

H13286

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

DESCRIPTIVE REPORT

Type of Survey: Navigable Area

Registry Number: H13286

LOCALITY

State(s): Florida

General Locality: Gulf of Mexico

Sub-locality: 8 Miles South of West Pass

2019

CHIEF OF PARTY
Dean R Moyles

LIBRARY & ARCHIVES

Date:

HYDROGRAPHIC TITLE SHEET

H13286

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 South of West Pass**

Scale: **20000**

Dates of Survey: **08/22/2019 to 10/24/2019**

Instructions Dated: **06/20/2019**

Project Number: **OPR-J359-KR-19**

Field Unit: **Fugro Pelagos**

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.

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Descriptive Report to Accompany Survey H13286

Project: OPR-J359-KR-19

Locality: Gulf of Mexico

Sublocality: 8 Miles South of West Pass

Scale: 1:20000

August 2019 - October 2019

Fugro Pelagos

Chief of Party: Dean R Moyles

A. Area Surveyed

Survey H13286 (Table 1) is located 8 miles South of West Pass (Figure 1). The M/V Go Liberty acquired complete coverage multibeam echosounder (MBES) and multibeam echosounder acoustic backscatter (MBAB) within the assigned survey limits from 22 August 2019 to 24 October 2019.

A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
29° 32' 57.07" N 85° 12' 7.94" W	29° 22' 35.22" N 85° 2' 32.66" W

Table 1: Survey Limits

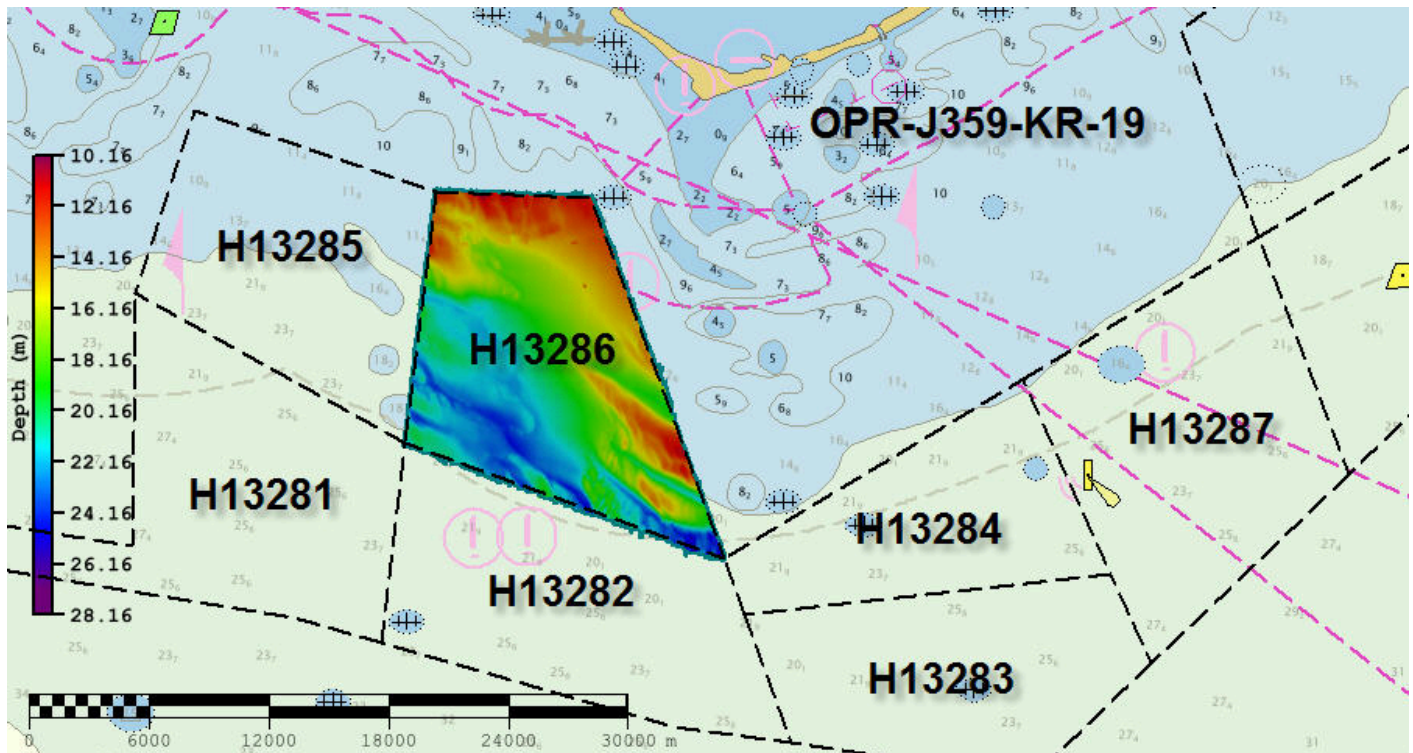


Figure 1: Survey H13286 relative to overall sheet limits of OPR-J359-KR-19

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. The survey areas are 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 to 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.

Full coverage MBES and MBAB (Table 2 and Figures 2-4) were achieved within the survey limits of H13286.

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 (HSSD 2019 5.2.2.3)

Table 2: Survey Coverage

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

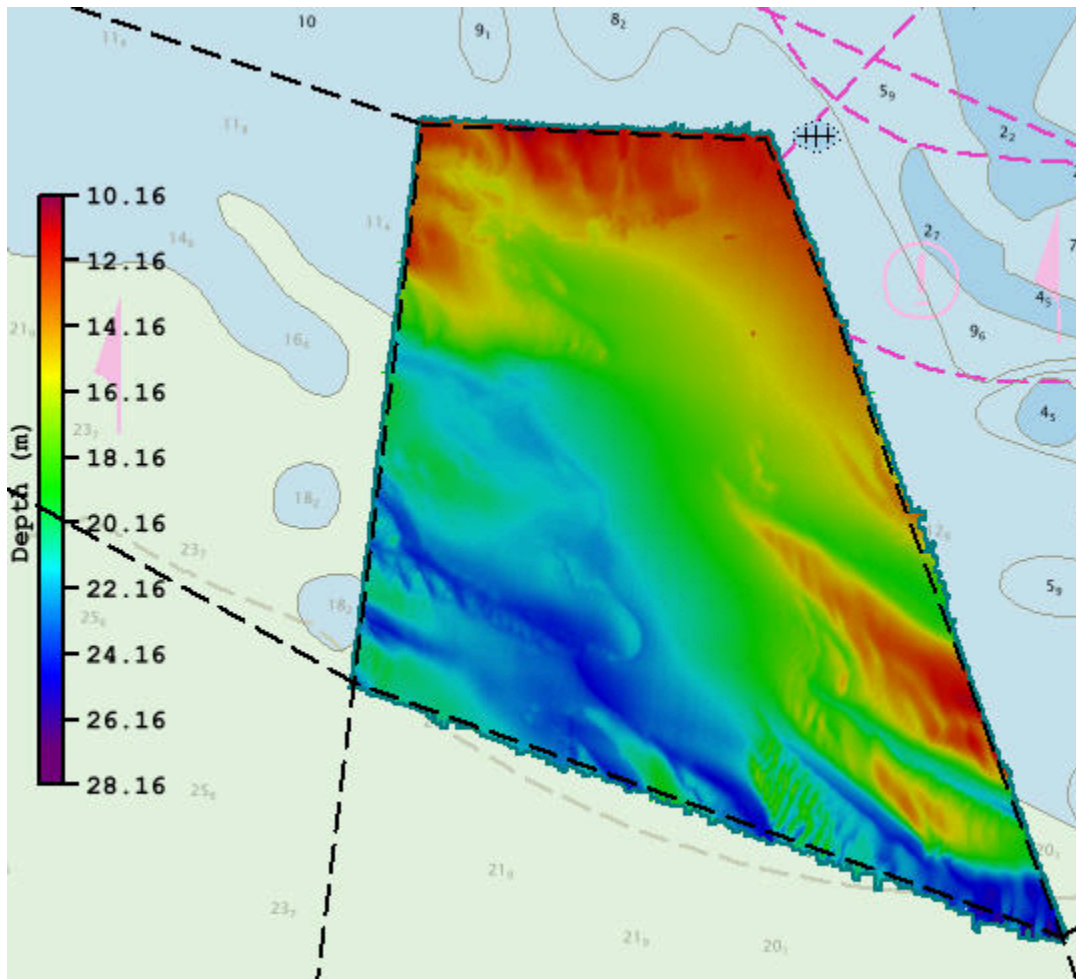


Figure 2: Survey H13286 complete coverage MBES

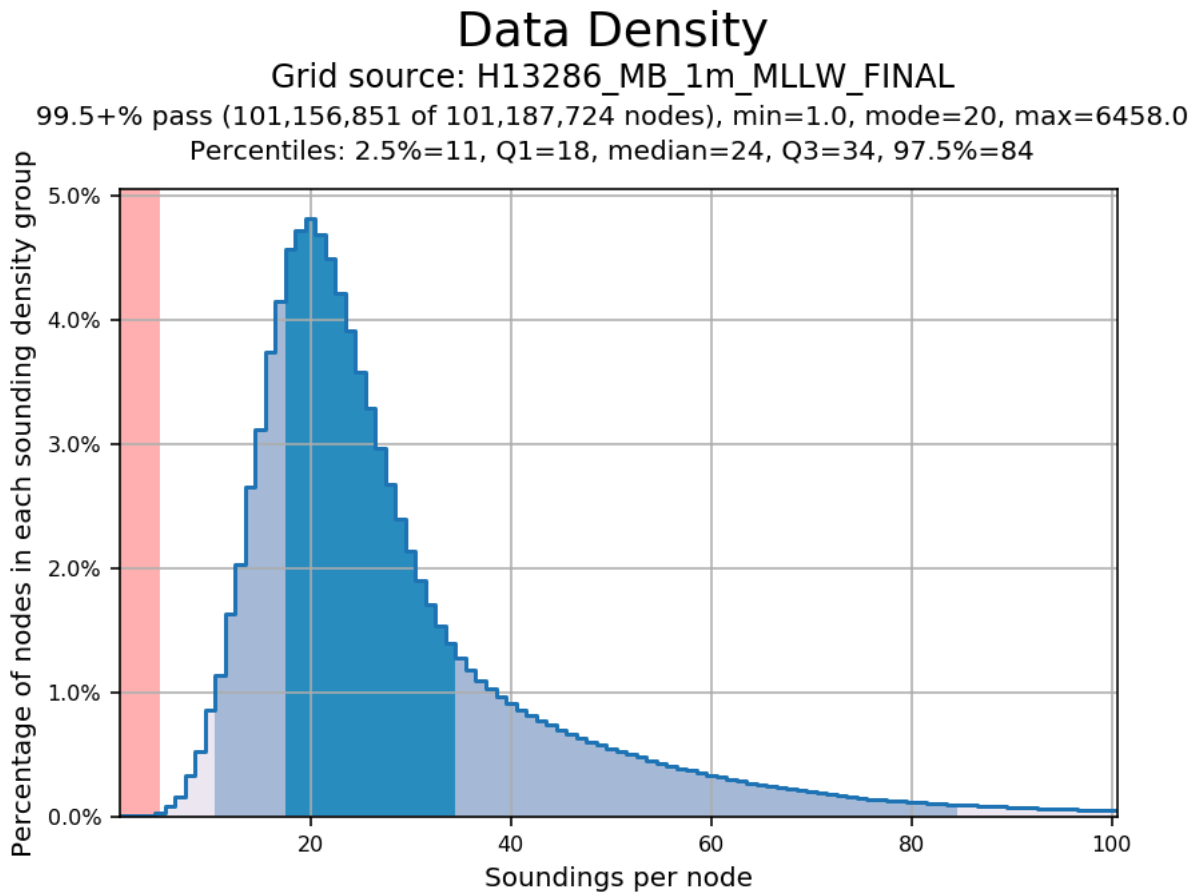


Figure 3: Survey H13286 1m complete coverage MBES density QC

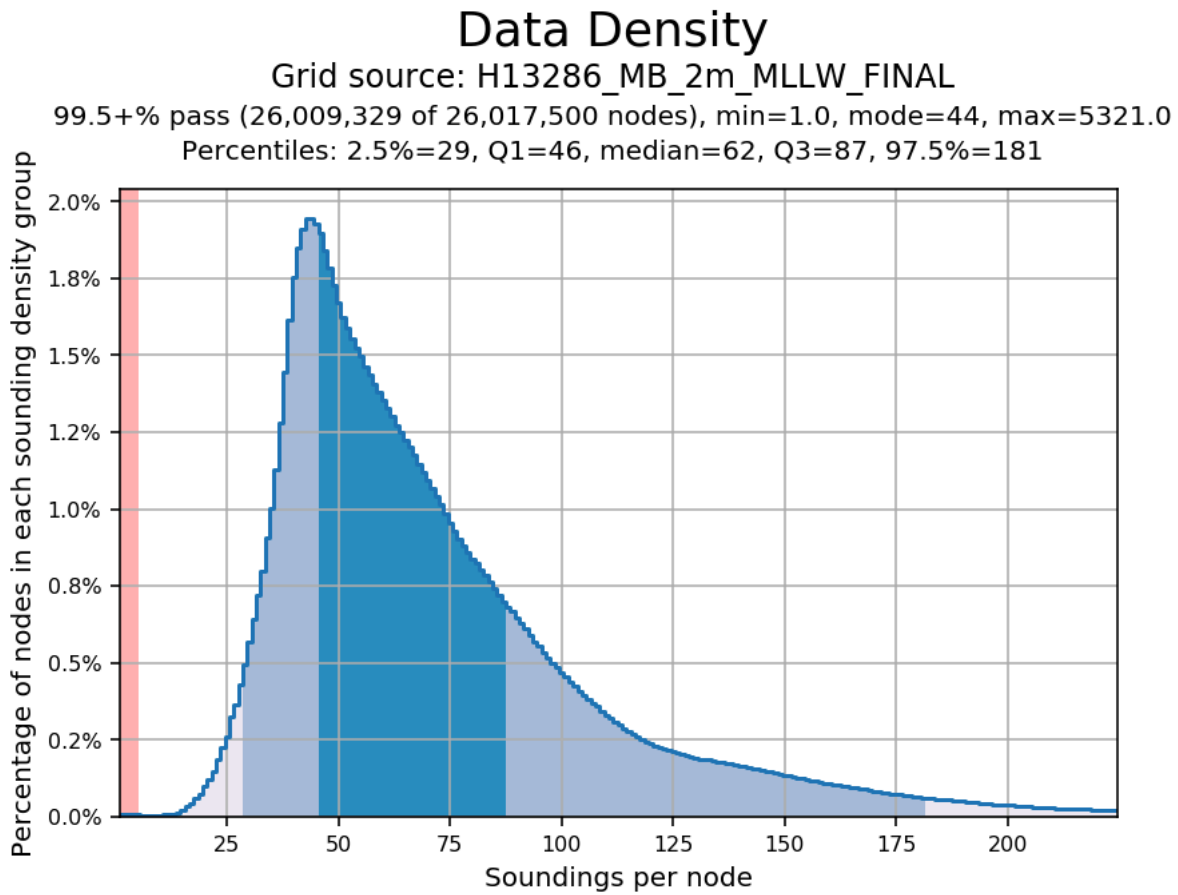


Figure 4: Survey H13286 2m complete coverage MBES density QC

A.6 Survey Statistics

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

	HULL ID	<i>M/V Go Liberty</i>	<i>Total</i>
LNM	SBES Mainscheme	0	0
	MBES Mainscheme	1494.09	1494.09
	Lidar Mainscheme	0	0
	SSS Mainscheme	0	0
	SBES/SSS Mainscheme	0	0
	MBES/SSS Mainscheme	0	0
	SBES/MBES Crosslines	66.44	64.44
	Lidar Crosslines	0	0
Number of Bottom Samples			8
Number Maritime Boundary Points Investigated			0
Number of DPs			0
Number of Items Investigated by Dive Ops			0
Total SNM			52.87

Table 3: Hydrographic Survey Statistics

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

Survey Dates	Day of the Year
08/22/2019	234

Survey Dates	Day of the Year
08/27/2019	239
08/29/2019	241
08/30/2019	242
08/31/2019	243
09/03/2019	246
09/04/2019	247
09/05/2019	248
09/06/2019	249
09/07/2019	250
09/08/2019	251
09/09/2019	252
09/10/2019	253
09/11/2019	254
09/12/2019	255
09/13/2019	256
09/14/2019	257
09/15/2019	258
09/17/2019	260
09/18/2019	261
10/24/2019	297

Table 4: Dates of Hydrography

B. Data Acquisition and Processing

B.1 Equipment and Vessels

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

B.1.1 Vessels

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

Hull ID	<i>M/V Go Liberty</i>
LOA	150 feet
Draft	10 feet

Table 5: Vessels Used



Figure 5: M/V Go Liberty

M/V Go Liberty (Table 5 and Figure 5) acquired MBES, MBAB, surface sound velocity, sound velocity profiles, attitude and positioning data within the survey limits of H13286 (Table 6). 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	Type
Teledyne RESON	SeaBat 7125 SV2	MBES
Teledyne RESON	SVP 70	Sound Speed System
AML Oceanographic	Smart SVP	Conductivity, Temperature, and Depth Sensor
Teledyne Oceanscience	CastAway-CTD	Conductivity, Temperature, and Depth Sensor
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 4.45% of mainscheme acquisition.

Crosslines for survey H13286 were acquired in accordance with section 5.2.4.2 of the HSSD 2019 (Figure 6). Of the 12,394,512 nodes compared between H13286 mainscheme MBES and MBES crosslines, 100% were within 1m difference. The mean difference is 0.002m, with a standard deviation of 0.06m (Figure 7).

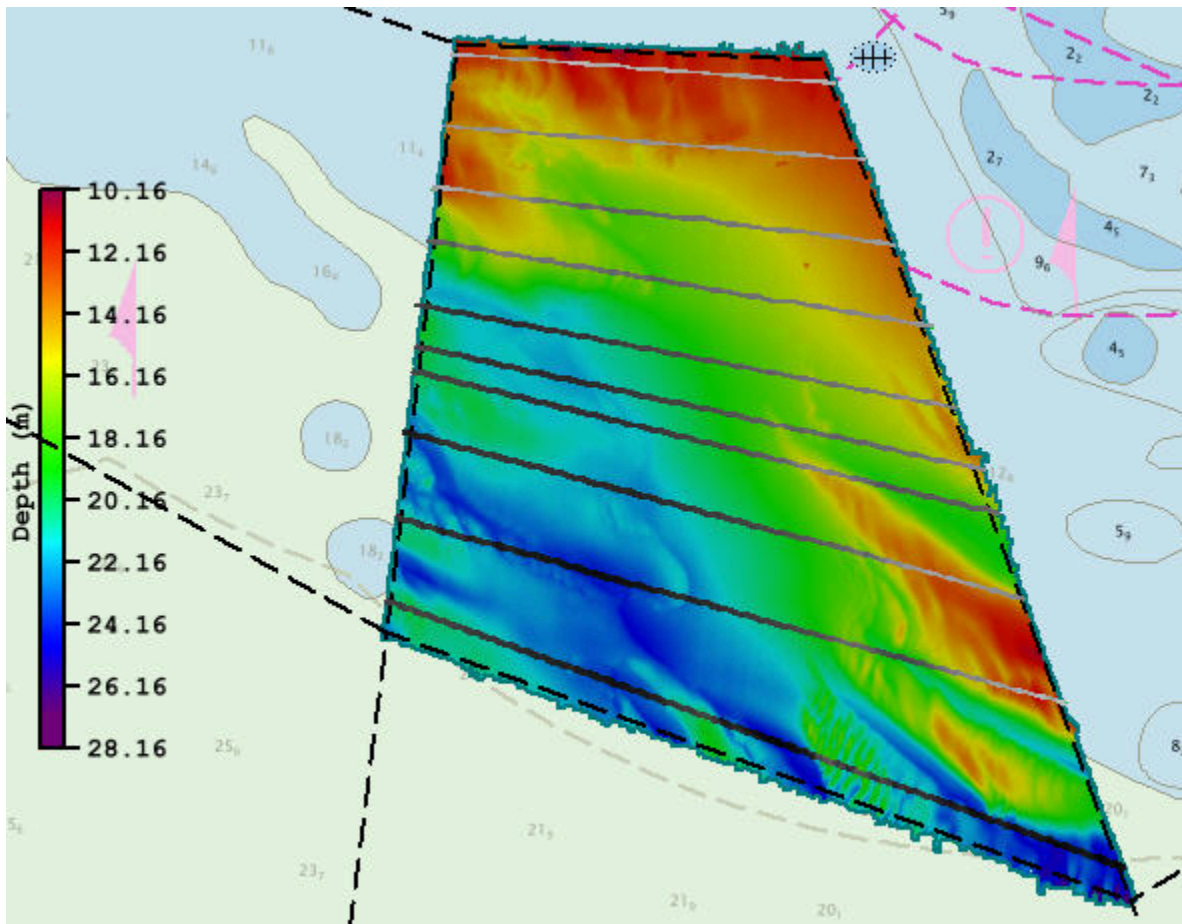


Figure 6: H13286 MBES mainscheme and MBES crossline distribution

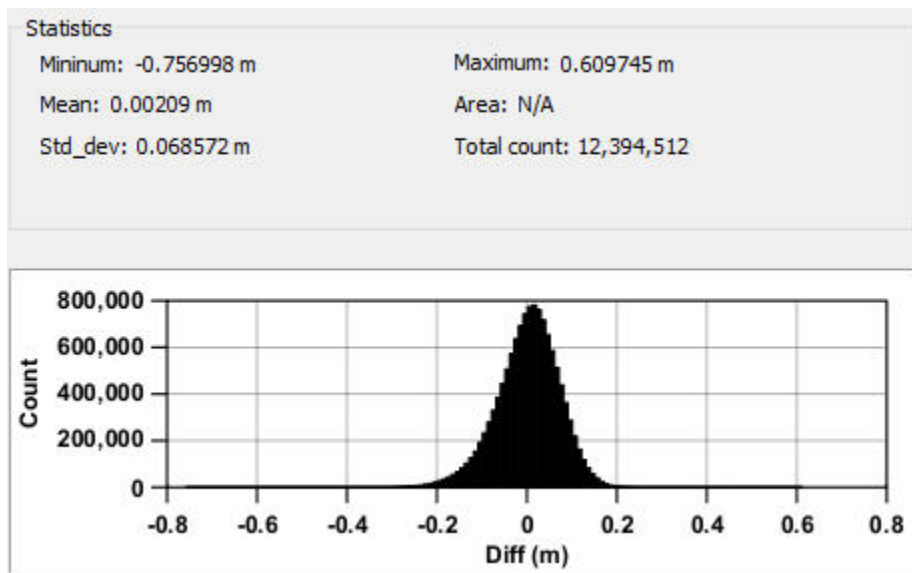


Figure 7: H13286 MBES mainscheme differenced from MBES crosslines statistical output

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	Measured - XBT	Surface
M/V Go Liberty	0.915 meters/second	N/A meters/second	N/A meters/second	0.25 meters/second

Table 8: Survey Specific Sound Speed TPU Values.

Survey H13286 uncertainty values (Tables 7 and 8) were evaluated both in CARIS HIPS 9.1 and via Pydro QC Tools v3.0.19. The finalized 1m (Figure 8) and 2m (Figure 9) bathymetric grids both meet uncertainty standards with a minimum of 99.5% of nodes passing.

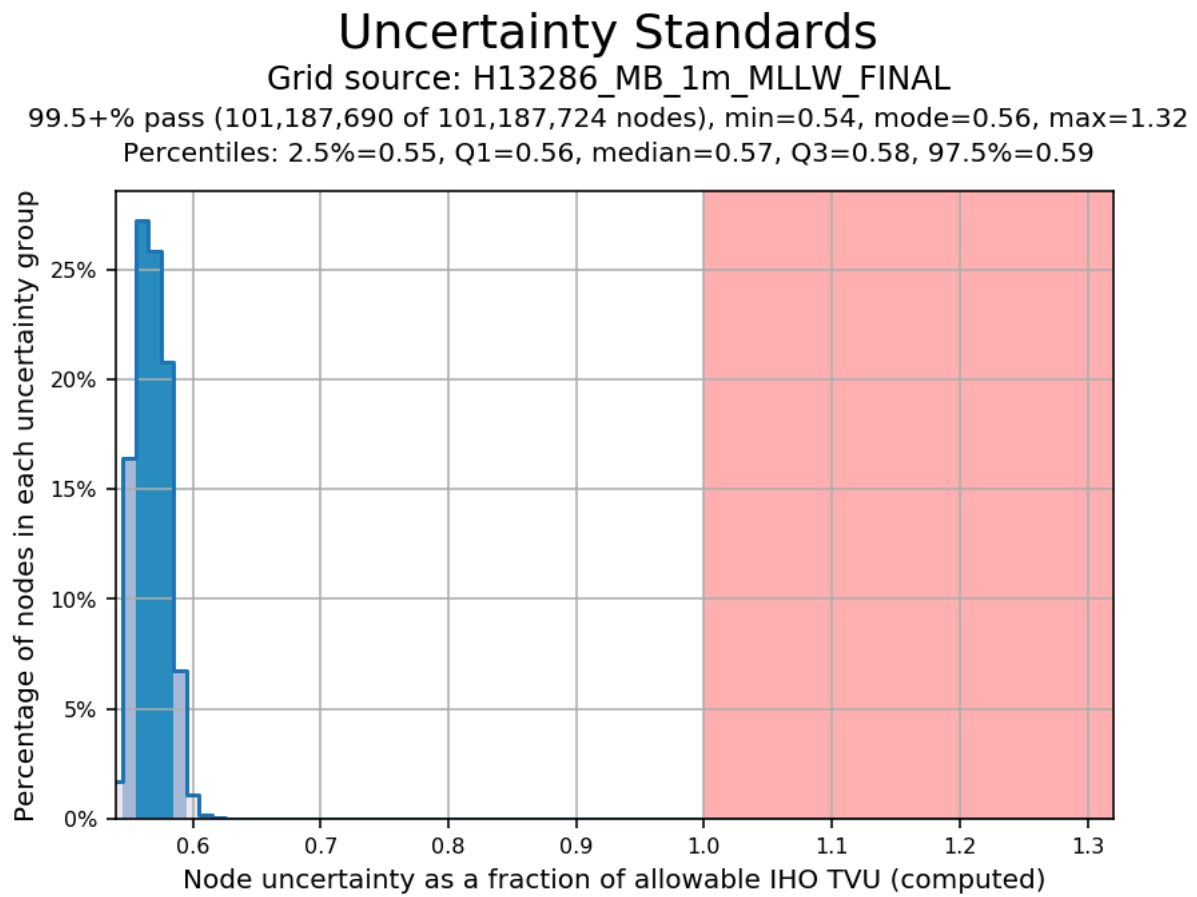


Figure 8: H13286 1m finalized grid TPU QC

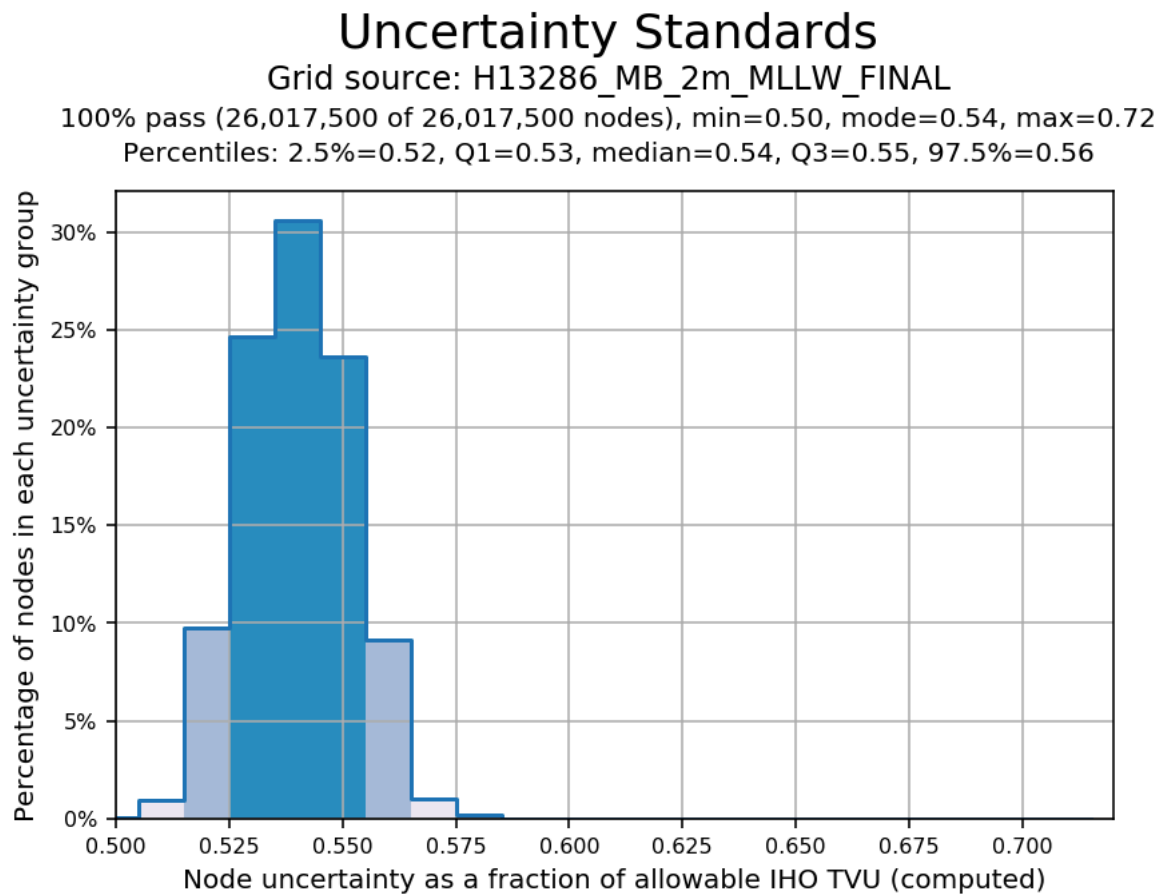


Figure 9: H13286 2m finalized grid TPU QC

B.2.3 Junctions

A total of 2 contemporary surveys are available to compare to H13286: H13185 and H13282 (Table 9).

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H13282	1:20000	2019	Fugro Pelagos, Inc.	S
H13285	1:20000	2019	Fugro Pelagos, Inc.	W

Table 9: Junctioning Surveys

H13282

Survey H13282 was acquired by Fugro Pelagos in 2019 as a part of OPR-J359-KR-19. Of the 1,085,300 grid nodes compared between H13286 and H13282, 100% agree within 50cm (Figure 10).

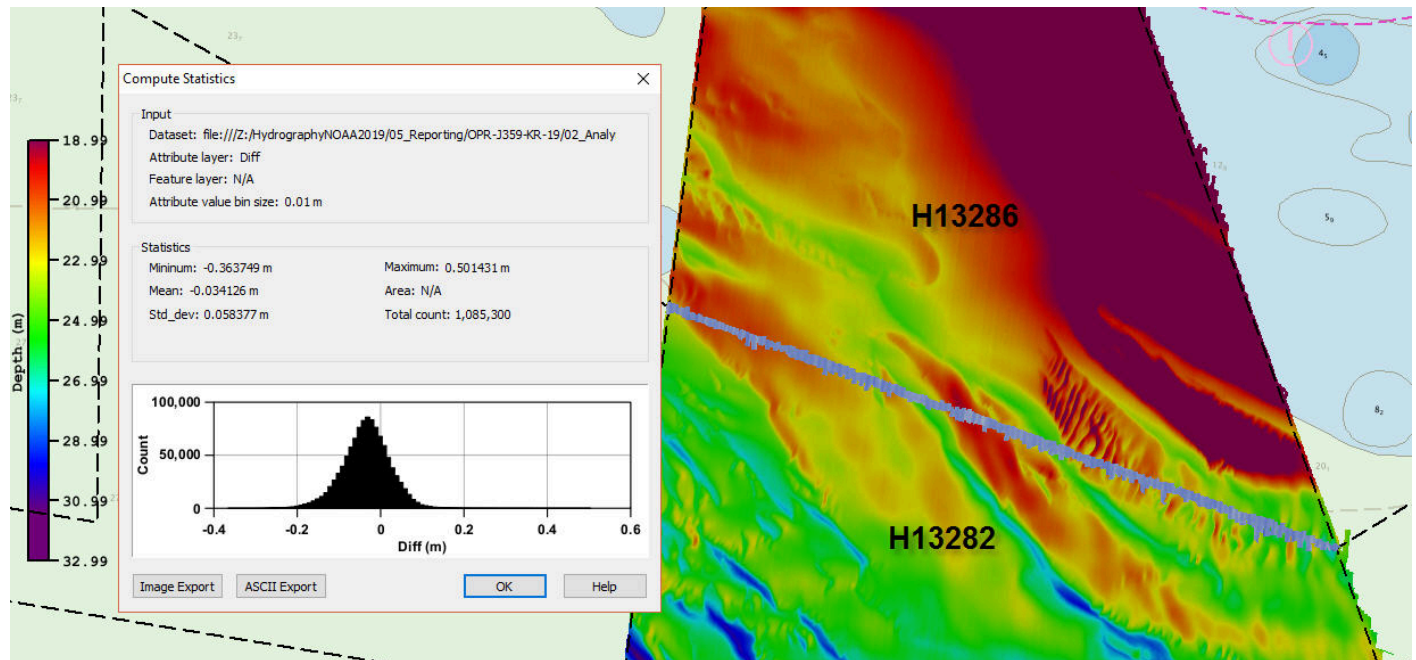


Figure 10: Survey H13286 junction with Survey H13282

H13285

Survey H13285 was acquired by Fugro Pelagos in 2019 as a part of OPR-J359-KR-19. Of the 1,550,023 grid nodes compared between H13286 and H13285, 100% agree within 50cm (Figure 11).

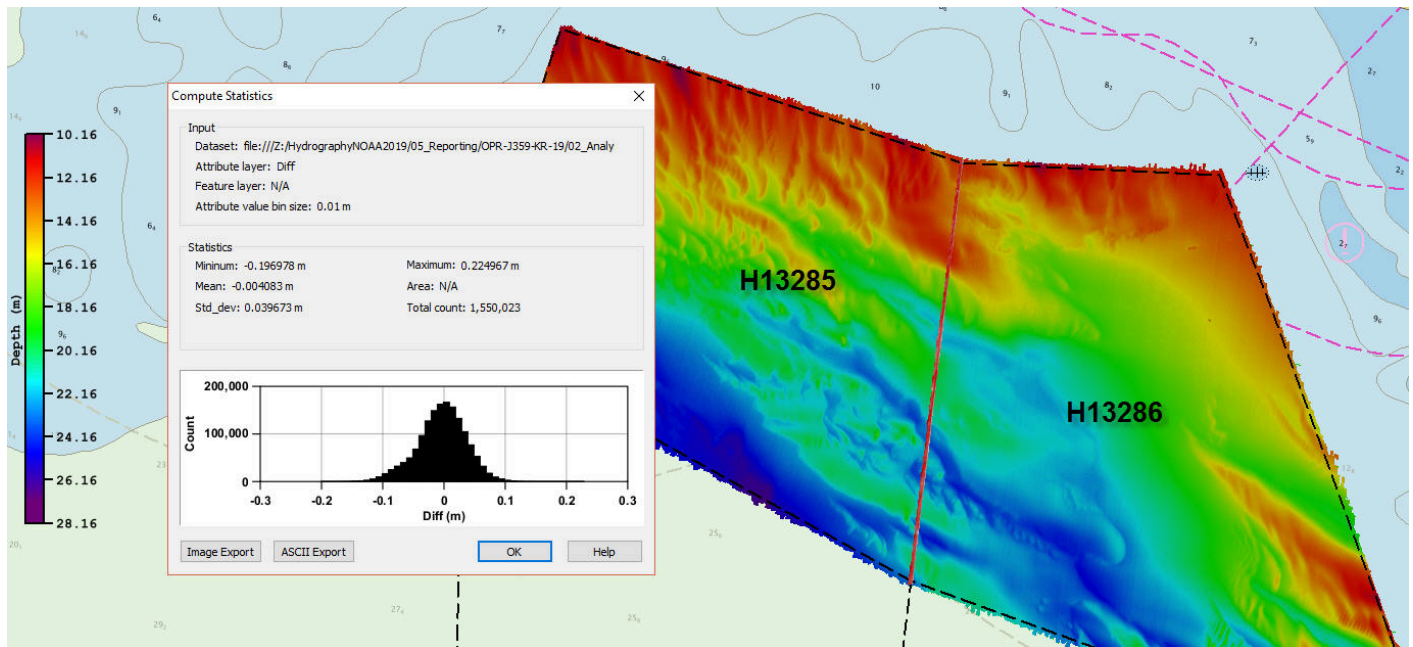


Figure 11: Survey H13286 junction with Survey H13285

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 Go Liberty using either an AML SV&P or a Teledyne Oceanscience UCTD SV&P (Figure 12).

Refer to the DAPR for additional information.

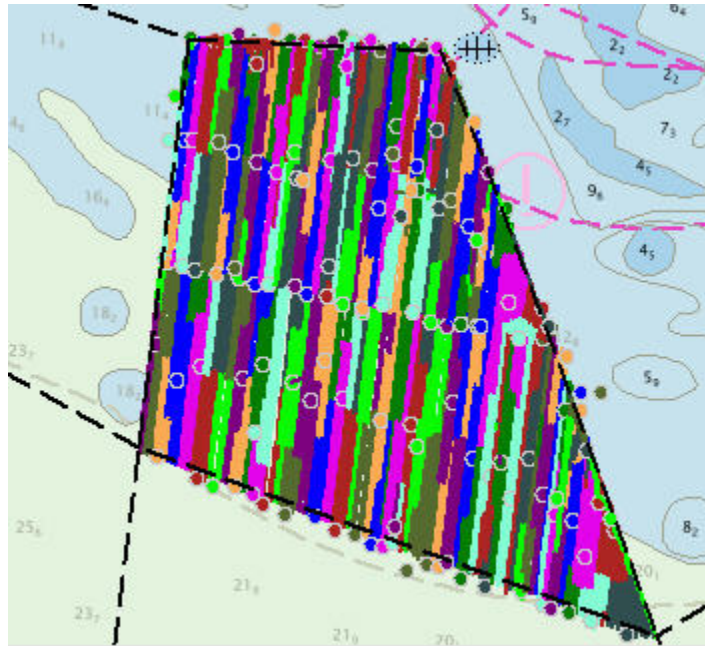


Figure 12: Temporal and geographic distribution of SVP casts within survey H13286

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 utilized in the acquisition and processing of Survey H13286 backscatter (Figure 13) are detailed in the DAPR.

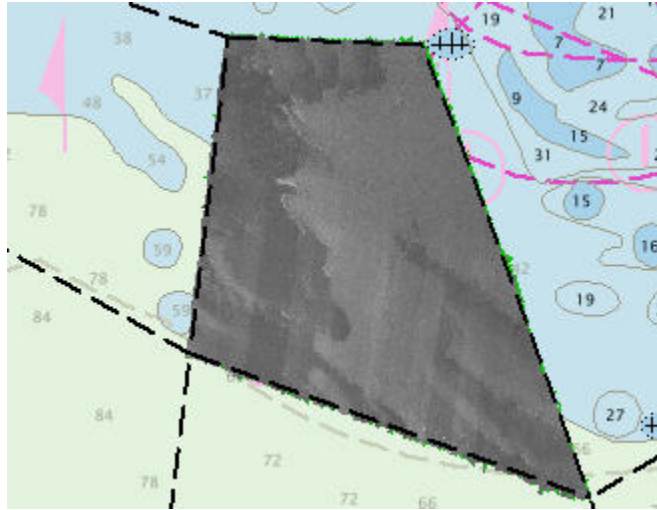


Figure 13: Survey H13286 backscatter coverage

B.5 Data Processing

B.5.1 Primary Data Processing Software

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

B.5.2 Surfaces

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

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13286_MB_1m_MLLW	CARIS Raster Surface (CUBE)	1 meters	10.17 meters - 27.20 meters	CMC_1m	Complete MBES

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13286_MB_1m_MLLW_Final	CARIS Raster Surface (CUBE)	1 meters	10.17 meters - 20.00 meters	CMC_1m	Complete MBES
H13286_MB_2m_MLLW	CARIS Raster Surface (CUBE)	2 meters	10.16 meters - 27.2 meters	CMC_2m	Complete MBES
H13286_MB_2m_MLLW_Final	CARIS Raster Surface (CUBE)	2 meters	18.00 meters - 27.2 meters	CMC_2m	Complete MBES
H13286_MBAB_1m_GoLiberty_400kHz	MB Backscatter Mosaic	1 meters	-	N/A	Complete MBES
H13286_MBAB_2m_GoLiberty_400kHz	MB Backscatter Mosaic	2 meters	-	N/A	Complete MBES

Table 10: 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 Datum Transformation

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

Method	Ellipsoid to Chart Datum Separation File
ERS via VDATUM	EC_Apalachicola_xyNAD83-MLLW_geoid12b.csar

Table 11: ERS method and SEP file

C.2 Horizontal Control

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

The projection used for this project is Universal Transverse Mercator (UTM) Zone 16.

PPP

All positioning and attitude data associated with OPR-J359-KR-19 was post-processed in POSpac MMS using PP-RTX methods. For further discussion, reference the HVCR and or DAPR submitted with this report.

D. Results and Recommendations

D.1 Chart Comparison

A chart comparison was conducted using the Triangle Rule script within the Chart Review Tool of Pydro QC Tools. A combined s57 file of charted soundings extracted from ENCs listed in the project instructions and an s57 file of surveyed soundings were compared with the following results (Figure 14):

Survey H13286 surveyed soundings show moderate variance to charted soundings due to shifting sandwave crests. 1,152 of the 61,820 surveyed soundings compared were flagged by QC Tools as being shoal to charted depths by greater than 1ft (Figure 15). 1,080 surveyed soundings were between 1-3ft shoal to charted; 69 surveyed soundings were between 4-5ft shoal to charted; 3 surveyed soundings were 6ft shoal to charted. Only 1 of the 3 survey soundings 6ft shoal to charted values falls within the assigned survey limits and indicates an uncharted wreck located at 29-30-05.89N 085-06-48.91W (Figure 16). Reference the Final Feature File associated with this survey for further details.

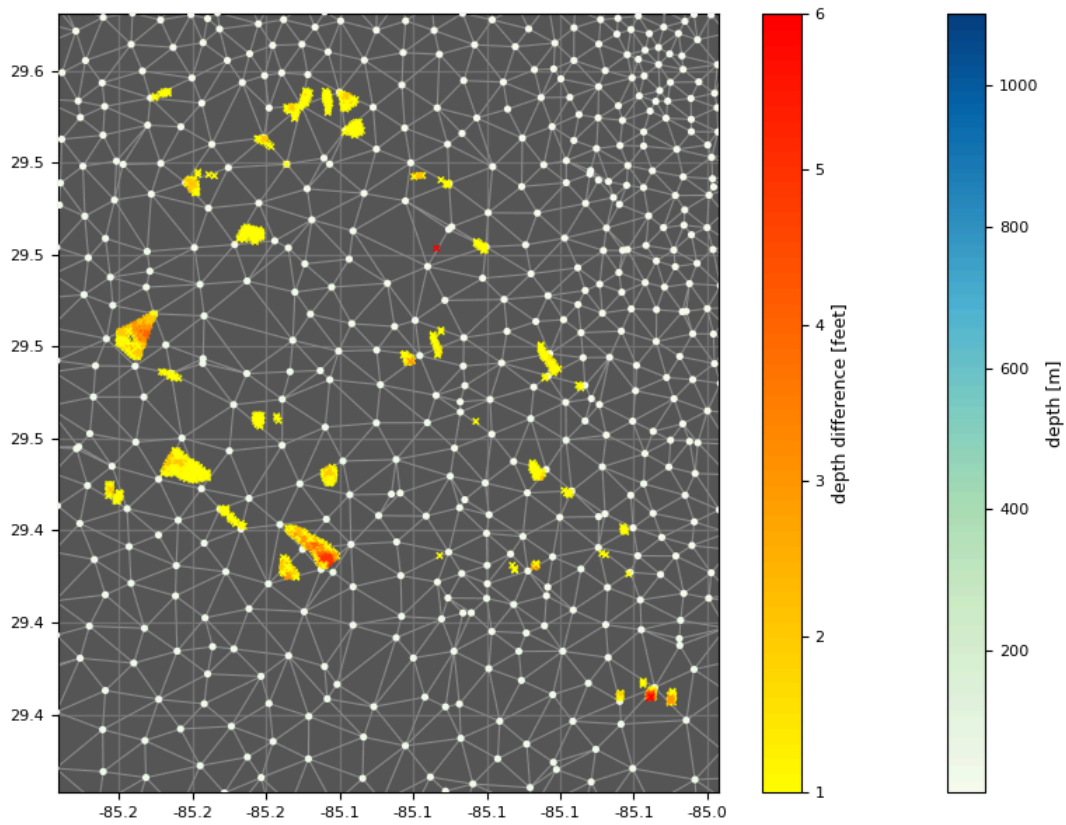


Figure 14: Pydro QC Tools chart review output of H13286 surveyed soundings shoal to charted soundings

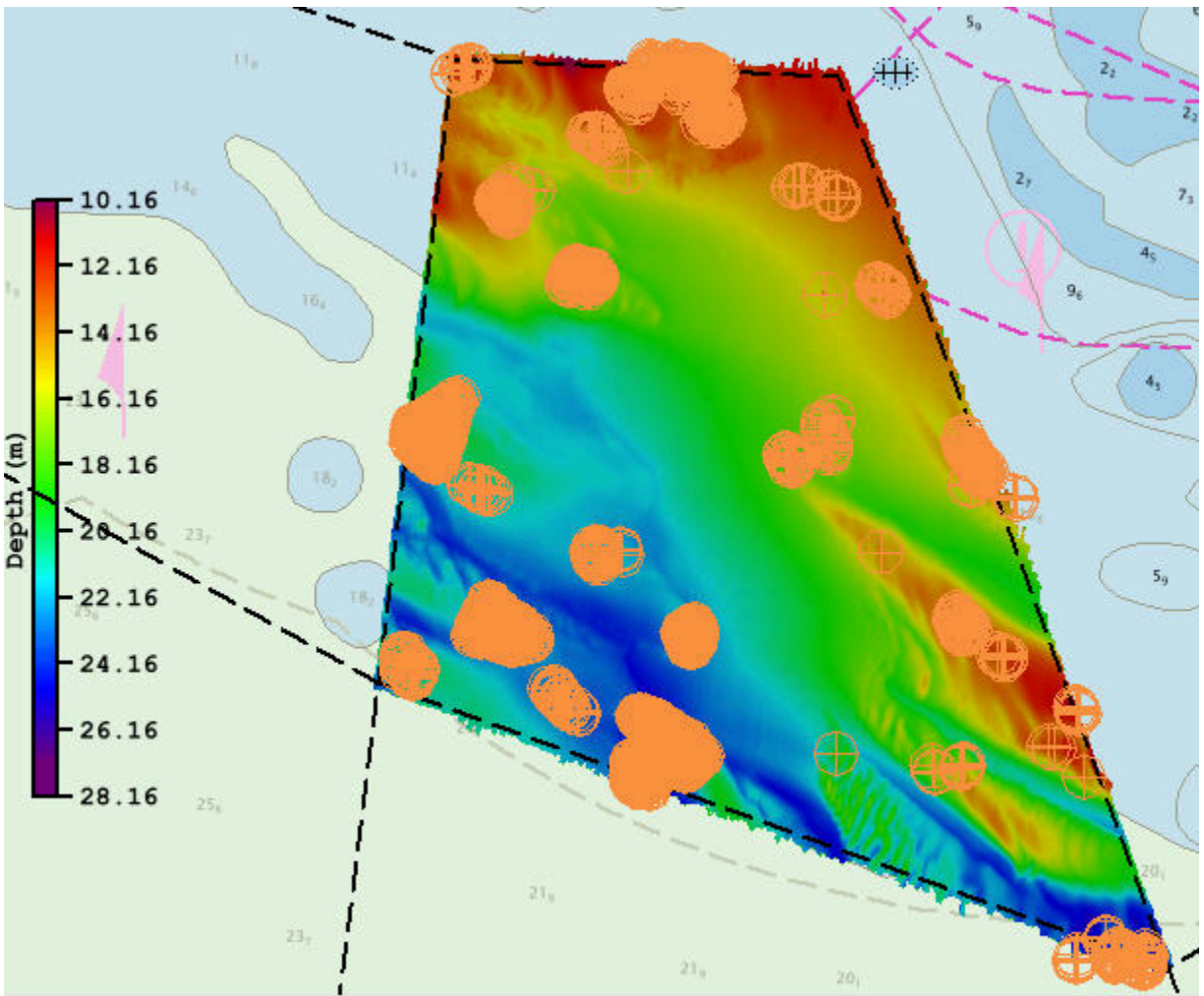


Figure 15: Pydro QC Tools output of areas of shoaling greater than 1ft

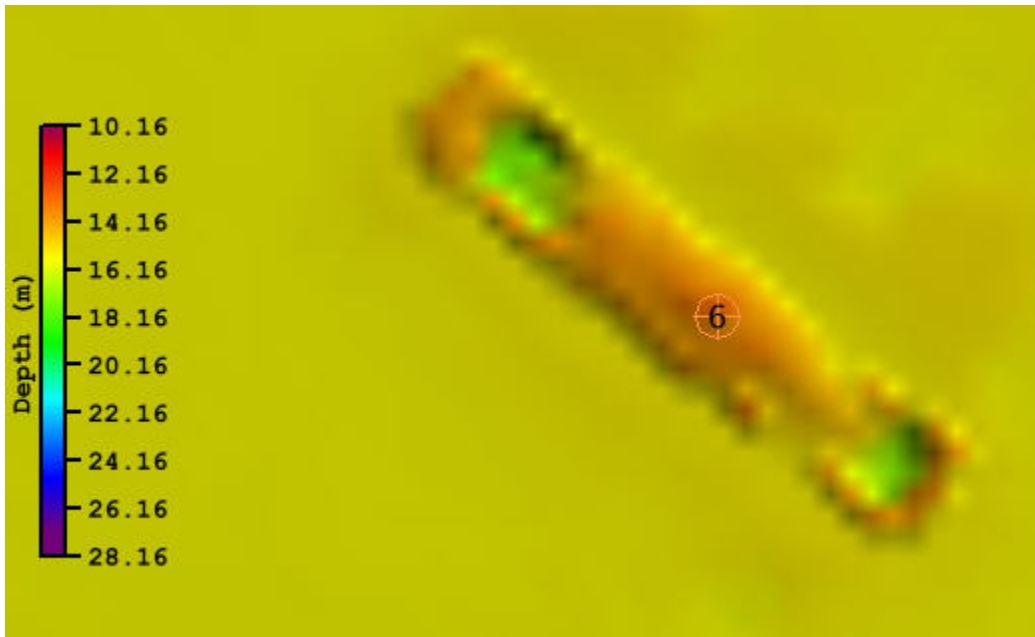


Figure 16: Survey H13286 sounding shoal to charted; uncharted wreck

D.1.1 Electronic Navigational Charts

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

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US4FL68M	1:80000	15	02/15/2019	02/15/2019	NO
US3GC06M	1:456394	26	09/27/2019	10/21/2019	NO

Table 12: Largest Scale ENC's

US4FL68M

US3GC06M

D.1.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

D.1.3 Charted Features

One charted wreck and one obstruction area were assigned for investigation within the survey limits of H13286. Reference the Final Feature File associated with this survey for further details.

D.1.4 Uncharted Features

One uncharted wreck and one potential obstruction were found within the survey limits of H13286. Reference the Final Feature File associated with this survey for further details.

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 8 bottom samples were assigned and investigated within the survey limits of survey H13286. Reference the Final Feature File associated with this survey for further details.

D.2 Additional Results

D.2.1 Shoreline

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

D.2.2 Aids to Navigation

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

D.2.3 Overhead Features

No overhead features exist for this survey.

D.2.4 Submarine Features

No submarine features exist for this survey.

D.2.5 Platforms

No platforms exist for this survey.

D.2.6 Ferry Routes and Terminals

No ferry routes or terminals exist for this survey.

D.2.7 Abnormal Seafloor and/or Environmental Conditions

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

D.2.8 Construction and Dredging

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

D.2.9 New Survey Recommendation

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

D.2.10 Inset Recommendation


No new insets are recommended for this area.

E. Approval Sheet

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

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

The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys Specifications and Deliverables, 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	01/17/2020	Dean Moyles  Digitally signed by Dean Moyles Date: 2020.03.30 13:40:39 -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
CO	Commanding Officer
CO-OPS	Center for Operational Products and Services
CORS	Continuously Operating Reference Station
CTD	Conductivity Temperature Depth
CEF	Chart Evaluation File
CSF	Composite Source File
CST	Chief Survey Technician
CUBE	Combined Uncertainty and Bathymetry Estimator
DAPR	Data Acquisition and Processing Report
DGPS	Differential Global Positioning System
DP	Detached Position
DR	Descriptive Report
DTON	Danger to Navigation
ENC	Electronic Navigational Chart
ERS	Ellipsoidal Referenced Survey
ERTDM	Ellipsoidally Referenced Tidal Datum Model
ERZT	Ellipsoidally Referenced Zoned Tides
FFF	Final Feature File
FOO	Field Operations Officer
FPM	Field Procedures Manual
GAMS	GPS Azimuth Measurement Subsystem
GC	Geographic Cell
GPS	Global Positioning System
HIPS	Hydrographic Information Processing System
HSD	Hydrographic Surveys Division

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

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

From: [Moyles, Dean](#)
To: NODC.submissions@noaa.gov
Cc: [Starla Robinson - NOAA Federal](#)
Subject: NCEI Sound Speed Data
Date: Wednesday, March 25, 2020 2:03:00 PM
Attachments: [OPR-J359-KR-19_20200325.zip](#)

Please find the attached Sound Speed Data for OPR-J359-KR-19 in the NetCDF template format. I apologize this was omitted from the final deliverables, please let me know if you have any questions.

Dean Moyles

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Together we create a safe and liveable world.

From: [Stone, Allison](#)
To: survey.outlines@noaa.gov
Cc: [Starla Robinson - NOAA Federal](#); [Moyles, Dean](#)
Subject: OPR-J359-KR-19 Survey Outlines
Date: Wednesday, November 27, 2019 5:22:16 PM
Attachments: [H13281_SurveyOutline.000](#)
[H13282_SurveyOutline.000](#)
[H13284_SurveyOutline.000](#)
[H13285_SurveyOutline.000](#)
[H13286_SurveyOutline.000](#)
[H13287_SurveyOutline.000](#)
[H13288_SurveyOutline.000](#)

Good Afternoon,

Please find attached survey outlines associated with OPR-J359-KR-19:

H13281
H13282
(H13283-submitted 10/4/19, not submitted herein)
H13284
H13285
H13286
H13287
H13288

A copy of this correspondence will be saved and submitted with the reporting package for this project. Please confirm receipt.

Kind regards,

Allison Stone
Hydrographer
Fugro

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A 6100 Hillcroft St Houston, TX 77081

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From: [Stone, Allison](#)
To: OCS.NDB@noaa.gov; Coast.Pilot@noaa.gov
Cc: [Starla Robinson - NOAA Federal](#); [Moyles, Dean](#)
Subject: OPR-J359-KR-2019 Coast Pilot Report Review Report
Date: Monday, December 2, 2019 1:38:33 PM
Attachments: [OPR_J359_KR_19_CoastPilotReviewReport.pdf](#)
[OPR-J359-KR-19CoastPilotReport.pdf](#)

Good afternoon,

Please find attached CP Review Report for project OPR-J359-KR-19. This review was conducted on the most recent Ch 6 of CP5 (24 Nov 2019).

CP5 Ch6 provided by HSD with Project Instructions was dated 20 May 2018.

In reference to the highlighted update requests, the wreck PA at the outer entrance to Government Cut was not included for investigation in the Project Instructions for investigation.

An additional comment was added relating to the prominence of the Highway 98 Bridge over the Gulf County Canal as a visual reference for approach.

If you have any additional comments or considerations, please do not hesitate to reach out.

Allison Stone

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From: [Laura Jeffery - NOAA Federal](#)
To: [Stone, Allison](#)
Cc: [OCS.NDB@noaa.gov](#); [Coast.Pilot@noaa.gov](#); [Starla Robinson - NOAA Federal](#); [Moyles, Dean](#)
Subject: Re: OPR-J359-KR-2019 Coast Pilot Report Review Report
Date: Monday, December 2, 2019 3:50:29 PM

Thank you very much Allison! We will have this made into a source doc and process it for CP5 soon.

-Nautical Publications Branch/NOS

On Mon, Dec 2, 2019 at 12:11 PM 'Stone, Allison' via _NOS OCS NSD Coast Pilot <coast.pilot@noaa.gov> wrote:

Good afternoon,

Please find attached CP Review Report for project OPR-J359-KR-19. This review was conducted on the most recent Ch 6 of CP5 (24 Nov 2019).

CP5 Ch6 provided by HSD with Project Instructions was dated 20 May 2018.

In reference to the highlighted update requests, the wreck PA at the outer entrance to Government Cut was not included for investigation in the Project Instructions for investigation.

An additional comment was added relating to the prominence of the Highway 98 Bridge over the Gulf County Canal as a visual reference for approach.

If you have any additional comments or considerations, please do not hesitate to reach out.

Allison Stone

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--

Laura B. Jeffery
Nautical Publications Branch/NOS
Cartographer/Reviewer
240-533-0073

NOAA-NOS-OCS-NSD-NPB
1315 E. West Hwy
SSMC3, Station 6315
Silver Spring, MD 20910

From: [Moyles, Dean](#)
To: ocs.ecc@noaa.gov
Cc: [Starla Robinson - NOAA Federal](#)
Subject: RE: OPR-J359-KR-19 Marine Mammal Sighting Logs
Date: Wednesday, March 25, 2020 2:13:00 PM
Attachments: [Marine Mammal Training Video Log 2019.xlsx](#)

Please find the attached Marine Mammal Training Log for OPR-J359-KR-19. I apologize this was omitted from the earlier submission.

Dean Moyles

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From: Nancy Young - NOAA Federal <nancy.young@noaa.gov>
Sent: Tuesday, December 3, 2019 4:36 PM
To: Moyles, Dean <dmoyles@fugro.com>
Subject: Re: OPR-J359-KR-19 Marine Mammal Sighting Logs

Thanks very much, Dean.

On Mon, Dec 2, 2019 at 11:10 AM 'Moyles, Dean' via [_NMFS AFSC NMML POP INFORMATION](#) <pop.information@noaa.gov> wrote:

Please find the attached marine mammal sighting logs for OPR-J359-KR-19. Please let me know if you have any questions.

Dean Moyles

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--

Nancy Young
NOAA Fisheries
Alaska Fisheries Science Center
Marine Mammal Laboratory
(206) 526-4297

Name	Date of Completion
Allison Stone	7/2/2019
Honza Rokyta	7/2/2019
Dean Moyles	7/2/2019
Mike Minton	7/2/2019
Clay Walker	7/2/2019
Patrick Keilen	7/2/2019
Nicholas Burch	7/17/2019
Emanual Byas	7/17/2019
Reed Nelle	7/17/2019
Tiziana Munene	7/17/2019
Dylan Coe	7/17/2019
Matt Green	7/17/2019
Gary Baxter	7/18/2019
Bobby Touchstone	7/19/2019
Honza Rokyta	7/31/2019
Scott Ferguson	7/31/2019
Caroline Bradley	9/23/2019

From: [Moyles, Dean](#)
To: ["pop.information@noaa.gov"](mailto:pop.information@noaa.gov); ["ocs.ecc@noaa.gov"](mailto:ocs.ecc@noaa.gov)
Cc: ["Starla Robinson - NOAA Federal"](#)
Subject: OPR-J359-KR-19 Marine Mammal Sighting Logs
Date: Monday, December 2, 2019 3:35:00 PM
Attachments: [OPR-J359-KR-19 Marine Mammal Sightings.zip](#)

Please find the attached marine mammal sighting logs for OPR-J359-KR-19. Please let me know if you have any questions.

Dean Moyles

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From: [Nancy Young - NOAA Federal](#)
To: [Moyles, Dean](#)
Subject: Re: OPR-J359-KR-19 Marine Mammal Sighting Logs
Date: Tuesday, December 3, 2019 4:36:35 PM

Thanks very much, Dean.

On Mon, Dec 2, 2019 at 11:10 AM 'Moyles, Dean' via _NMFS AFSC NMML POP INFORMATION <pop.information@noaa.gov> wrote:

Please find the attached marine mammal sighting logs for OPR-J359-KR-19. Please let me know if you have any questions.

Dean Moyles

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--

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Alaska Fisheries Science Center
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APPROVAL PAGE

H13286

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