of exposed pipeline approximately 1555 feet in length with starting coordinates 29 38 41.586N, 88 30 26.46W and ending at 29 38 34.291N, 88 30 10.936W. The exposed segment has a bearing of 119 degrees and was identified in acoustic data acquired on September 26, 2019 (DN 269). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Tana Exploration Company LLC pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_07b is a segment of exposed pipeline approximately 1377 feet in length with starting coordinates 29 38 25.5N, 88 29 50.412W and ending at 29 38 19.432N, 88 29 36.456W. The exposed segment has a bearing of 117 degrees and was identified in acoustic data acquired on September 26, 2019 (DN 269). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Tana Exploration Company LLC pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_08a is a segment of exposed pipeline approximately 1085 feet in length with starting coordinates 29 38 36.463N, 88 32 27.752W and ending at 29 38 27.956N, 88 32 20.629W. The exposed segment has a bearing of 145 degrees and was identified in acoustic data acquired on September 24, 2019 (DN 267). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_08b is a segment of exposed pipeline approximately 5951 feet in length with starting coordinates 29 38 21.385N, 88 32 14.839W and ending at 29 37 44.409N, 88 31 28.764W. The exposed segment has a bearing of 134 degrees and was identified in acoustic data acquired on September 24, 2019 (DN 267). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_09a is a segment of exposed pipeline approximately 93 feet in length with starting coordinates 29 37 36.759N, 88 33 08.613W and ending at 29 37 36.754N, 88 33 7.554W. The exposed segment has a bearing of 91 degrees and was identified in acoustic data acquired on September 24, 2019 (DN 267). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Texas Eastern Transmission LP pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_09b is a segment of exposed pipeline approximately 627 feet in length with starting coordinates 29 37 36.009N, 88 32 37.15W and ending at 29 37 35.876N, 88 32 30.052W. The exposed segment has a bearing of 92 degrees and was identified in acoustic data acquired on September 24, 2019 (DN 267). The segment is located near a charted pipeline and sits in a depression below the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Texas Eastern Transmission LP pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_09c is a segment of exposed pipeline approximately 141 feet in length with starting coordinates 29 37 35.565N, 88 32 11.458W and ending at 29 37 35.572N, 88 32 9.857W. The exposed segment has a bearing of 90 degrees and was identified in acoustic data acquired on September 25, 2019 (DN 268). The segment is located near a charted pipeline and rises approximately 4 feet above the surrounding seafloor. According to BOEM/BSEE online map service,

the exposed segment is part of a Texas Eastern Transmission LP pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_09d is a segment of exposed pipeline approximately 55 feet in length with starting coordinates 29 37 35.32N, 88 31 52.253W and ending at 29 37 35.3N, 88 31 51.636W. The exposed segment has a bearing of 93 degrees and was identified in acoustic data acquired on September 25, 2019 (DN 268). The pipeline is part of a located within a charted pipeline area and sits in a depression below the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Texas Eastern Transmission LP pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_09e is a segment of exposed pipeline approximately 84 feet in length with starting coordinates 29 37 34.827N, 88 31 29.732W and ending at 29 37 34.789N, 88 31 28.786W. The exposed segment has a bearing of 93 degrees and was identified in acoustic data acquired on September 24, 2019 (DN 267). The segment is located near a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Texas Eastern Transmission LP pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_10 is a segment of exposed pipeline approximately 7921 feet in length with starting coordinates 29 38 19.158N, 88 29 48.909W and ending at 29 37 34.161N, 88 30 53.578W. The exposed segment has a bearing of 232 degrees and was identified in acoustic data acquired on September 26, 2019 (DN 269). The segment is located 1975 feet from a charted pipeline and rises approximately 1 foot above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_11 is a segment of exposed pipeline approximately 247 feet in length with starting coordinates 29 37 30.33N, 88 27 14.213W and ending at 29 37 27.906N, 88 27 14.591W. The exposed segment has a bearing of 188 degrees and was identified in acoustic data acquired on September 28, 2019 (DN 271). The segment is located near a charted pipeline and rises approximately 4 feet above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is a Texas Eastern Transmission LP pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_12a is a segment of exposed pipeline approximately 522 feet in length with starting coordinates 29 37 28.209N, 88 27 15.114W and ending at 29 37 27.357N, 88 27 9.281W. The exposed segment has a bearing of 100 degrees and was identified in acoustic data acquired on September 28, 2019 (DN 271). The segment is located near a charted pipeline and rises approximately 4 feet above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Dauphin Island Gathering Partn pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_12b is a segment of exposed pipeline approximately 289 feet in length with starting coordinates 29 37 26.072N, 88 27 0.685W and ending at 29 37 25.489N, 88 26 57.484W. The exposed segment has a bearing of 102 degrees and was identified in acoustic data acquired on October 5, 2019 (DN 278). The segment is located near a charted pipeline and rises approximately 3 feet above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is part of a Dauphin Island Gathering Partn pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_13 is a segment of exposed pipeline approximately 92 feet in length with starting coordinates 29 37 48.08N, 88 31 22.903W and ending at 29 37 45.043N, 88 31 22.603W. The exposed segment has a bearing of 177 degrees and was identified in acoustic data acquired on September 24, 2019 (DN 267). This segment is located near a charted pipeline and appears to be unburied with no discernable height above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is a Callon Petroleum Operating Company pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

H13266_Pipeline_14 is a segment of exposed pipeline approximately 92 feet in length with starting coordinates 29 37 34.396N, 88 31 3.729W and ending at 29 37 32.533N, 88 31 3.533W. The exposed segment has a bearing of 325 degrees and was identified in acoustic data acquired on September 24, 2019 (DN 267). This segment is located near a charted pipeline and appears to be unburied with no discernable height above the surrounding seafloor. According to BOEM/BSEE online map service, the exposed segment is a Texas Eastern Transmission LP pipeline. The exposed pipeline is not significantly shoaler than nearby charted soundings.

Jason Creech, CH | Vice President, Nautical Charting Program Manager
David Evans and Associates, Inc.
2801 SE Columbia Way, Suite 130 | Vancouver, WA, 98661 | www.deainc.com
t: 804.806.4440 | c: 804.516.7829 | jasc@deainc.com

Jason Creech

From: NODC.DataOfficer@noaa.gov
Sent: Monday, February 3, 2020 9:27 AM
To: Jason Creech
Subject: [Send2NCEI] data submission confirmation for Reference ID: 0DMBMT

Dear Jason Creech,

Thank you for submitting your data collection, titled "SOUND VELOCITY collected from S/V Blake in Gulf of Mexico from 2019-06-14 to 2020-01-16", to the NOAA National Centers for Environmental Information (NCEI). Your submission package has been assigned Reference ID: 0DMBMT. 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: 0DMBMT) 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.

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

David Evans and Associates, Inc.
2801 SE Columbia Way, Suite 130
Vancouver, WA 98661
Phone: 360-314-3200
Fax: 360-314-3250

OPR-J311-KR-19
Marine Mammal Trained Observers

Inclusive Dates: 5/21/2019 - 2/15/2020
General Locality: Chandeleur Islands

H Number	Sub Locality	Priority
H13260	12 NM East of North Islands	1
H13261	19 NM East of North Islands	2
H13262	19 NM East of Freemason Islands	3
H13263	25 NM East of Freemason Islands	4
H13264	23 NM East of North Islands	5
H13265	27 NM East of North Islands	6
H13266	27 NM ESE of Freemason Islands	7
H13267	24 NM East of Brenton Islands	8
H13268	12 NM South of Mobile Point	9

Observer	Position	Training Video[1] Date
Alexandra Juneau	Survey Crew	6/7/2019
Andrew Beets	Survey Crew	7/12/2019
Callan McGriff	Survey Crew	6/15/2019
Daniel Prince	Survey Crew	6/7/2019
David Moehl	Survey Crew	6/7/2019
Erin Haphey	Survey Crew	7/8/2019
Jason Dorfman	Survey Crew	6/6/2019
Laura Rajnak	Survey Crew	6/7/2019
Matthew Chatterton	Survey Crew	6/20/2019
Rachel Hausmann	Survey Crew	6/12/2019
Sam Werner	Survey Crew	6/6/2019
Steven Loy	Survey Crew	3/13/2019
Tyler Ball	Survey Crew	9/11/2019
George Hopkins	Vessel Crew	6/22/2019
Harry Stutzke	Vessel Crew	6/13/2019
Jarrod Leckich	Vessel Crew	6/22/2019
Jason Privett	Vessel Crew	9/10/2019
Jerry David Keith	Vessel Crew	6/13/2019
Jonathan Jones	Vessel Crew	9/11/2019
Joseph Ziz	Vessel Crew	7/15/2019
Ryan Willis	Vessel Crew	6/13/2019
Timothy Kennedy	Vessel Crew	6/13/2019

[1] Marine Species Awareness Training Video: https://www.youtube.com/watch?v=KKo3r1yVBBA

Jason Creech

From: Jason Creech
Sent: Friday, January 31, 2020 3:15 PM
To: 'pop.information@noaa.gov'; 'ocs.ecc@noaa.gov'
Cc: Christina Fandel - NOAA Federal
Subject: OPR-J311-KR-19 Marine Mammal Observation Logs
Attachments: OPR-J311-KR-19_Marine_Mammal_Logs.zip

Good afternoon

I have attached a zip file containing Marine Mammal Observation Logs from hydrographic survey project OPR-J311-KR-19. This project was performed by David Evans and Associates, Inc. under contract to NOAA Office of Coast Survey.

Please let me know if you have any questions about this submittal.

Thanks,
Jason

Jason Creech, CH | Vice President, Nautical Charting Program Manager
David Evans and Associates, Inc.
2801 SE Columbia Way, Suite 130 | Vancouver, WA, 98661 | www.deainc.com
t: 804.806.4440 | c: 804.516.7829 | jasc@deainc.com

APPROVAL PAGE

H13266

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.ELIZABETH .1284020495 Date: 2021.09.02 09:48:55 -08'00'

Commander Meghan McGovern, NOAA
Chief, Atlantic Hydrographic Branch