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

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area	
Registry Number:	H13158	
	LOCALITY	
State(s):	Florida	
General Locality:	Gulf of Mexico	
Sub-locality:	8 Miles West of St Joseph Peninsula	
	2019	
	CHIEF OF PARTY	
Dean R. Moyles		
	LIBRARY & ARCHIVES	
Date:		

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	H13158
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: 8 Miles West of St Joseph Peninsula

Scale: 40000

Dates of Survey: 02/16/2019 to 05/24/2019

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:

The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts. All separates are filed with the hydrographic data. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via http://www.ncei.noaa.gov/.

Table of Contents

A. Area Surveyed	<u>1</u>
A.1 Survey Limits	<u>1</u>
A.2 Survey Purpose.	<u>2</u>
A.3 Survey Quality	<u>3</u>
A.4 Survey Coverage	<u>3</u>
A.5 Survey Statistics	<u>4</u>
B. Data Acquisition and Processing	<u>7</u>
B.1 Equipment and Vessels	<u>7</u>
B.1.1 Vessels	<u>7</u>
B.1.2 Equipment	<u>7</u>
B.2 Quality Control	<u>8</u>
B.2.1 Crosslines.	<u>8</u>
B.2.2 Uncertainty	<u>9</u>
B.2.3 Junctions	<u>11</u>
B.2.4 Sonar QC Checks	<u>14</u>
B.2.5 Equipment Effectiveness.	<u>14</u>
B.2.6 Factors Affecting Soundings.	<u>14</u>
B.2.7 Sound Speed Methods.	<u>15</u>
B.2.8 Coverage Equipment and Methods	<u>15</u>
B.3 Echo Sounding Corrections.	<u>16</u>
B.3.1 Corrections to Echo Soundings.	<u>16</u>
B.3.2 Calibrations	<u>16</u>
B.4 Backscatter.	<u>16</u>
B.5 Data Processing.	<u>16</u>
B.5.1 Primary Data Processing Software.	<u>16</u>
B.5.2 Surfaces	<u>17</u>
C. Vertical and Horizontal Control.	<u>17</u>
C.1 Vertical Control.	<u>17</u>
C.2 Horizontal Control	<u>18</u>
D. Results and Recommendations.	<u>18</u>
D.1 Chart Comparison	<u>18</u>
D.1.1 Electronic Navigational Charts.	<u>20</u>
D.1.2 Maritime Boundary Points.	<u>21</u>
D.1.3 Charted Features.	<u>21</u>
D.1.4 Uncharted Features.	<u>21</u>
D.1.5 Shoal and Hazardous Features.	<u>21</u>
D.1.6 Channels	<u>21</u>
D.1.7 Bottom Samples	<u>21</u>
D.2 Additional Results.	
D.2.1 Shoreline.	<u>2</u> 2
D.2.2 Prior Surveys.	
D.2.3 Aids to Navigation.	<u>22</u>
D.2.4 Overhead Features.	<u>2</u> 2

D.2.5 Submarine Features.	<u>22</u>
D.2.6 Platforms	<u>22</u>
D.2.7 Ferry Routes and Terminals.	<u>22</u>
D.2.8 Abnormal Seafloor and/or Environmental Conditions.	22
D.2.9 Construction and Dredging.	22
D.2.10 New Survey Recommendation.	
D.2.11 Inset Recommendation.	
E. Approval Sheet.	
F. Table of Acronyms.	
List of Tables	
Table 1: Survey Limits.	<u>1</u>
Table 2: Survey Coverage	<u>3</u>
Table 3: Hydrographic Survey Statistics.	<u>5</u>
Table 4: Dates of Hydrography	<u>6</u>
Table 5: Vessels Used.	
Table 6: Major Systems Used	<u>7</u>
Table 7: Survey Specific Tide TPU Values.	
Table 8: Survey Specific Sound Speed TPU Values.	<u>9</u>
Table 9: Junctioning Surveys.	
Table 10: Primary bathymetric data processing software.	16
Table 11: Primary imagery data processing software	
Table 12: Submitted Surfaces.	
Table 13: Largest Scale ENCs.	
List of Figures	
	<u>2</u>
Figure 2: Survey H13158 full coverage MBES.	
Figure 3: MBES crossline to mainscheme distribution.	
Figure 4: H13158 mainscheme MBES differenced to crossline statistical output	
Figure 5: H13158 1m finalized grid TPU QC.	
Figure 6: H13158 2m finalized grid TPU QC.	
Figure 7: Junction surveys to H13158: H13156 and H13154	<u>12</u>
Figure 8: Survey H13158 differenced to Survey H13156	<u>13</u>
Figure 9: Survey H13158 differenced to Survey H13154	
Figure 10: Temporal and geographic distribution of SVP casts within survey H13158	
Figure 11: QC tools output instances of survey H13158 soundings shoal to charted soundings >1m	<u>19</u>
Figure 12: QC tools output instances of surveyed soundings shoal to charted soundings >1m over survey	
H13158 area with ENC soundings TIN.	<u>20</u>

Descriptive Report to Accompany Survey H13158

Project: OPR-J359-KR-18

Locality: Gulf of Mexico

Sublocality: 8 Miles West of St Joseph Peninsula

Scale: 1:40000

February 2019 - May 2019

Fugro Pelagos, Inc.

Chief of Party: Dean R. Moyles

A. Area Surveyed

Survey H13158 (Table 1) is located approximately 8 linear nautical miles West of Saint Joseph Peninsula (Figure 1). The M/V Pelagos and M/V MacGinitie acquired full coverage multibeam echosounder (MBES) and multibeam echosounder acoustic backscatter within the assigned survey limits from 16 February 2019 to 24 May 2019.

A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
29° 46' 6.3" N	29° 33' 32.74" N
85° 36' 58.43" W	85° 30' 41.65" W

Table 1: Survey Limits

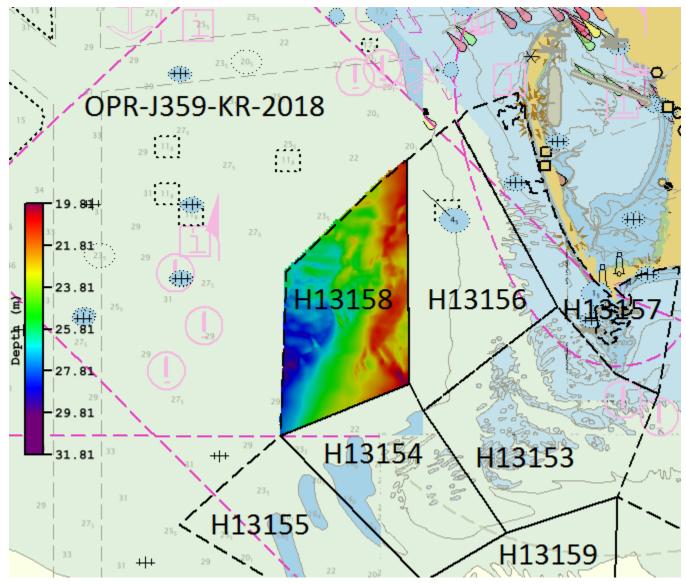


Figure 1: Survey H13158 location relative to overall sheet limits of OPR-J359-KR-18

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

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:

Water Depth	Coverage Required	
All waters in survey area	Complete coverage MBES with acoustic backscatter	

Table 2: Survey Coverage

Survey H13158 meets survey coverage requirements as assigned in the project instructions and HSSD (Table 2 and Figure 2).

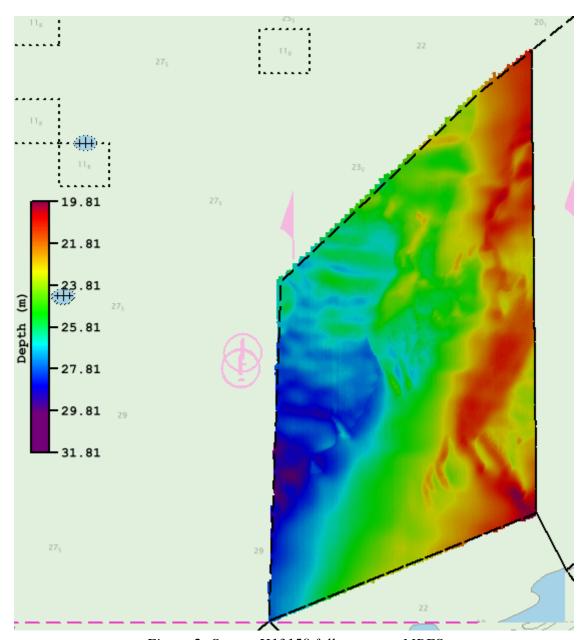


Figure 2: Survey H13158 full coverage MBES

A.5 Survey Statistics

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

	HULL ID	M/V Pelagos	M/V MacGinitie	Total
	SBES Mainscheme	0	0	0
	MBES Mainscheme	1124.87	7.97	1132.84
	Lidar Mainscheme	0	0	0
LNM	SSS Mainscheme	0	0	0
LINIVI	SBES/SSS Mainscheme	0	0	0
	MBES/SSS Mainscheme	0	0	0
	SBES/MBES Crosslines	51.01	0	51.01
	Lidar Crosslines	0	0	0
Numb Botton	er of n Samples			9
- '	er Maritime lary Points igated			0
Numb	er of DPs			0
1	er of Items igated by Ops			0
Total S	SNM			48.56

Table 3: Hydrographic Survey Statistics

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

Survey Dates	Day of the Year	
02/16/2019	47	

Survey Dates	Day of the Year
02/17/2019	48
02/18/2019	49
02/21/2019	52
09/13/2018	256
02/23/2019	54
02/27/2019	58
04/01/2019	91
04/03/2019	93
04/06/2019	96
04/07/2019	97
04/08/2019	98
04/10/2019	100
04/11/2019	101
04/13/2019	103
04/16/2019	106
04/17/2019	107
04/18/2019	108
04/23/2019	113
04/24/2019	114
04/25/2019	115
04/30/2019	120
05/01/2019	121
05/02/2019	122
05/03/2019	123
05/04/2019	124
05/06/2019	126
05/24/2019	144

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:

Hull ID	M/V Pelagos	M/V MacGinitie
LOA	34 feet	32 feet
Draft	2 feet	1.5 feet

Table 5: Vessels Used

M/V Pelagos and M/V MacGinitie acquired multibeam echosounder, acoustic backscatter, surface sound velocity, sound velocity profiles, attitude and positioning data within the survey limits of H13158. 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:

Manufacturer	Model	Туре
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
Applanix	POS MV 320 v5	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 4.50% of mainscheme acquisition.

Crosslines for survey H13158 (Figure 3) were acquired in accordance with sections 5.2.4.2 of the HSSD 2018. Of the 2,863,426 nodes compared between H13158 mainscheme MBES and MBES crosslines, 100% are within 1m difference. The mean difference is -0.0046m, with a standard deviation of 0.06m (Figure 4).

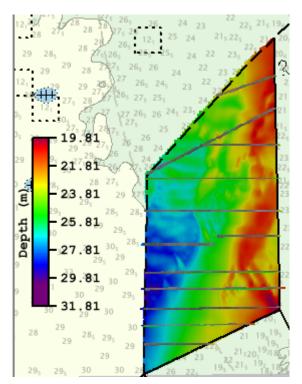


Figure 3: MBES crossline to mainscheme distribution

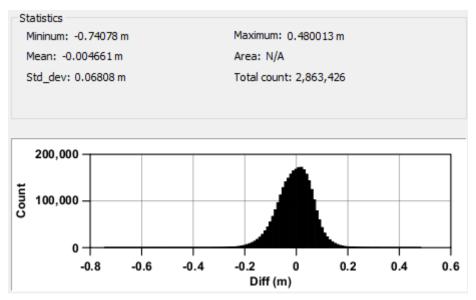


Figure 4: H13158 mainscheme MBES differenced to crossline statistical output

B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

Method	Measured	Zoning
ERS via VDATUM	0.1 meters	0.101 meters

Table 7: Survey Specific Tide TPU Values.

Hull ID	Measured - CTD	Measured - MVP	Surface
Pelagos	1.464 meters/second	N/A meters/second	0.25 meters/second
MacGinitie	1.411 meters/second	N/A meters/second	0.25 meters/second

Table 8: Survey Specific Sound Speed TPU Values.

Survey H13158 uncertainty values were evaluated both in CARIS HIPS and SIPS and via Pydro QC tools v2.7.5. Both the 1m (Figure 5) and 2m (Figure 6) finalized grids meet uncertainty standards with 100% of nodes exceeding minimum requirements.

Uncertainty Standards

Grid source: H13158_MB_1m_MLLW_Final

100% pass (116,371 of 116,371 nodes), min=0.54, mode=0.55, max=0.74 Percentiles: 2.5%=0.54, Q1=0.55, median=0.55, Q3=0.55, 97.5%=0.57

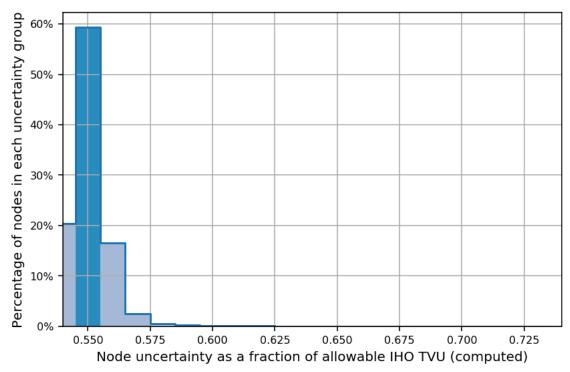


Figure 5: H13158 1m finalized grid TPU QC

Uncertainty Standards

Grid source: H13158_MB_2m_MLLW_Final

100% pass (41,639,433 of 41,639,433 nodes), min=0.49, mode=0.53, max=0.96 Percentiles: 2.5%=0.50, Q1=0.51, median=0.53, Q3=0.54, 97.5%=0.55

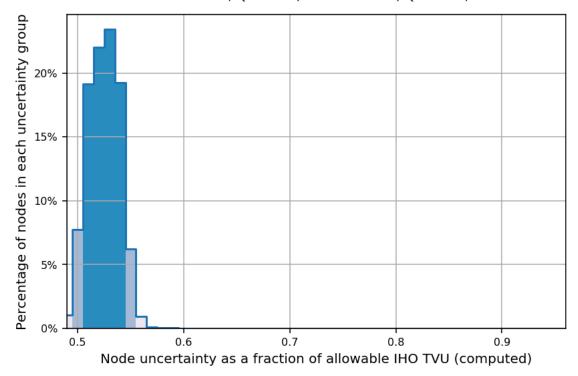


Figure 6: H13158 2m finalized grid TPU QC

B.2.3 Junctions

Data from two contemporary junction surveys to H13158 are available at the time of this report (Figure 7). Both junction surveys, H13156 and H13154, contain data acquired by the R/V Acadiana prior to the arrival of Hurricane Michael (Table 9). Surveyed depths in the area of OPR-J359-KR-18 were effected by the storm, causing some inconstancies 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 8 and 9).

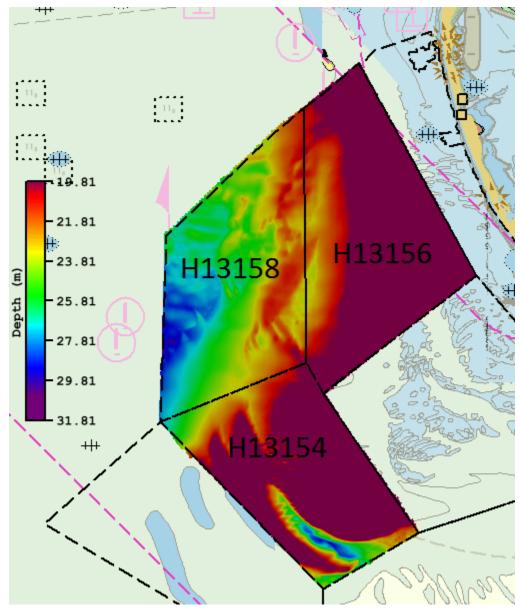


Figure 7: Junction surveys to H13158: H13156 and H13154

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H13156	1:40000	2018	R/V Acadiana	Е
H13154	1:40000	2018	R/V Acadiana	S

Table 9: Junctioning Surveys

H13156

Of 416,894 nodes differenced between survey H13158 and H13156, 100% agree within 0.5m. The minimum difference is -0.28m, the maximum difference is 0.45m with a mean of 0.13m and a standard deviation of 0.05m.

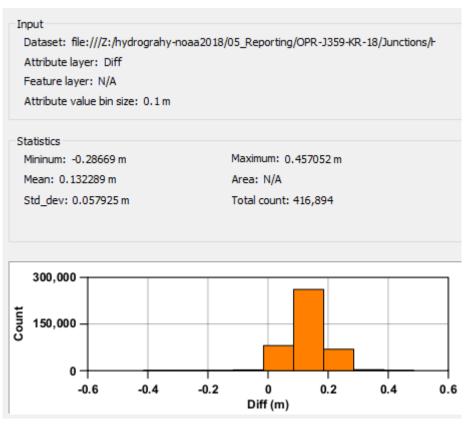


Figure 8: Survey H13158 differenced to Survey H13156

H13154

Of 521, 731 nodes differenced between survey H13158 and H13154, 100% agree within 1m. The minimum difference is -0.12m, the maximum difference is 0.64m with a mean difference difference of 0.12m and a standard deviation of 0.05m.

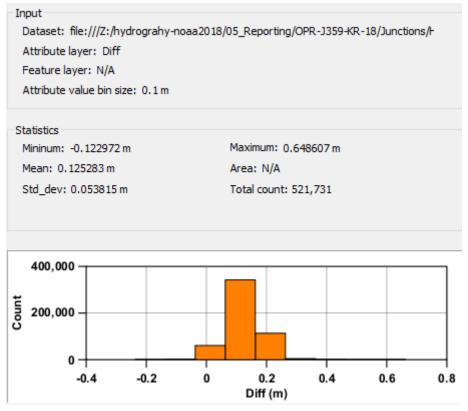


Figure 9: Survey H13158 differenced to Survey H13154

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 and M/V MacGintie using an AML Sound Velocity & Pressure (SV&P) sensor (Figure 10).

Refer to the DAPR for additional information.

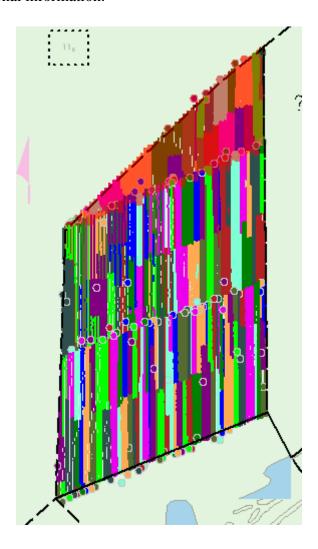


Figure 10: Temporal and geographic distribution of SVP casts within survey H13158

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
H13158_MB_1m_MLLW	CARIS Raster Surface (CUBE)	1 meters	19.78 meters - 30.64 meters	CMC 1m	Complete MBES
H13158_MB_1m_MLLW_Final	CARIS Raster Surface (CUBE)	1 meters	19.78 meters - 20 meters	CMC 1m	Complete MBES
H13158_MB_2m_MLLW	CARIS Raster Surface (CUBE)	2 meters	20.00* meters 30.61 meters	CMC 2m	Complete MBES
H13158_MB_2m_MLLW_Final	CARIS Raster Surface (CUBE)	2 meters	20.00 meters - 30.61 meters	CMC 2m	Complete MBES
H13158_MBAB_2m_400kHz	MB Backscatter Mosaic	2 meters	0 N/A - 0 N/A	N/A	Complete MBES
H13158_MBAB_1m_400kHz	MB Backscatter Mosaic	1 meters	0 N/A - 0 N/A	N/A	Complete MBES

Table 12: Submitted Surfaces *The submitted parent grid depth range was attributed 19.81m - 30.61m.

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 both the finalized 1m and 2m grids 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 ENCs US3GC05M and US4FL60M. 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.

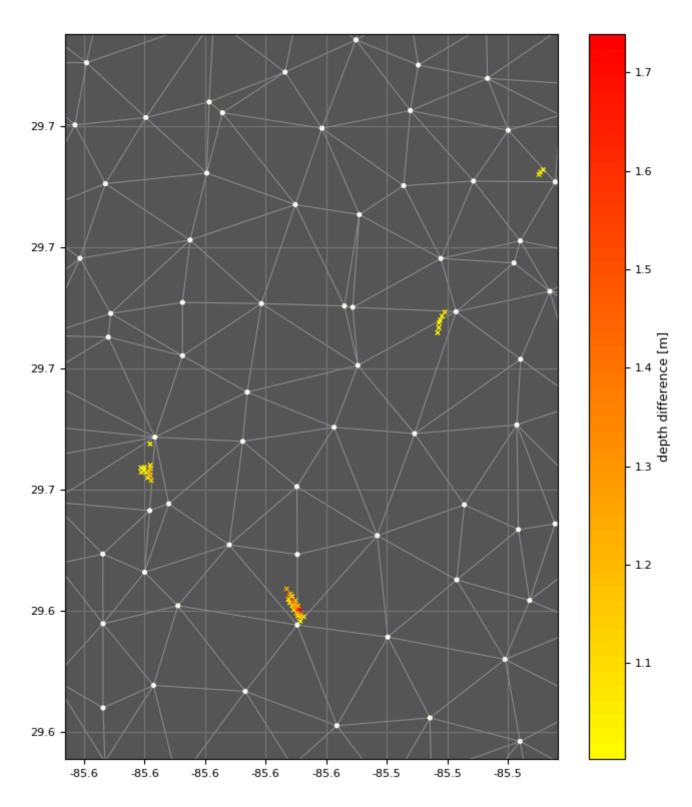


Figure 11: QC tools output instances of survey H13158 soundings shoal to charted soundings >1m.

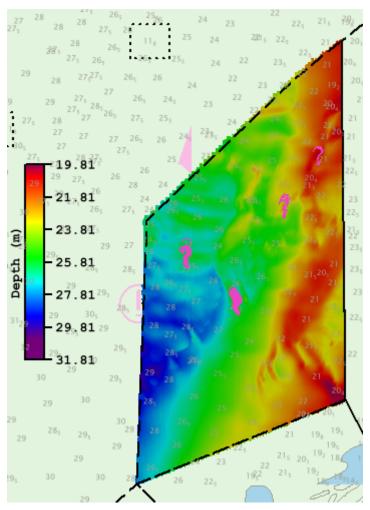


Figure 12: QC tools output instances of surveyed soundings shoal to charted soundings >1m over survey H13158 area with ENC soundings TIN.

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?
US3GC05M	1:456394	47	09/13/2018	09/13/2018	NO
US4FL60M	1:80000	23	02/14/2019	02/14/2019	NO

Table 13: Largest Scale ENCs

US3GC05M

US4FL60M

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

No uncharted features exist for this survey.

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

A total of 9 bottom samples were acquired within the sheet limits of survey H13158 per appendix H of the HSSD 2018. For a complete discussion, refer to the final feature file submitted with 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 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.

Approver Name	Approver Title	Approval Date	Signature
Dean R. Moyles	Chief of Party	06/07/2019	Dean Moyles Date: 2019.06.12 12:09:17 -02'30'

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
СО	Commanding Officer
CO-OPS	Center for Operational Products and Services
CORS	Continually Operating Reference Staiton
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
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
HSSD	Hydrographic Survey Specifications and Deliverables

Acronym	Definition
HSTP	Hydrographic Systems Technology Programs
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
NAIP	National Agriculture and Imagery Program
NALL	Navigable Area Limit Line
NM	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
РНВ	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
PST	Physical Science Technician
RNC	Raster Navigational Chart
RTK	Real Time Kinematic
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
TPE	Total Propagated Error
TPU	Topside Processing Unit
USACE	United States Army Corps of Engineers
USCG	United Stated Coast Guard
UTM	Universal Transverse Mercator
XO	Executive Officer
ZDA	Global Positiong System timing message
ZDF	Zone Definition File

H13158 OPR-J359-KR-18 DR Appendix II

Name	Date of Completion
Dean Moyles	8/15/2018
Honza Rokyta	8/15/2018
Kevin Kline	8/15/2018
Ross Turlington	8/15/2018
Blair Bouttle	8/15/2018
Gavin Goolsby	8/15/2018
Clay Walker	8/16/2018
Skyler Lebeof	8/26/2018
Tom Fitzpatrick	9/17/2018
Max Wike	10/2/2018
Dirk Wakker	10/2/2018
Riley Jones	12/4/2018
Allison Stone	12/4/2018
Chris Turner	12/4/2018
Reed Cody	1/9/2019
Sam Cody	1/17/2019
Roy Cain	1/17/2019
Mike Minton	3/9/2019
Patrick Keilen	4/2/2019
Jenny Tixier	4/7/2019
Josiah Latthitham	4/7/2019
Zach Jacobson	4/17/2019

From: <u>Brian Mohr - NOAA Federal</u>

To: Moyles, Dean

Subject: Re: Survey Outlines (Pre-Hurricane) OPR-J359-KR-18 Apalachicola

Date: Wednesday, March 27, 2019 10:37:44 AM

Attachments: <u>image001.png</u>

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

On Thu, Feb 21, 2019 at 6:51 AM 'Moyles, Dean' via _NOS OCS Survey Outlines <<u>survey.outlines@noaa.gov</u>> 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: <u>dmoyles@fugro.com</u>

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

6100 Hillcroft Street, Houston, TX 77081, USA



 From:
 Brian Mohr - NOAA Federal

 To:
 Starla Robinson - NOAA Federal

Cc: <u>Stone, Allison; survey.outlines@noaa.gov; Moyles, Dean</u>

Subject: Re: Survey Outlines for OPR-J359-KR-18

Date: Monday, May 6, 2019 2:53:03 PM

Attachments: <u>image001.png</u>

Got it, thank you Allison, I'll get H13157 and H13158 updated in SURDEX shortly.

Brian Mohr
Physical Scientist - Data Manager
Hydrographic Surveys Division
brian.mohr@noaa.gov

On Mon, May 6, 2019 at 9:56 AM Starla Robinson - NOAA Federal < Starla.Robinson@noaa.gov > wrote:

Thank you for the update.

On Sun, May 5, 2019 at 2:57 PM Stone, Allison < Al.Stone@fugro.com > wrote:

Good afternoon All,

Please find attached WGS84, .000 files containing the survey outlines of H13157 and H13158; priorities within OPR-J359-KR-18.

Kind regards,

Allison C. Stone

Hydrographic Survey Technician

C +1 843 607 9980

Email: al.stone@fugro.com

Fugro (USA) Marine INC: https://www.fugro.com/

6100 Hillcroft Street

Houston, TX 77081

From: Moyles, Dean

To: "OCS.NDB@noaa.gov"; "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

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



Moyles, Dean

From: Moyles, Dean

Sent: Monday, June 3, 2019 8:40 AM

To: pop.information@noaa.gov; ocs.ecc@noaa.gov

Cc: Starla Robinson - NOAA Federal

Subject: RE: Marine Mammal Sightings (OPR-J359-KR-18) **Attachments:** Marine Mammal Sightings (OPR-J359-KR-18)_R1.pdf

Attached are some additional forms from OPR-J359-KR-18.

Dean Moyles

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

T +1 713 369-5400 | **C** +1 858 945-6378 | **E** <u>dmoyles@fugro.com</u> | **W** <u>https://www.fugro.com/</u> **A** 6100 Hillcroft Street, Houston, TX 77081, USA

Together we create a safe and liveable world.



From: Moyles, Dean

Sent: Wednesday, April 10, 2019 9:01 AM

To: pop.information@noaa.gov; ocs.ecc@noaa.gov

Cc: Starla Robinson - NOAA Federal <Starla.Robinson@noaa.gov>

Subject: Marine Mammal Sightings (OPR-J359-KR-18)

This project is still ongoing, there could be more forms to follow. Please let me know if you have any questions or comments.

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

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





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 | 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 < NCEI-MD.Ingest@noaa.gov >

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

To: NODC.submissions@noaa.gov; Moyles, Dean <dmoyles@fugro.com>

Cc: 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

Date: 4/9/2019

MEMORANDUM FOR: Corey Allen

Chief, Hydrographic Surveys Division Operations Branch

FROM: Starla Robinson

Project Manager, OPR-J359-KR-18

Hydrographic Surveys Division Operations Branch

SUBJECT: Waiver request – Check Sum MD-5 Hash

OPR-J359-KR-18

Contract # EA133C-14-CQ-0032

Project: OPR-J359-KR-18

Task Order: 04

Fugro is granted a waiver from the requirement of performing a check sum per 2018 HSSD Section 8.3.1 Media. The contractor remains responsible for ensuring that all files are present and have not become corrupt during transfer. How the field unit chooses to accomplish this left to their professional discretion.

Justification

It is the intent of HSD to ensure that quality data is delivered in a timely and responsible fashion. In this case, the check sums is producing excessive delays, impacting the contractors ability to deliver the data.

<u>Decision</u>	2019.04.09 15:14:44 -04'00'		
Waiver is:	Granted	Denied	

cc: Chief, HSD OPS Fugro Pelagos

Stacy Dohse, Contract Specialist Emily Clark, Contract Officer



APPROVAL PAGE

H13158

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
- Bottom samples
- Geospatial PDF of survey products

Approved:				

Commander Meghan McGovern, NOAA

Chief, Atlantic Hydrographic Branch