

H13159

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

**DESCRIPTIVE REPORT**

Type of Survey: Navigable Area

Registry Number: H13159

**LOCALITY**

State(s): Florida

General Locality: Gulf of Mexico

Sub-locality: 12 Miles South of Cape San Blas

**2019**

CHIEF OF PARTY  
Dean R. Moyles

LIBRARY & ARCHIVES

Date:

**HYDROGRAPHIC TITLE SHEET**

**H13159**

**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): **Florida**

General Locality: **Gulf of Mexico**

Sub-Locality: **12 Miles South of Cape San Blas**

Scale: **40000**

Dates of Survey: **05/03/2019 to 05/22/2019**

Instructions Dated: **02/25/2019**

Project Number: **OPR-J359-KR-18**

Field Unit: **Fugro Pelagos, Inc.**

Chief of Party: **Dean R. Moyles**

Soundings by: **Multibeam Echo Sounder**

Imagery by: **Multibeam Echo Sounder Backscatter**

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.*

# Table of Contents

<a href="#">A. Area Surveyed.....</a>	<a href="#">1</a>
<a href="#">A.1 Survey Limits.....</a>	<a href="#">1</a>
<a href="#">A.2 Survey Purpose.....</a>	<a href="#">2</a>
<a href="#">A.3 Survey Quality.....</a>	<a href="#">3</a>
<a href="#">A.4 Survey Coverage.....</a>	<a href="#">3</a>
<a href="#">A.5 Survey Statistics.....</a>	<a href="#">4</a>
<a href="#">B. Data Acquisition and Processing.....</a>	<a href="#">6</a>
<a href="#">B.1 Equipment and Vessels.....</a>	<a href="#">6</a>
<a href="#">B.1.1 Vessels.....</a>	<a href="#">6</a>
<a href="#">B.1.2 Equipment.....</a>	<a href="#">7</a>
<a href="#">B.2 Quality Control.....</a>	<a href="#">7</a>
<a href="#">B.2.1 Crosslines.....</a>	<a href="#">7</a>
<a href="#">B.2.2 Uncertainty.....</a>	<a href="#">9</a>
<a href="#">B.2.3 Junctions.....</a>	<a href="#">10</a>
<a href="#">B.2.4 Sonar QC Checks.....</a>	<a href="#">13</a>
<a href="#">B.2.5 Equipment Effectiveness.....</a>	<a href="#">13</a>
<a href="#">B.2.6 Factors Affecting Soundings.....</a>	<a href="#">13</a>
<a href="#">B.2.7 Sound Speed Methods.....</a>	<a href="#">14</a>
<a href="#">B.2.8 Coverage Equipment and Methods.....</a>	<a href="#">14</a>
<a href="#">B.3 Echo Sounding Corrections.....</a>	<a href="#">14</a>
<a href="#">B.3.1 Corrections to Echo Soundings.....</a>	<a href="#">14</a>
<a href="#">B.3.2 Calibrations.....</a>	<a href="#">15</a>
<a href="#">B.4 Backscatter.....</a>	<a href="#">15</a>
<a href="#">B.5 Data Processing.....</a>	<a href="#">15</a>
<a href="#">B.5.1 Primary Data Processing Software.....</a>	<a href="#">15</a>
<a href="#">B.5.2 Surfaces.....</a>	<a href="#">15</a>
<a href="#">C. Vertical and Horizontal Control.....</a>	<a href="#">16</a>
<a href="#">C.1 Vertical Control.....</a>	<a href="#">16</a>
<a href="#">C.2 Horizontal Control.....</a>	<a href="#">16</a>
<a href="#">D. Results and Recommendations.....</a>	<a href="#">17</a>
<a href="#">D.1 Chart Comparison.....</a>	<a href="#">17</a>
<a href="#">D.1.1 Electronic Navigational Charts.....</a>	<a href="#">19</a>
<a href="#">D.1.2 Maritime Boundary Points.....</a>	<a href="#">20</a>
<a href="#">D.1.3 Charted Features.....</a>	<a href="#">20</a>
<a href="#">D.1.4 Uncharted Features.....</a>	<a href="#">20</a>
<a href="#">D.1.5 Shoal and Hazardous Features.....</a>	<a href="#">20</a>
<a href="#">D.1.6 Channels.....</a>	<a href="#">20</a>
<a href="#">D.1.7 Bottom Samples.....</a>	<a href="#">20</a>
<a href="#">D.2 Additional Results.....</a>	<a href="#">20</a>
<a href="#">D.2.1 Shoreline.....</a>	<a href="#">20</a>
<a href="#">D.2.2 Prior Surveys.....</a>	<a href="#">21</a>
<a href="#">D.2.3 Aids to Navigation.....</a>	<a href="#">21</a>
<a href="#">D.2.4 Overhead Features.....</a>	<a href="#">21</a>

<a href="#">D.2.5 Submarine Features.....</a>	<a href="#">21</a>
<a href="#">D.2.6 Platforms.....</a>	<a href="#">21</a>
<a href="#">D.2.7 Ferry Routes and Terminals.....</a>	<a href="#">21</a>
<a href="#">D.2.8 Abnormal Seafloor and/or Environmental Conditions.....</a>	<a href="#">21</a>
<a href="#">D.2.9 Construction and Dredging.....</a>	<a href="#">21</a>
<a href="#">D.2.10 New Survey Recommendation.....</a>	<a href="#">21</a>
<a href="#">D.2.11 Inset Recommendation.....</a>	<a href="#">22</a>
<a href="#">E. Approval Sheet.....</a>	<a href="#">23</a>
<a href="#">F. Table of Acronyms.....</a>	<a href="#">24</a>

## List of Tables

<a href="#">Table 1: Survey Limits.....</a>	<a href="#">1</a>
<a href="#">Table 2: Survey Coverage.....</a>	<a href="#">3</a>
<a href="#">Table 3: Hydrographic Survey Statistics.....</a>	<a href="#">5</a>
<a href="#">Table 4: Dates of Hydrography.....</a>	<a href="#">6</a>
<a href="#">Table 5: Vessels Used.....</a>	<a href="#">6</a>
<a href="#">Table 6: Major Systems Used.....</a>	<a href="#">7</a>
<a href="#">Table 7: Survey Specific Tide TPU Values.....</a>	<a href="#">9</a>
<a href="#">Table 8: Survey Specific Sound Speed TPU Values.....</a>	<a href="#">9</a>
<a href="#">Table 9: Junctioning Surveys.....</a>	<a href="#">11</a>
<a href="#">Table 10: Primary bathymetric data processing software.....</a>	<a href="#">15</a>
<a href="#">Table 11: Primary imagery data processing software.....</a>	<a href="#">15</a>
<a href="#">Table 12: Submitted Surfaces.....</a>	<a href="#">16</a>
<a href="#">Table 13: Largest Scale ENC.....</a>	<a href="#">19</a>

## List of Figures

<a href="#">Figure 1: Survey H13159 location relative to overall sheet limits of OPR-J359-KR-18.....</a>	<a href="#">2</a>
<a href="#">Figure 2: Survey H13159 full coverage MBES.....</a>	<a href="#">4</a>
<a href="#">Figure 3: H13159 MBES crossline to mainscheme distribution.....</a>	<a href="#">8</a>
<a href="#">Figure 4: H13159 mainscheme MBES differenced to crossline statistical output.....</a>	<a href="#">8</a>
<a href="#">Figure 5: H13159 2m finalized grid TPU QC.....</a>	<a href="#">10</a>
<a href="#">Figure 6: Junction surveys to H13159: H13153, H13154, and H13155.....</a>	<a href="#">11</a>
<a href="#">Figure 7: Survey H13159 differenced to Survey H13153.....</a>	<a href="#">12</a>
<a href="#">Figure 8: Survey H13158 differenced to Survey H13154.....</a>	<a href="#">12</a>
<a href="#">Figure 9: Survey H13158 differenced to Survey H13155.....</a>	<a href="#">13</a>
<a href="#">Figure 10: Temporal and geographic distribution of SVP casts within survey H13159.....</a>	<a href="#">14</a>
<a href="#">Figure 11: QC tools output instances of survey H13159 soundings shoal to charted soundings &gt;1m.....</a>	<a href="#">18</a>
<a href="#">Figure 12: QC tools output instances of surveyed soundings shoal to charted soundings &gt;1m over survey H13159 area with ENC soundings TIN.....</a>	<a href="#">19</a>

## Descriptive Report to Accompany Survey H13159

Project: OPR-J359-KR-18

Locality: Gulf of Mexico

Sublocality: 12 Miles South of Cape San Blas

Scale: 1:40000

May 2019 - May 2019

**Fugro Pelagos, Inc.**

Chief of Party: Dean R. Moyles

### A. Area Surveyed

Survey H13159 (Table 1) is located approximately 12 linear nautical miles South of Cape San Blas, FL (Figure 1). The M/V Pelagos acquired full coverage multibeam echosounder (MBES) and multibeam echosounder acoustic backscatter within the assigned survey limits from 3 May 2019 to 22 May 2019.

#### A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
29° 29' 55.32" N 85° 30' 5.88" W	29° 23' 13.53" N 85° 20' 52.03" W

*Table 1: Survey Limits*

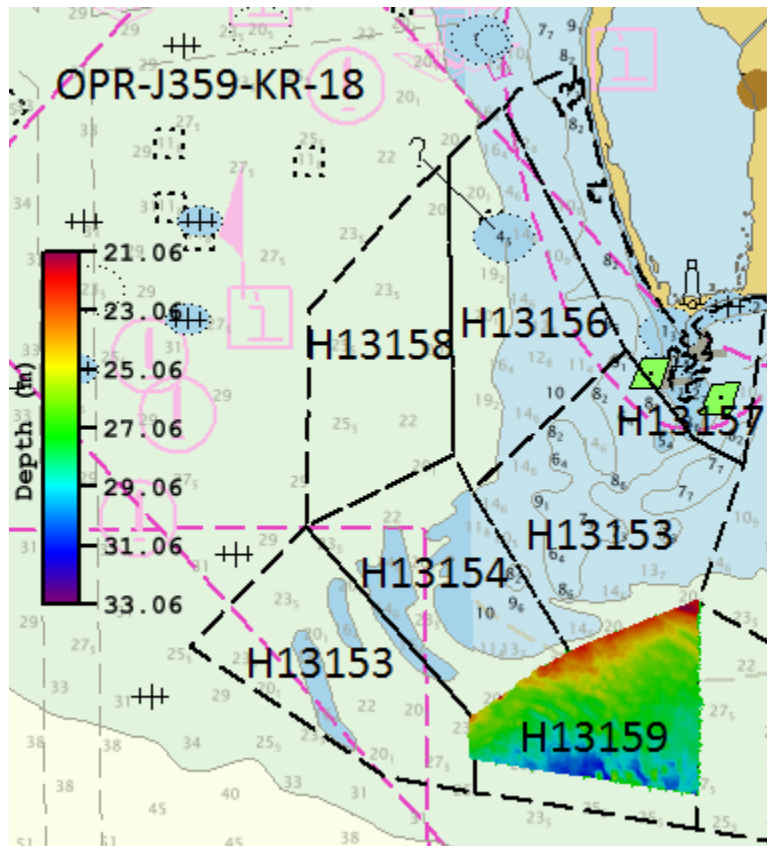


Figure 1: Survey H13159 location relative to overall sheet limits of OPR-J359-KR-18

Survey H13159 extents were not entirely surveyed, as the condition of contract mileage was met before the limits were filled in.

## A.2 Survey Purpose

The Vicinity of Apalachicola project will provide contemporary surveys to update National Ocean Service (NOS) nautical charting products. It is offshore of Apalachicola Bay and Joseph Bay, FL. The survey will provide updated bathymetry and feature data to address concerns of migrating shoals, thus reducing the risk to navigation within the project area.

The Apalachicola Surveys delineate the western extent of the Big Bend Mapping project, a Florida Coastal Mapping Program (FCMaP) priority. This multi-year, multi-agency mapping project will fill in an area in which only 2% of the seafloor is mapped to modern standards. Improving the understanding of the bathymetry, geomorphology, bio-diversity and distribution of habitats in this region will support Floridian fisheries, coastal modeling, and resource management.

The project will cover approximately 323 square nautical miles of high priority survey area identified in the latest iteration of NOAA HSD's risk based prioritization model. Data from this project will supersede all

prior survey data providing modern hydrographic survey data for this area and updating the local charting products.

### **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:

<b>Water Depth</b>	<b>Coverage Required</b>
All waters in survey area	Complete coverage MBES with acoustic backscatter

*Table 2: Survey Coverage*

Survey H13159 meets survey coverage requirements as assigned in the project instructions and HSSD (Table 2 and Figure 2).

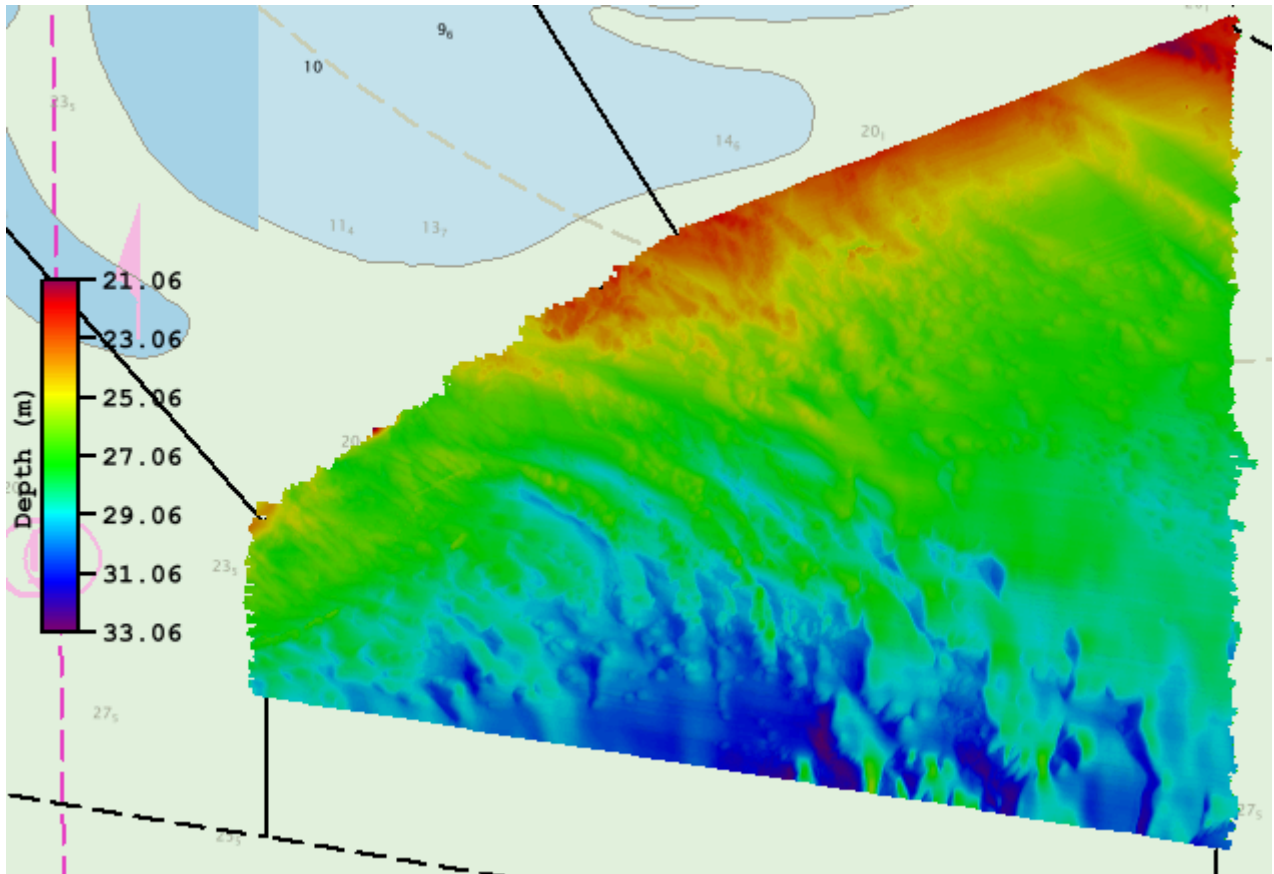


Figure 2: Survey H13159 full coverage MBES

## A.5 Survey Statistics

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



	<b>HULL ID</b>	<i>M/V Pelagos</i>	<i>Total</i>
<b>LNM</b>	<b>SBES Mainscheme</b>	0	0
	<b>MBES Mainscheme</b>	787.71	787.71
	<b>Lidar Mainscheme</b>	0	0
	<b>SSS Mainscheme</b>	0	0
	<b>SBES/SSS Mainscheme</b>	0	0
	<b>MBES/SSS Mainscheme</b>	0	0
	<b>SBES/MBES Crosslines</b>	44.93	44.93
	<b>Lidar Crosslines</b>	0	0
<b>Number of Bottom Samples</b>			0
<b>Number Maritime Boundary Points Investigated</b>			0
<b>Number of DPs</b>			0
<b>Number of Items Investigated by Dive Ops</b>			0
<b>Total SNM</b>			37.02

*Table 3: Hydrographic Survey Statistics*

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

<b>Survey Dates</b>	<b>Day of the Year</b>
05/03/2019	123

<b>Survey Dates</b>	<b>Day of the Year</b>
05/06/2019	126
05/07/2019	127
05/08/2019	128
05/10/2018	130
05/11/2019	131
05/12/2019	132
05/14/2019	134
05/15/2019	135
05/16/2019	136
05/17/2019	137
05/18/2019	138
05/19/2019	139
05/20/2019	140
05/21/2019	141
05/22/2019	142

*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 (Table 6), survey vessels (Table 5), quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR are discussed in the following sections.

#### **B.1.1 Vessels**

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

<b>Hull ID</b>	<b><i>M/V Pelagos</i></b>
<b>LOA</b>	34 feet
<b>Draft</b>	2 feet

*Table 5: Vessels Used*

M/V Pelagos acquired multibeam echosounder, acoustic backscatter, surface sound velocity, sound velocity profiles, attitude and positioning data within the survey limits of H13159. For a detailed listing of equipment used to acquire survey data, refer to the DAPR submitted with this report under Project Reports.

### B.1.2 Equipment

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

<b>Manufacturer</b>	<b>Model</b>	<b>Type</b>
Teledyne RESON	SeaBat 7125 SV2	MBES
Teledyne RESON	SVP 70	Sound Speed System
AML Oceanographic	SV&P	Sound Velocity and Pressure Sensor
Applanix	POS MV 320 v4	Positioning and Attitude System

*Table 6: Major Systems Used*

For a detailed listing of equipment, refer to the DAPR submitted with this report.

## B.2 Quality Control

### B.2.1 Crosslines

Multibeam/single beam echo sounder/side scan sonar crosslines acquired for this survey totaled 5.70% of mainscheme acquisition.

Crosslines for survey H13159 (Figure 3) were acquired in accordance with sections 5.2.4.2 of the HSSD 2018. Of the 2,595,049 nodes compared between H13159 mainscheme MBES and MBES crosslines, 100% are within 1m difference. The mean difference is -0.01m, with a standard deviation of 0.06m (Figure 4).

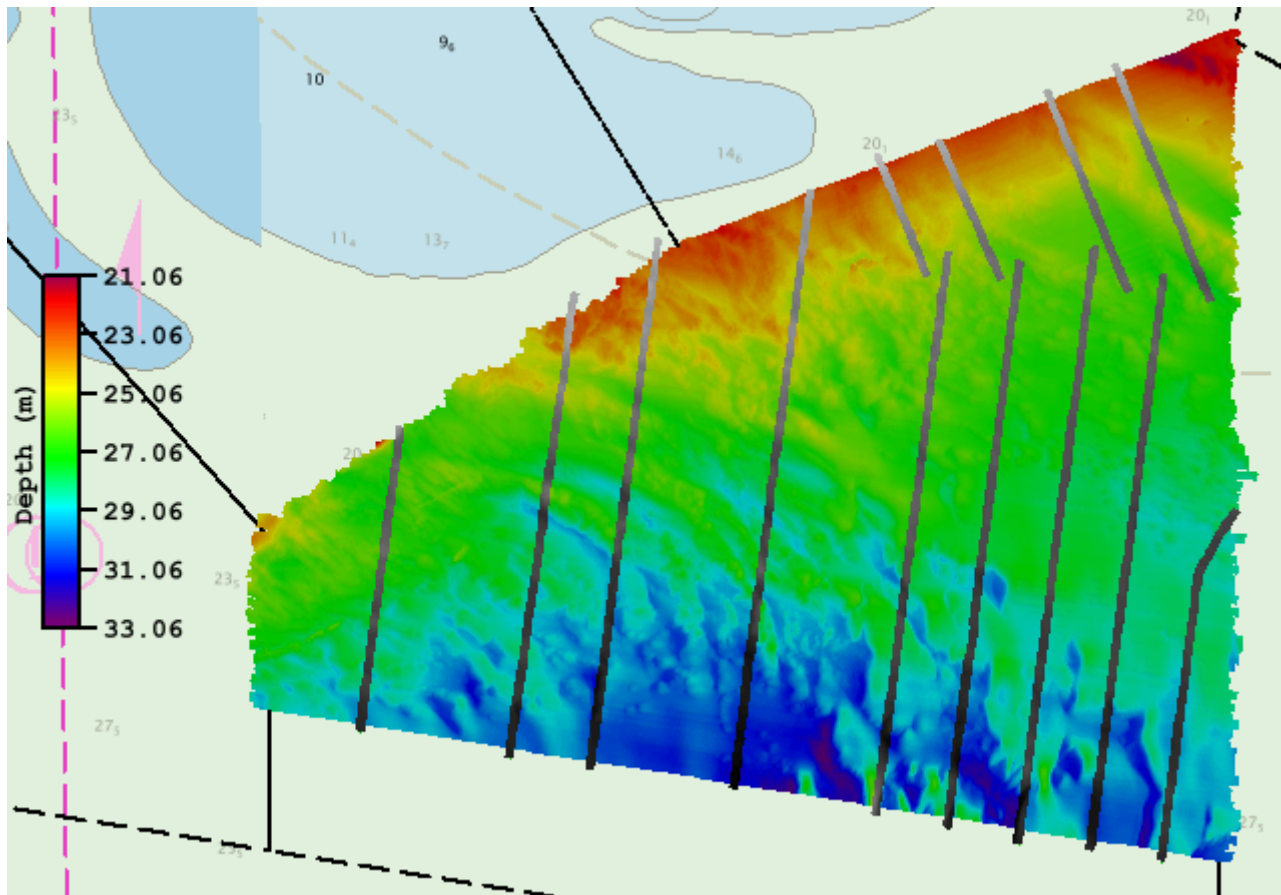


Figure 3: H13159 MBES crossline to mainscheme distribution

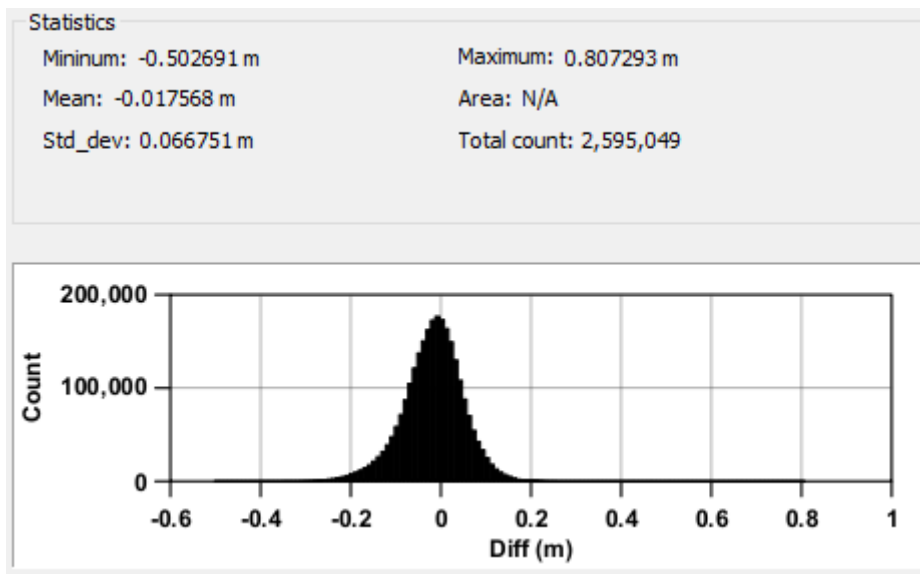


Figure 4: H13159 mainscheme MBES differenced to crossline statistical output

### B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

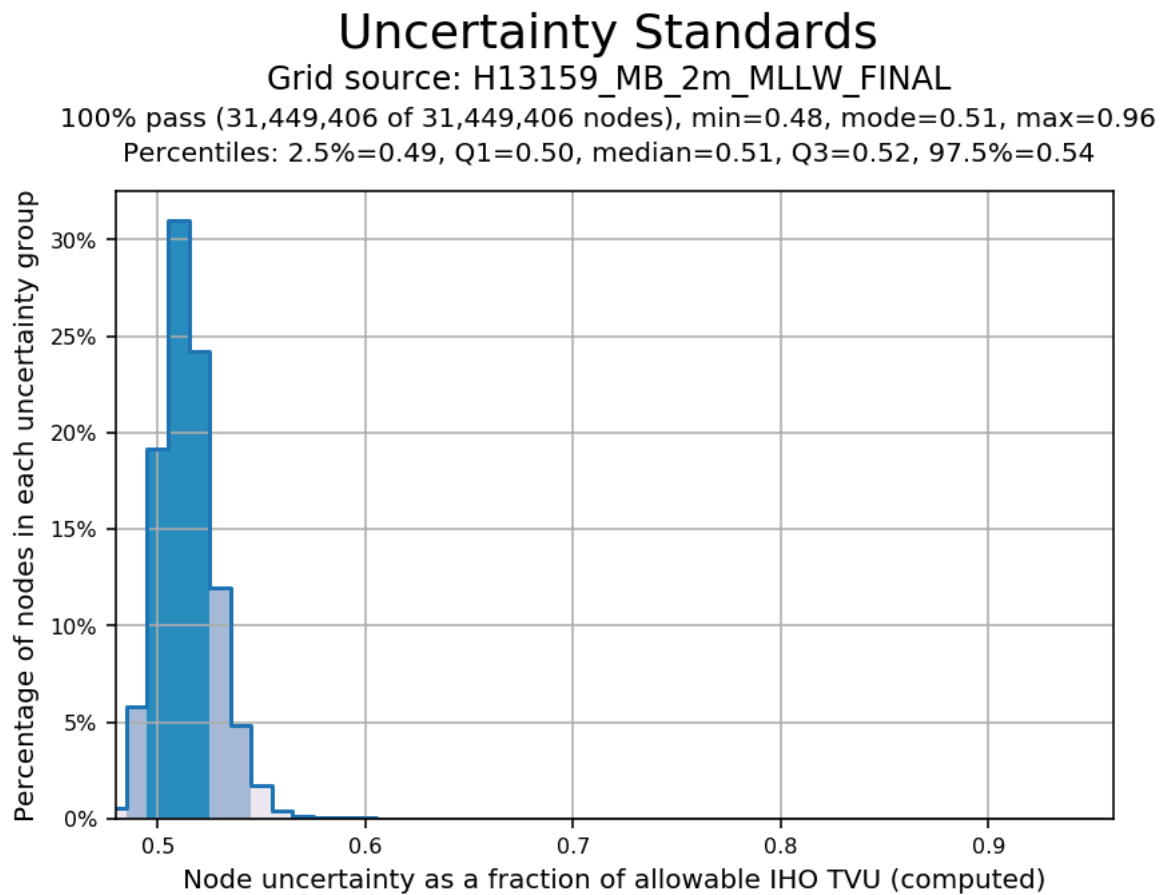
<b>Method</b>	<b>Measured</b>	<b>Zoning</b>
ERS via VDATUM	0.1 meters	0.101 meters

*Table 7: Survey Specific Tide TPU Values.*

<b>Hull ID</b>	<b>Measured - CTD</b>	<b>Measured - MVP</b>	<b>Surface</b>
Pelagos	1.880 meters/second	N/A meters/second	0.25 meters/second

*Table 8: Survey Specific Sound Speed TPU Values.*

Survey H13159 uncertainty values were evaluated both in CARIS HIPS and SIPS and via Pydro QC tools v2.7.5. The 2m (Figure 5) finalized grid meet uncertainty standards with 100% of nodes exceeding minimum requirements.



*Figure 5: H13159 2m finalized grid TPU QC*

### B.2.3 Junctions

Data from three junction surveys to H13159 are available at the time of this report (Figure 6). All junction surveys, H13153, H13154, and H13155, contain data acquired by the R/V Acadiana prior to the arrival of Hurricane Michael in October 2018 (Table 9). Surveyed depths in the area of OPR-J359-KR-18 were effected by the storm causing some inconsistencies when comparing soundings between data sets. Survey data were compared by running a difference surface in CARIS HIPS and SIPS on finalized 2m surfaces for each survey (Figures 7-9).

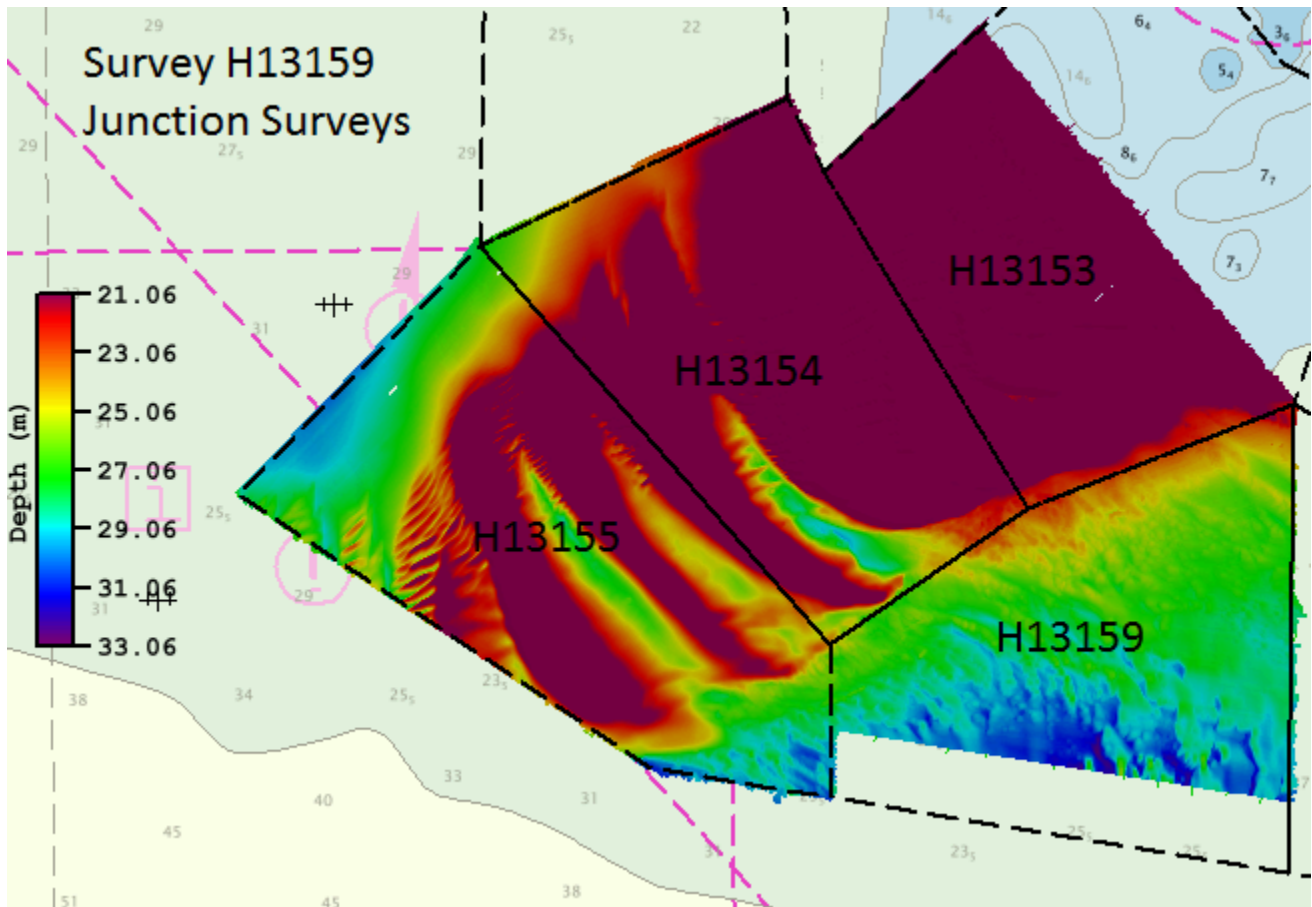


Figure 6: Junction surveys to H13159: H13153, H13154, and H13155

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H13153	1:20000	2018	R/V Acadiana	N
H13154	1:40000	2018	R/V Acadiana	NW
H13155	1:40000	2018	R/V Acadiana	W

Table 9: Junctioning Surveys

H13153

Of 331,282 nodes differenced between survey H13159 and H13153, 100% agree within 1m. The minimum difference is -0.19m, the maximum difference is 0.82m with a mean of 0.27m and a standard deviation of 0.070m.

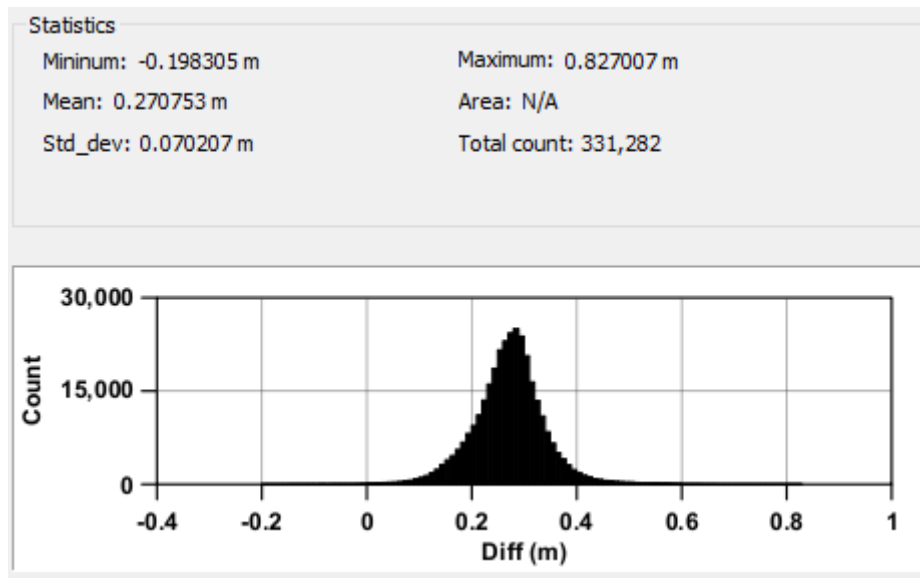


Figure 7: Survey H13159 differenced to Survey H13153

### H13154

Of 467,380 nodes differenced between survey H13159 and H13154, 99.9% agree within 1m. The minimum difference is -0.26m, the maximum difference is 1.16m with a mean of 0.18m and a standard deviation of 0.10m.

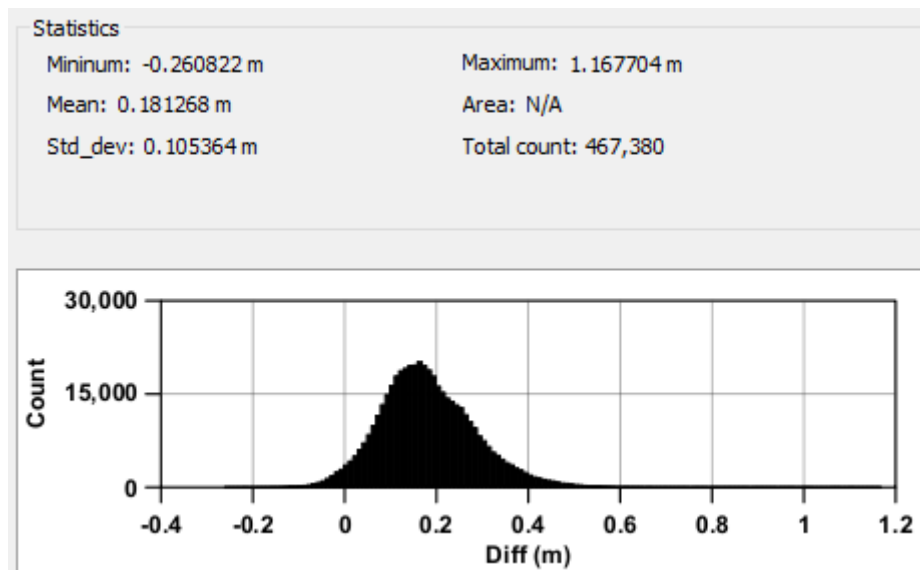


Figure 8: Survey H13158 differenced to Survey H13154



## H13155

Of 316,063 nodes differenced between survey H13159 and H13155, 100% agree within xm. The minimum difference is -0.12m, the maximum difference is 0.68m with a mean of 0.23m and a standard deviation of 0.06m.

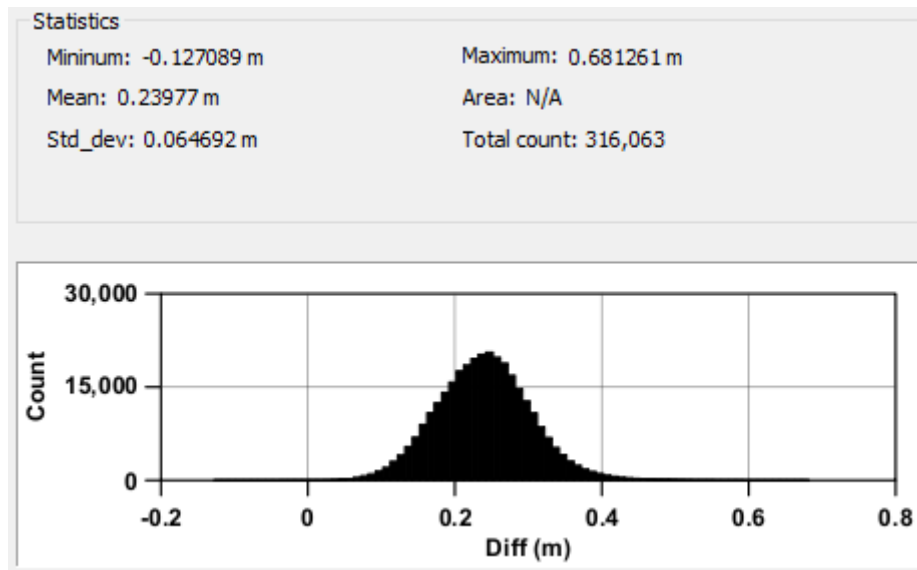


Figure 9: Survey H13158 differenced to Survey H13155

### 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.

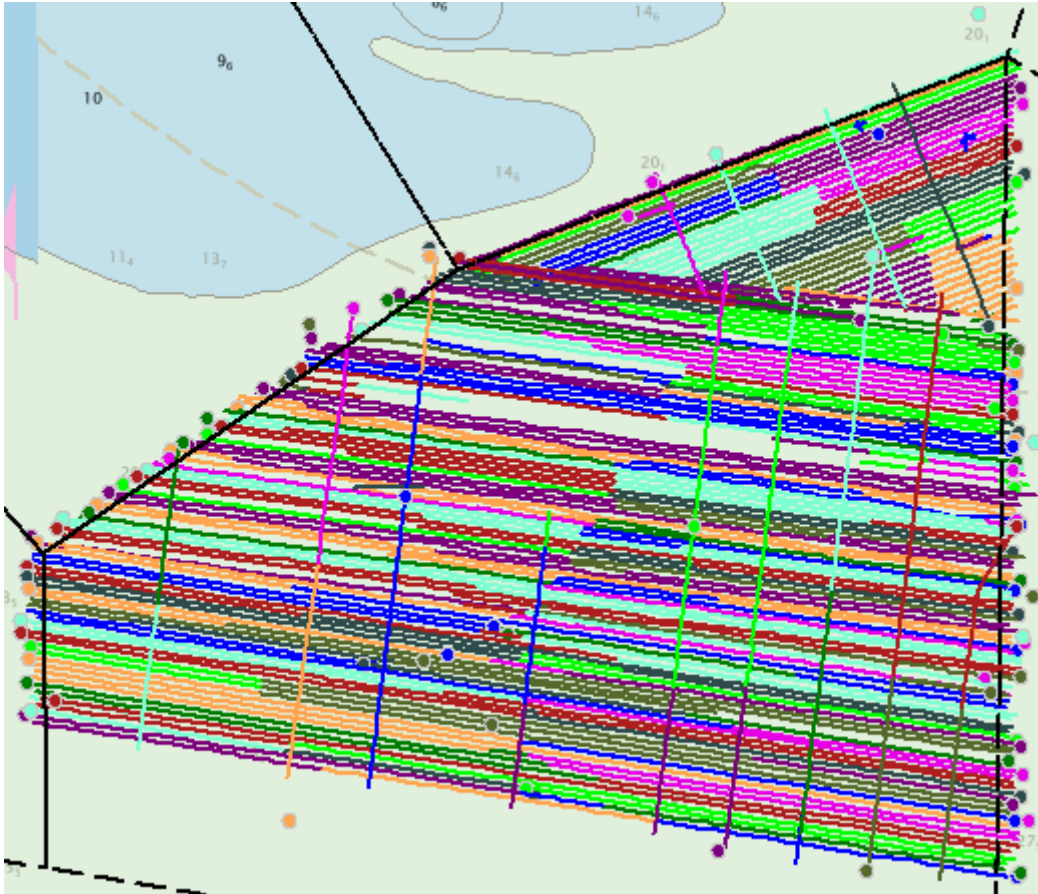
### B.2.6 Factors Affecting Soundings

There were no other factors that affected corrections to soundings.

## B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: Sound velocity profiles were acquired every two hours from the M/V Pelagos using an AML Sound Velocity & Pressure (SV&P) sensor (Figure 10).

Refer to the DAPR for additional information.



*Figure 10: Temporal and geographic distribution of SVP casts within survey H13159*

## B.2.8 Coverage Equipment and Methods

All equipment and survey methods were used as detailed in the DAPR.

## 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

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

Manufacturer	Name	Version
Teledyne CARIS	HIPS & SIPS	9.1.9

*Table 10: Primary bathymetric data processing software*

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

Manufacturer	Name	Version
QPS	FMGT	7.8.7

*Table 11: Primary imagery data processing software*

The following Feature Object Catalog was used: NOAA Extended Attribute Files V5\_7.

### 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
H13159_MB_2m_MLLW	CARIS Raster Surface (CUBE)	2 meters	21.06 meters - 32.94 meters	CMC 2m	Complete MBES

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13159_MB_2m_MLLW_Final	CARIS Raster Surface (CUBE)	2 meters	21.06 meters - 32.94 meters	CMC 2m	Complete MBES
H13159_MBAB_2m_400kHz	MB Backscatter Mosaic	2 meters	0 N/A - 0 N/A	N/A	Complete MBES

*Table 12: Submitted Surfaces*

## 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 Methods Used:

ERS via VDATUM

#### Ellipsoid to Chart Datum Separation File:

J359\_Buffer1mi\_xyNAD83-MLLW\_geoid12b.csar

### C.2 Horizontal Control

The horizontal datum for this project is North American Datum 1983.

The projection used for this project is Projected UTM 16.

## **D. Results and Recommendations**

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

A selected sounding set was made from the finalized 2m grid with the following characteristics: shoal biased; 1 to 10,000mm at map scale; defined radius of 5. An overall sounding selection was created from charted soundings from ENC US4FL68M. The two were then compared with a minimum threshold of 1m survey soundings shoal to charted soundings using the Chart Review feature within Pydro QC tools (Figures 11 and 12). Surveyed soundings deeper than charted soundings were not analyzed.

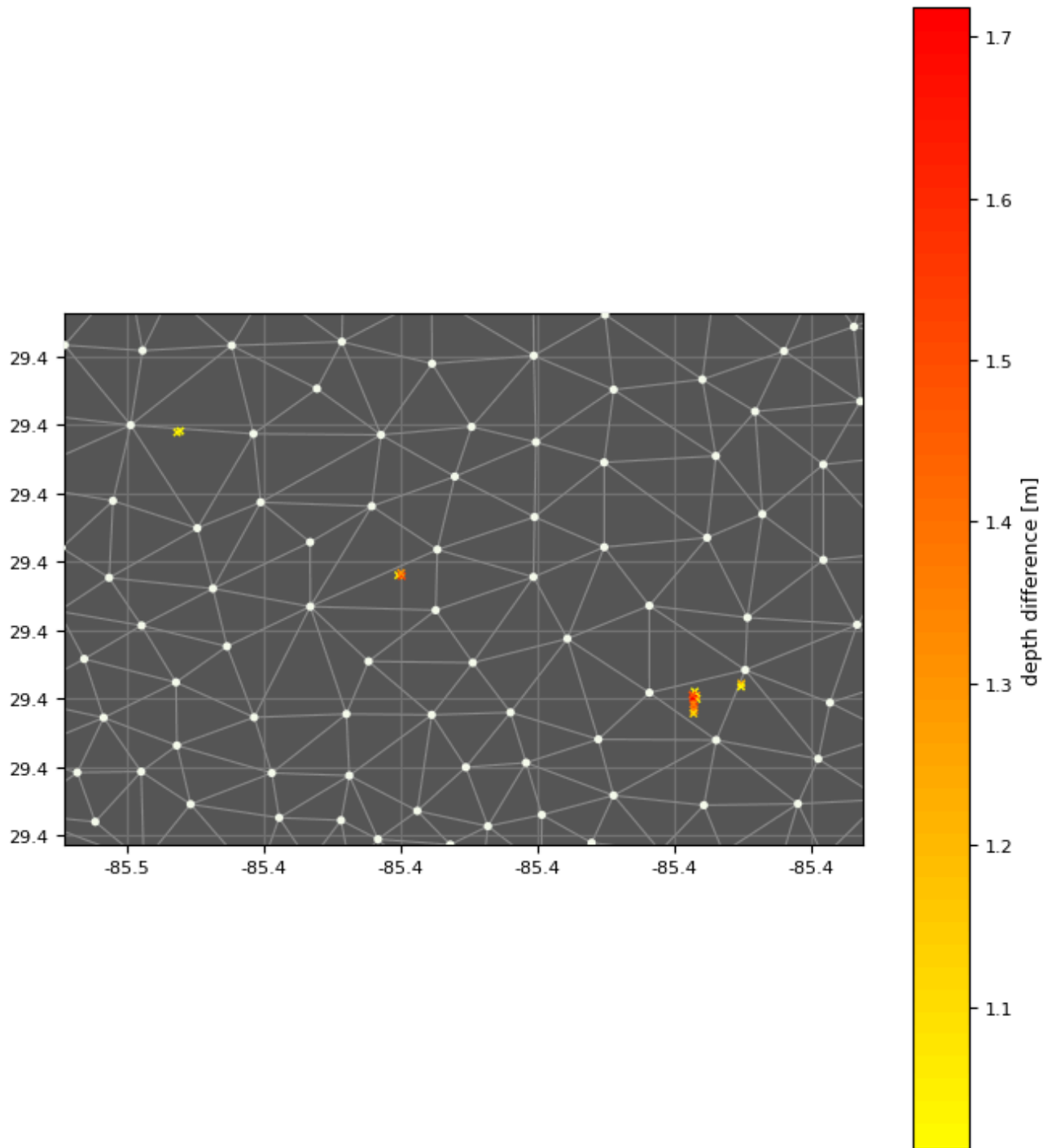


Figure 11: QC tools output instances of survey H13159 soundings shoal to charted soundings >1m.

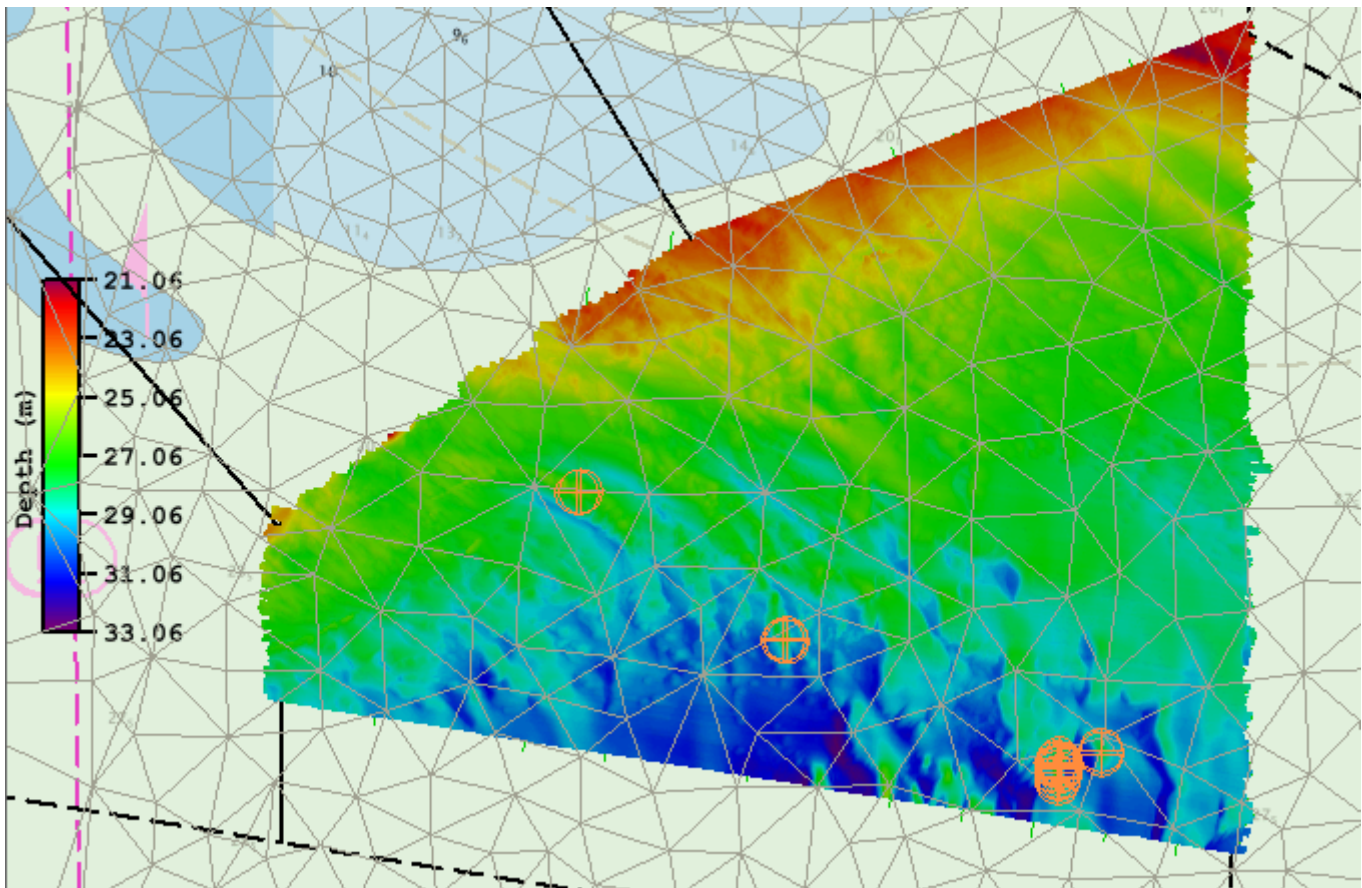


Figure 12: QC tools output instances of surveyed soundings shoal to charted soundings >1m over survey H13159 area with ENC soundings TIN.

### 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?
US4FL68M	1:80000	16	03/12/2019	05/10/2019	NO

Table 13: Largest Scale ENCs

US4FL68M

Survey H13159 shows good general agreement within 1m with charted soundings extracted from ENC US4FL68M. The area of most significant shoaling is in the vicinity of 29-23-59.091078N 085-22-37.690949W. The greatest difference is 1.7m shoal to depths charted.

### **D.1.2 Maritime Boundary Points**

No Maritime Boundary Points were assigned for this survey.

### **D.1.3 Charted Features**

No charted features exist for this survey.

### **D.1.4 Uncharted Features**

One uncharted wreck was discovered and investigated. For further details, refer to the final feature file submitted with this report.

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

No shoals or potentially hazardous features exist for this survey.

### **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**

No bottom samples were required for this survey.

## **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 Prior Surveys**

No prior survey comparisons exist for this survey.

**D.2.3 Aids to Navigation**

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

**D.2.4 Overhead Features**

No overhead features exist for this survey.

**D.2.5 Submarine Features**

No submarine features exist for this survey.

**D.2.6 Platforms**

No platforms exist for this survey.

**D.2.7 Ferry Routes and Terminals**

No ferry routes or terminals exist for this survey.

**D.2.8 Abnormal Seafloor and/or Environmental Conditions**

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

**D.2.9 Construction and Dredging**

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

**D.2.10 New Survey Recommendation**

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

**D.2.11 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, 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 with the exception of deficiencies noted in the Descriptive Report.

<b>Approver Name</b>	<b>Approver Title</b>	<b>Approval Date</b>	<b>Signature</b>
Dean R. Moyles	Chief of Party	06/07/2019	Dean Moyles <small>Digitally signed by Dean Moyles Date: 2019.06.12 12:10:33 -0230'</small>

## F. Table of Acronyms

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

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

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

**From:** Moyles, Dean  
**To:** ["OCS.NDB@noaa.gov"](mailto:OCS.NDB@noaa.gov); ["Coast.Pilot@NOAA.GOV"](mailto:Coast.Pilot@NOAA.GOV)  
**Cc:** [Starla Robinson - NOAA Federal](#)  
**Subject:** Coast Pilot Review Report  
**Date:** Monday, April 08, 2019 10:49:00 AM  
**Attachments:** [OPR-J359-KR-18\\_CoastPilotReviewReport.pdf](#)  
[OPR-J359-KR-18CoastPilotReport.pdf](#)  
[image001.png](#)

---

Please find the attached Coast Pilot Review Report, please let me know if you have any questions.

Kind regards,

Dean Moyles  
*Marine Hydrographic Manager (NSPS/THSOA cert. No. 226)*

T +1 713 369-5400 | C +1 858 945-6378  
email: [dmoyles@fugro.com](mailto:dmoyles@fugro.com)

Fugro (USA) Marine Inc.: <https://www.fugro.com/>  
6100 Hillcroft Street, Houston, TX 77081, USA



**From:** [Brian Mohr - NOAA Federal](#)  
**To:** [Moyles, Dean](#)  
**Subject:** Re: Survey Outlines (Pre-Hurricane) OPR-J359-KR-18 Apalachicola  
**Date:** Wednesday, March 27, 2019 10:37:44 AM  
**Attachments:** [image001.png](#)

---

Got it, thank you Dean, I'll get H13153, H13154 and H13155 updated in SURDEX shortly.

Brian Mohr  
Physical Scientist - Data Manager  
Hydrographic Surveys Division  
[brian.mohr@noaa.gov](mailto:brian.mohr@noaa.gov)

On Thu, Feb 21, 2019 at 6:51 AM 'Moyles, Dean' via \_NOS OCS Survey Outlines  
<[survey.outlines@noaa.gov](mailto:survey.outlines@noaa.gov)> wrote:

Here are the survey outlines for the work completed prior to Hurricane Michael. Please let me know if you have any questions or comments.

Kind regards,

Dean Moyles

*Marine Hydrographic Manager (ACSM cert. No. 226)*

T +1 713 369-5400 | C +1 858 945-6378

email: [dmoyles@fugro.com](mailto:dmoyles@fugro.com)

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

6100 Hillcroft Street, Houston, TX 77081, USA





**From:** [Brian Mohr - NOAA Federal](#)  
**To:** [Moyles, Dean](#)  
**Subject:** Re: Survey Outlines for OPR-J359-KR-18  
**Date:** Wednesday, May 29, 2019 11:48:57 AM

---

Got it, thank you Dean, I'll get H13159 updated in SURDEX shortly.

Brian Mohr  
Physical Scientist - Data Manager  
Hydrographic Surveys Division  
[brian.mohr@noaa.gov](mailto:brian.mohr@noaa.gov)

On Tue, May 28, 2019 at 9:36 AM 'Moyles, Dean' via "\_NOS OCS Survey Outlines" <[survey.outlines@noaa.gov](mailto:survey.outlines@noaa.gov)> wrote:

Good afternoon All,

Please find attached WGS84, .000 file containing the survey outline for H13159.

**Dean Moyles**

*Marine Hydrographic Manager (NSPS/THSOA cert. No. 226)*

Fugro

**T** +1 713 369-5400 | **C** +1 858 945-6378 | **E** [dmoyles@fugro.com](mailto:dmoyles@fugro.com) | **W** <https://www.fugro.com/>

**A** 6100 Hillcroft Street, Houston, TX 77081, USA

**Together we create a safe and liveable world.**



**Sent:** Thursday, February 21, 2019 8:21 AM  
**To:** '[survey.outlines@noaa.gov](mailto:survey.outlines@noaa.gov)' <[survey.outlines@noaa.gov](mailto:survey.outlines@noaa.gov)>  
**Cc:** Starla Robinson - NOAA Federal <[Starla.Robinson@noaa.gov](mailto:Starla.Robinson@noaa.gov)>  
**Subject:** Survey Outlines (Pre-Hurricane) OPR-J359-KR-18 Apalachicola

Here are the survey outlines for the work completed prior to Hurricane Michael. Please let me know if you have any questions or comments.

Kind regards,

Dean Moyles

*Marine Hydrographic Manager (ACSM cert. No. 226)*

T +1 713 369-5400 | C +1 858 945-6378

email: [dmoyles@fugro.com](mailto:dmoyles@fugro.com)

Fugro (USA) Marine Inc.: <https://www.fugro.com/>

6100 Hillcroft Street, Houston, TX 77081, USA







Jonathan Haines - NOAA Federal <jonathan.haines@noaa.gov>

---

## FW: NOAA Office of Coast Survey Profile Data accession 0239782 published

---

**Moyles, Dean** <dmoyles@fugro.com>

Tue, Aug 3, 2021 at 8:10 AM

To: "starla.robinson" <Starla.Robinson@noaa.gov>, Jonathan Haines - NOAA Federal <jonathan.haines@noaa.gov>

FYI.

Dean Moyles  
Marine Hydrographic Manager (NSPS/THSOA cert. No. 226)  
Fugro

T +1 709 726-4252x263 | C +1 858 945-6378 | E [dmoyles@fugro.com](mailto:dmoyles@fugro.com) | W <https://www.fugro.com/>  
A 25 Pippy Place, St. John's, NL Canada A1B 3X2

Together we create a safe and liveable world.

-----Original Message-----

From: [NCEI-MD.Ingest@noaa.gov](mailto:NCEI-MD.Ingest@noaa.gov) <[NCEI-MD.Ingest@noaa.gov](mailto:NCEI-MD.Ingest@noaa.gov)>

Sent: Tuesday, August 3, 2021 9:35 AM

To: [NODC.submissions@noaa.gov](mailto:NODC.submissions@noaa.gov); Moyles, Dean <[dmoyles@fugro.com](mailto:dmoyles@fugro.com)>

Cc: [John.Relph@noaa.gov](mailto:John.Relph@noaa.gov)

Subject: NOAA Office of Coast Survey Profile Data accession 0239782 published

NCEI has archived and published the following NOAA Office of Coast Survey Profile data set:

Oceanographic profile data collected from sound velocimeter - moving vessel profiler casts aboard MacGinitie, Pelagos, and R/V Acadiana as part of project OPR-J359-KR-18 in the Gulf of Mexico and North Pacific Ocean from 2018-08-22 to 2019-05-22 (NCEI Accession 0239782)

You can find your new data set and associated metadata at  
<https://www.ncei.noaa.gov/archive/accession/0239782>

APPROVAL PAGE

H13159

The survey data meet or exceed the current requirements of the Office of Coast Survey hydrographic data review process and may be used to update NOAA products. The following survey products will be archived at the National Centers for Environmental Information:

- Descriptive Report
- Collection of Bathymetric Attributed Grids (BAGs)
- Collection of acoustic backscatter mosaics
- Geospatial PDF of survey products

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

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