

H13143

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

DESCRIPTIVE REPORT

Type of Survey: Navigable Area

Registry Number: H13143

LOCALITY

State(s): Puerto Rico

General Locality: San Juan and Ponce and Vicinities

Sub-locality: Bahia de Ponce

2018

CHIEF OF PARTY
Christiaan van Westendorp, CAPT/NOAA

LIBRARY & ARCHIVES

Date:

HYDROGRAPHIC TITLE SHEET

H13143

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): **Puerto Rico**

General Locality: **San Juan and Ponce and Vicinities**

Sub-Locality: **Bahia de Ponce**

Scale: **5000**

Dates of Survey: **09/05/2018 to 11/05/2018**

Instructions Dated: **06/15/2018**

Project Number: **OPR-I369-TJ-18**

Field Unit: **NOAA Ship *Thomas Jefferson***

Chief of Party: **Christiaan van Westendorp, CAPT/NOAA**

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 19N, 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. Area Surveyed.....	1
A.1 Survey Limits.....	1
A.2 Survey Purpose.....	4
A.3 Survey Quality.....	4
A.4 Survey Coverage.....	4
A.5 Survey Statistics.....	4
B. Data Acquisition and Processing.....	6
B.1 Equipment and Vessels.....	6
B.1.1 Vessels.....	7
B.1.2 Equipment.....	7
B.2 Quality Control.....	8
B.2.1 Crosslines.....	8
B.2.2 Uncertainty.....	9
B.2.3 Junctions.....	9
B.2.4 Sonar QC Checks.....	14
B.2.5 Equipment Effectiveness.....	14
B.2.6 Factors Affecting Soundings.....	14
B.2.7 Sound Speed Methods.....	14
B.2.8 Coverage Equipment and Methods.....	16
B.3 Echo Sounding Corrections.....	16
B.3.1 Corrections to Echo Soundings.....	16
B.3.2 Calibrations.....	16
B.4 Backscatter.....	16
B.5 Data Processing.....	19
B.5.1 Primary Data Processing Software.....	19
B.5.2 Surfaces.....	19
B.5.3 Data Density.....	20
C. Vertical and Horizontal Control.....	21
C.1 Vertical Control.....	21
C.2 Horizontal Control.....	22
D. Results and Recommendations.....	22
D.1 Chart Comparison.....	22
D.1.1 Electronic Navigational Charts.....	22
D.1.2 Maritime Boundary Points.....	25
D.1.3 Charted Features.....	25
D.1.4 Uncharted Features.....	25
D.1.5 Shoal and Hazardous Features.....	25
D.1.6 Channels.....	25
D.1.7 Bottom Samples.....	25
D.2 Additional Results.....	26
D.2.1 Shoreline.....	26
D.2.2 Prior Surveys.....	26
D.2.3 Aids to Navigation.....	26

D.2.4 Overhead Features.....	26
D.2.5 Submarine Features.....	26
D.2.6 Platforms.....	27
D.2.7 Ferry Routes and Terminals.....	27
D.2.8 Abnormal Seafloor and/or Environmental Conditions.....	27
D.2.9 Construction and Dredging.....	28
D.2.10 New Survey Recommendation.....	28
D.2.11 Inset Recommendation.....	28
E. Approval Sheet.....	29
F. Table of Acronyms.....	30

List of Tables

Table 1: Survey Limits.....	1
Table 2: Survey Coverage.....	4
Table 3: Hydrographic Survey Statistics.....	5
Table 4: Dates of Hydrography.....	6
Table 5: Vessels Used.....	7
Table 6: Major Systems Used.....	7
Table 7: Survey Specific Tide TPU Values.....	9
Table 8: Survey Specific Sound Speed TPU Values.....	9
Table 9: Junctioning Surveys.....	10
Table 10: Submitted Surfaces.....	20
Table 11: Largest Scale ENC's.....	22

List of Figures

Figure 1: H13143 survey area plotted on NOAA chart 25677.....	2
Figure 2: H13143 MBES coverage on RNC 25677.....	3
Figure 3: H13143 modified survey limits.....	3
Figure 4: H13143 crossline/mainscheme comparison.....	8
Figure 5: H13143 uncertainty standards.....	9
Figure 6: H13141 junctions on the western edge of H13143.....	10
Figure 7: H13143 and H13141 surface difference comparison statistics.....	11
Figure 8: H13144 junctions at the southeastern edge of H13143.....	12
Figure 9: H13143 and H13144 surface difference comparison statistics.....	12
Figure 10: W00468 junctions on the southern edge of H13143 where there is a significant ledge feature present.....	13
Figure 11: H13143.....	14
Figure 12: Distribution of SVP data on survey H13143 coverage.....	15
Figure 13: TJ 2903's 300 kHz acoustic backscatter at 1m resolution.....	17
Figure 14: TJ 2904's 300 kHz acoustic backscatter at 1m resolution.....	17
Figure 15: S222's 300 kHz acoustic backscatter at 1m resolution.....	18
Figure 16: S222's 70 kHz acoustic backscatter at 1m resolution.....	18

Figure 17: Combined multibeam acoustic backscatter at 1m resolution.....	19
Figure 18: H13143 data density statistics.....	21
Figure 19: The western portion of Survey H13143 plotted over ENC US5PR44. Areas within black boxes indicate significantly shoaler soundings than charted.....	23
Figure 20: The eastern portion of Survey H13143 plotted over ENC US5PR42M. Areas within black boxes indicate significantly shoaler soundings than charted.....	24
Figure 21: An example of an area north of the Arrecife Ratones in need of contour updates. Data from Survey H13143 plotted over ENC US5PR42M. Blue line represents charted 5.4 m contour and the red line represents field created 5.4m contour from H13143 survey data.....	24
Figure 22: Uncharted and exposed pipeline in Survey H13143.....	27
Figure 23: Charted pier/jetty under construction or repair at time of survey.....	28

Descriptive Report to Accompany Survey H13143

Project: OPR-I369-TJ-18

Locality: San Juan and Ponce and Vicinities

Sublocality: Bahia de Ponce

Scale: 1:5000

September 2018 - November 2018

NOAA Ship *Thomas Jefferson*

Chief of Party: Christiaan van Westendorp, CAPT/NOAA

A. Area Surveyed

Survey H13143 includes Bahia de Ponce, Puerto Rico, and surrounding waters from Bahia de Tallaboa to approximately 2NM NW of Isla Caja de Muertos. Survey H13143 was conducted in accordance with coverage requirements set forth in the Project Instructions OPR-I369-TJ-18 (Figure 1).

A.1 Survey Limits

Data were acquired within the following survey limits (Table 1):

Northwest Limit	Southeast Limit
17° 58' 32" N 66° 43' 55" W	17° 55' 59" N 66° 32' 33" W

Table 1: Survey Limits

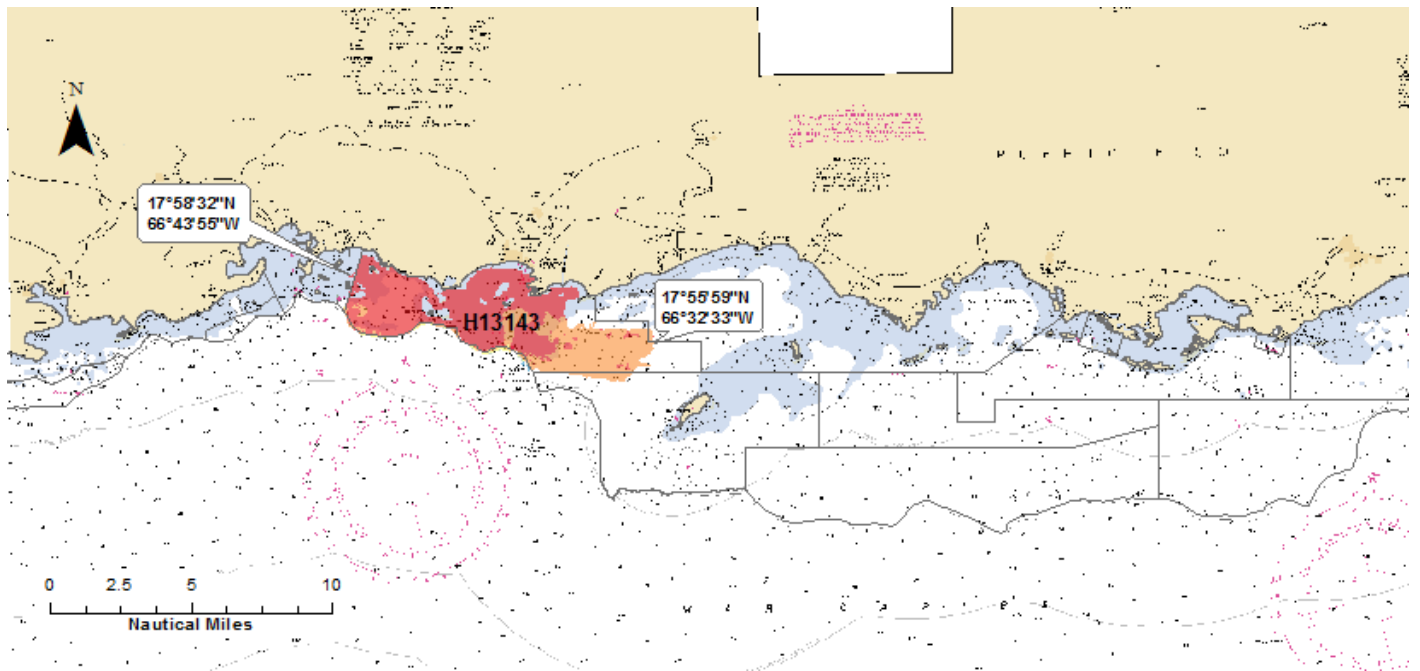


Figure 1: H13143 survey area plotted on NOAA chart 25677

Survey data were acquired in accordance with the requirements set forth by the Project Instructions (PI) and the Hydrographic Surveys Specifications and Deliverables (HSSD) dated April 2018. Some portions of the assigned survey limits were not addressed due to operational time constraints (Figure 2).

Survey limits for Surveys H13143 and H13144 were modified with Project Manager approval to maximize operational efficiency and account for available operational assets (Figure 3).

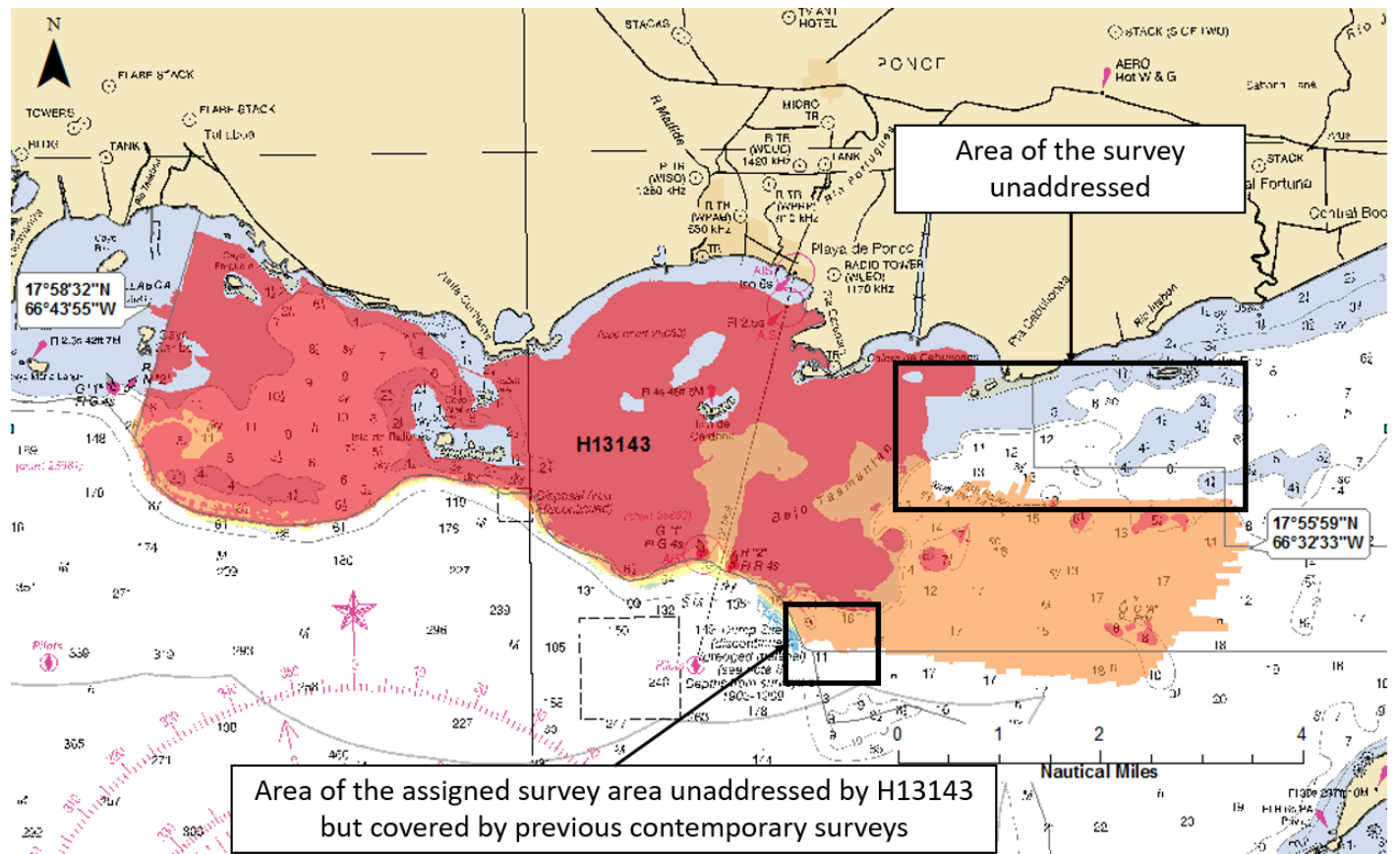


Figure 2: H13143 MBES coverage on RNC 25677

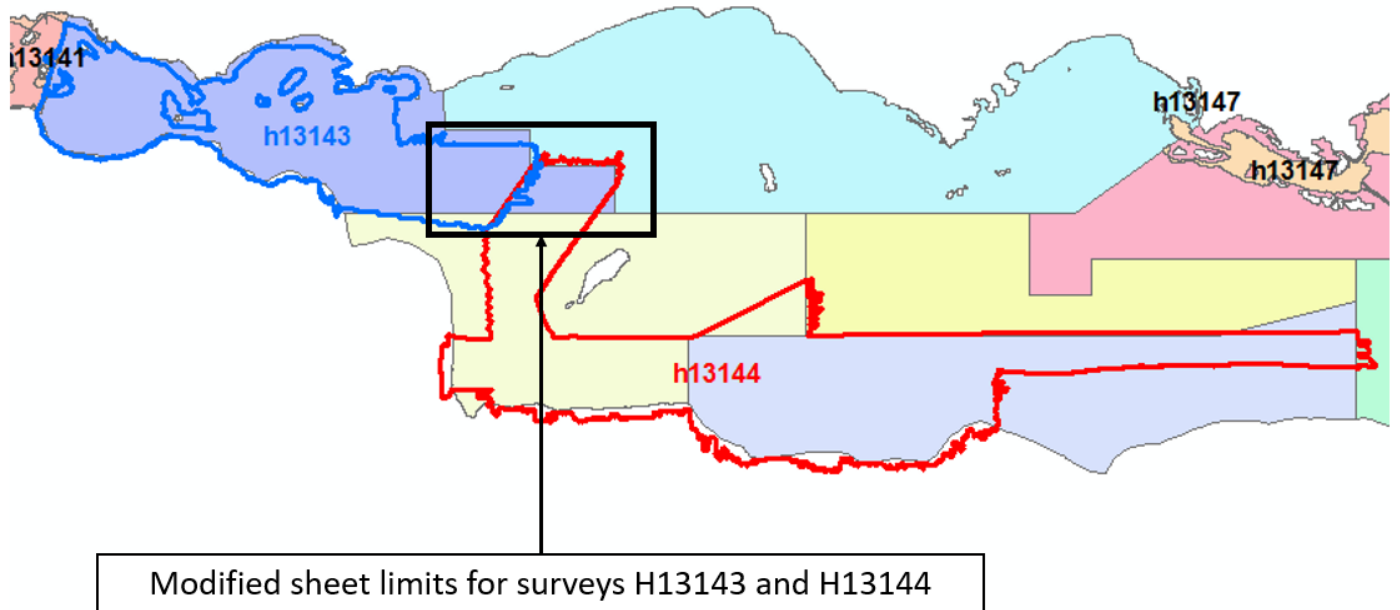


Figure 3: H13143 modified survey limits

A.2 Survey Purpose

The economy for the 3.3 million Americans in the territory of Puerto Rico is largely ocean dependent. Approximately 7% of the jobs in Puerto Rico are directly involved in ocean related services accounting for over \$920 million in wages. The island also imports 85% of its foodstuffs and virtually all of its energy products. Currently, only a small percentage of its coasts and critical harbors have been surveyed with modern, high-resolution sounding or hydrographic LiDAR devices. In 2017 the island was damaged by two major hurricanes; in response, the NOAA ship *Thomas Jefferson* conducted emergency sidescan and multibeam surveys of seven port facilities to locate storm related obstructions and damage to the channels. A follow up to some of these ports and pilot areas, combined with a survey of the surrounding coastline, is necessary to verify that dangerous obstructions have been removed prior to updating nautical charts.

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 (Table 2):

Water Depth	Coverage Required
All waters in survey area	Complete Coverage (refer to HSSD Section 5.2.2.3)

Table 2: Survey Coverage

Survey coverage was in accordance with requirements listed in Table 2 and in the 2018 Hydrographic Survey Specifications and Deliverables (HSSD). Coverage requirements were met with complete multibeam echosounder (MBES) coverage (Figure 2).

A.5 Survey Statistics

The following table lists the mainscheme and crossline acquisition mileage for this survey (Table 3):

	HULL ID	<i>S-222</i>	<i>HSL 2903</i>	<i>HSL 2904</i>	<i>Total</i>
LNM	SBES Mainscheme	0	0	0	0
	MBES Mainscheme	136.7	240.7	763.1	1140.5
	Lidar Mainscheme	0	0	0	0
	SSS Mainscheme	0	0	0	0
	SBES/SSS Mainscheme	0	0	0	0
	MBES/SSS Mainscheme	0	0	0	0
	SBES/MBES Crosslines	14.4	6.8	42.9	64.1
	Lidar Crosslines	0	0	0	0
Number of Bottom Samples					0
Number Maritime Boundary Points Investigated					0
Number of DPs					0
Number of Items Investigated by Dive Ops					0
Total SNM					22.5

Table 3: Hydrographic Survey Statistics

The following table lists the specific dates of data acquisition for this survey (Table 4):

Survey Dates	Day of the Year
09/05/2018	248

Survey Dates	Day of the Year
09/06/2018	249
09/07/2018	250
09/21/2018	264
09/22/2018	265
09/23/2018	266
09/24/2018	267
09/25/2018	268
09/27/2018	270
10/16/2018	289
10/17/2018	290
10/18/2018	291
10/19/2018	292
10/20/2018	293
10/21/2018	294
10/22/2018	295
10/24/2018	297
10/31/2018	304
11/01/2018	305
11/02/2018	306
11/03/2018	307
11/04/2018	308
11/05/2018	309

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. Deviations from the DAPR are noted in this report.

B.1.1 Vessels

The following vessels were used for data acquisition during this survey (Table 5):

Hull ID	S-222	2903	2904
LOA	63.4 meters	8.5 meters	8.5 meters
Draft	4.6 meters	1.2 meters	1.2 meters

Table 5: Vessels Used

Refer to DAPR for OPR-I369-TJ-18 for a complete listing of equipment used.

B.1.2 Equipment

The following major systems were used for data acquisition during this survey (Table 6):

Manufacturer	Model	Type
AML Oceanographic	Micro-CTD	Conductivity, Temperature, and Depth Sensor
Applanix	POS MV 320 v5	Positioning and Attitude System
Kongsberg Maritime	EM 710	MBES
Kongsberg Maritime	EM 2040	MBES
Rolls Royce	MVP100	Profiling System
Sea-Bird Scientific	SBE 19plus V2	Conductivity, Temperature, and Depth Sensor
Valeport	Thru-Hull SVS	Sound Speed System
Teledyne RESON	SVP 70	Sound Speed Sensor
Teledyne RESON	SVP 71	Sound Speed Sensor

Table 6: Major Systems Used

Vessel configurations, equipment operations, data acquisition, and processing were consistent with specifications described in the DAPR.

B.2 Quality Control

B.2.1 Crosslines

Multibeam/single beam echo sounder/side scan sonar crosslines acquired for this survey totaled 5.62% of mainscheme acquisition.

Multibeam echosounder crosslines acquired for this survey totaled 5.6% of mainscheme acquisition. Hydrographic survey launch (HSL) 2903 collected 6.8 linear nautical miles, HSL 2904 collected 42.9 linear nautical miles, and S-222 collected 14.4 linear nautical miles. In all, 64.1 linear nautical miles of MBES crosslines were collected between all platforms.

A Variable Resolution (VR) Combined Uncertainty and Bathymetry Estimator (CUBE) surface of mainscheme data and a VR CUBE surface of crossline data were differenced - the resulting mean was -0.02m and the standard deviation 0.09m. Visual inspection of the difference surface indicated no systematic issues (Figure 4).

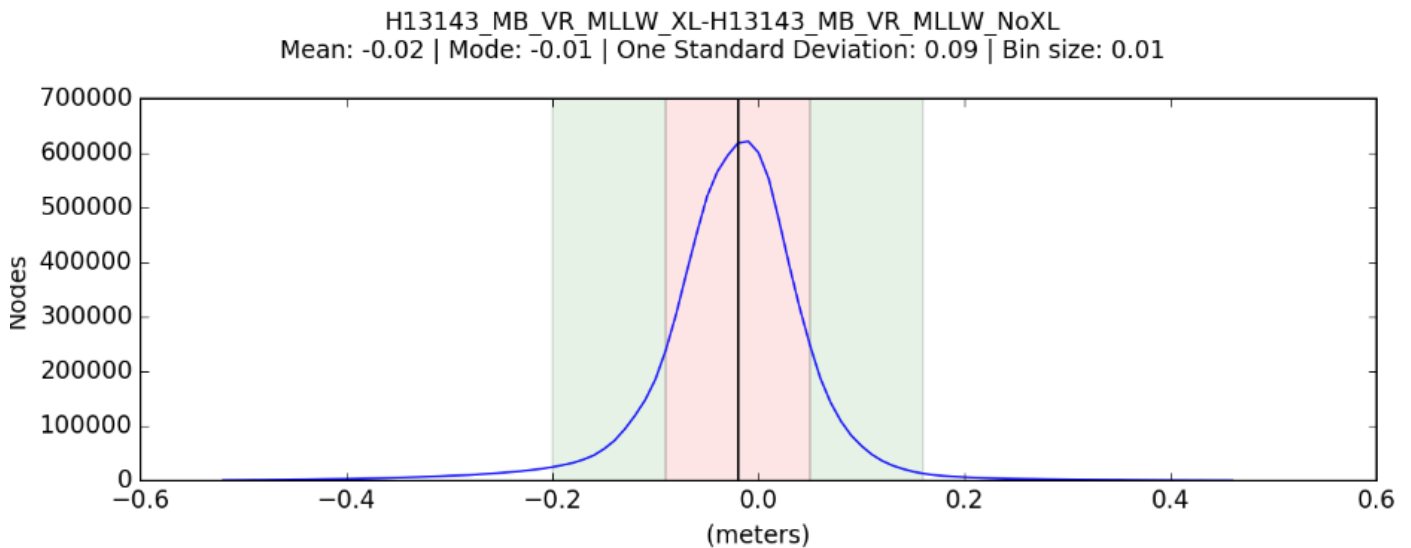


Figure 4: H13143 crossline/mainscheme comparison

B.2.2 Uncertainty

The following survey specific parameters were used for this survey (Tables 7 and 8):

Method	Measured	Zoning
ERS via VDATUM	0 meters	0.12 meters

Table 7: Survey Specific Tide TPU Values.

Hull ID	Measured - CTD	Measured - MVP	Surface
S-222	4 meters/second	2 meters/second	0.2 meters/second
2903	4 meters/second		0.2 meters/second
2904	4 meters/second		0.2 meters/second

Table 8: Survey Specific Sound Speed TPU Values.

The bathymetric surface's uncertainty layer is compliant with HSSD 2018 uncertainty standards. Over 99.5% of all nodes pass uncertainty standards (Figure 5).

Figure 5: H13143 uncertainty standards

B.2.3 Junctions

Three contemporary surveys junction with H13143 The following junctions were made with this survey (Table 9):

Registry Number	Scale	Year	Field Unit	Relative Location
H13141	1:5000	2018	NOAA Ship THOMAS JEFFERSON	W
H13144	1:5000	2018	NOAA Ship THOMAS JEFFERSON	SE
W00468	1:20000	2018	NOAA Ship NANCY FOSTER	S

*Table 9: Junctioning Surveys*H13141

The west side of Survey H13143 junctioned with Survey H13141 (Figure 6). A difference surface comparison was conducted in accordance with procedures outlined in the DAPR.

The mean difference between bathymetric surface nodes was -0.02m with a standard deviation of 0.06m. Statistics and visual inspection indicate that surveys H13143 and H13141 are in general agreement (Figure 7).

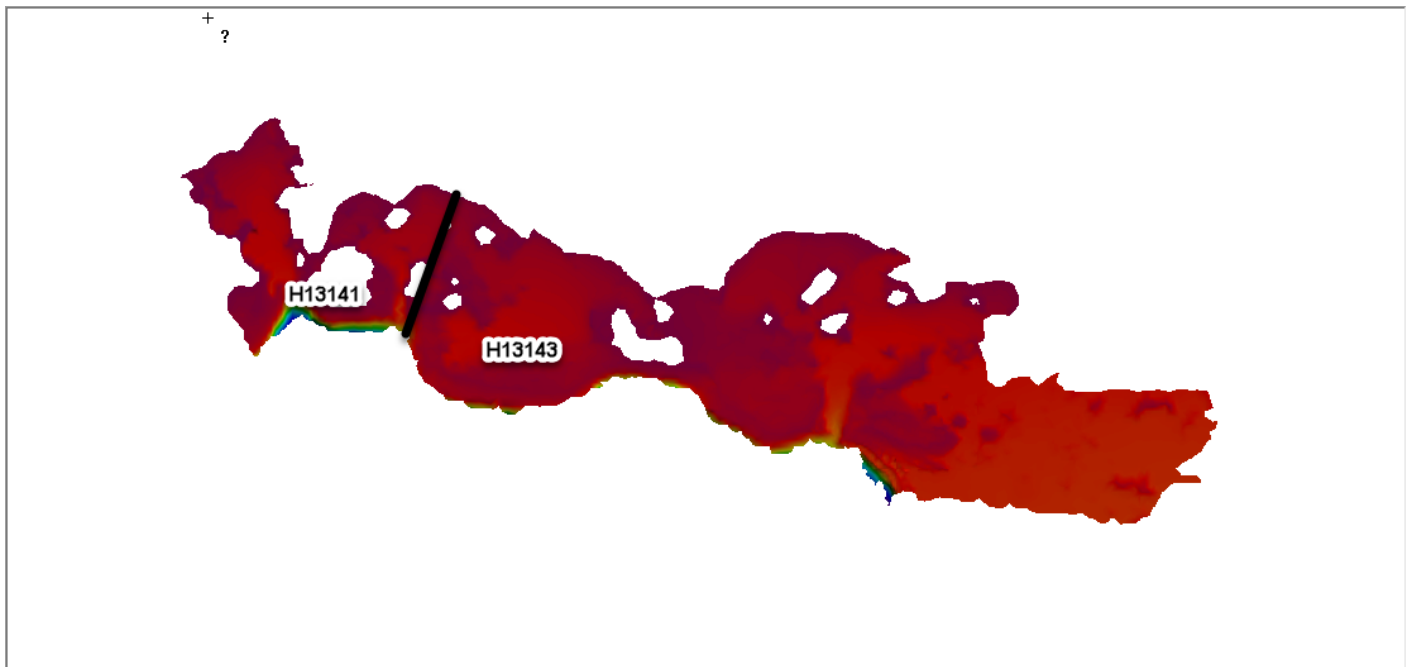


Figure 6: H13141 junctions on the western edge of H13143

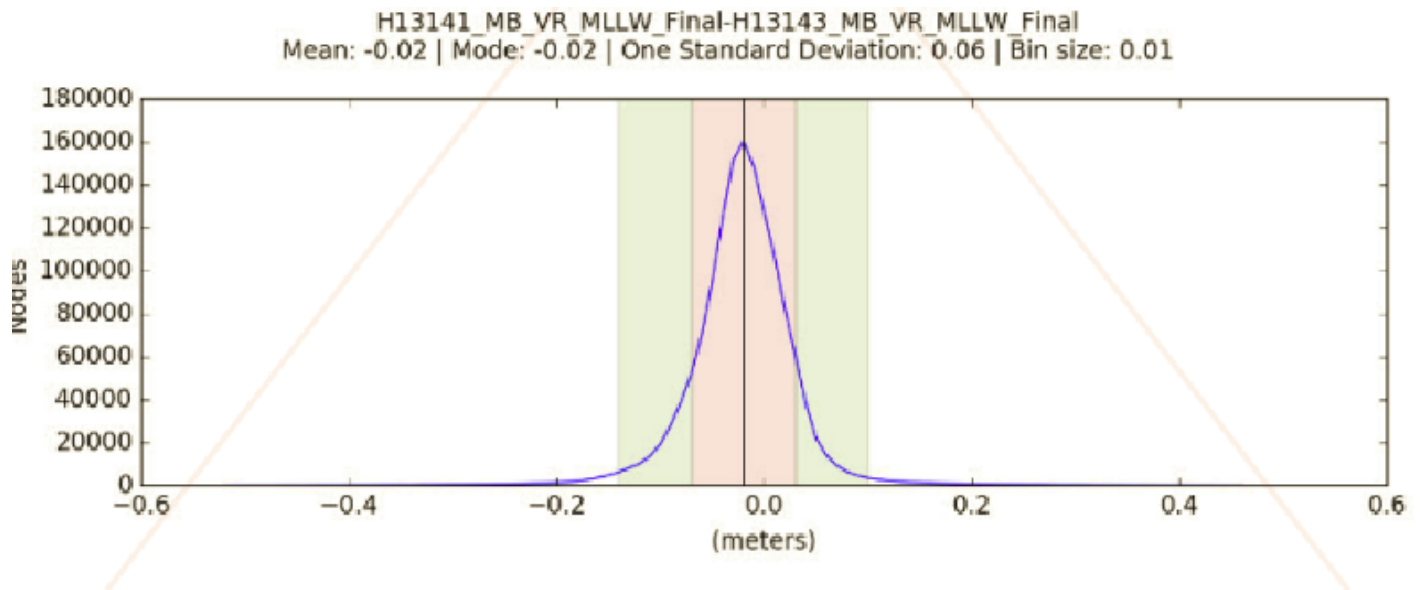


Figure 7: H13143 and H13141 surface difference comparison statistics

H13144

The east side of Survey H13143 junctioned with Survey H13144 (Figure 8). A difference surface comparison was conducted in accordance with procedures outlined in the DAPR.

The mean difference between bathymetric surface nodes was -0.03m with a standard deviation of 0.07m. Statistics and visual inspection indicate that surveys H13143 and H13144 are in general agreement (Figure 9).

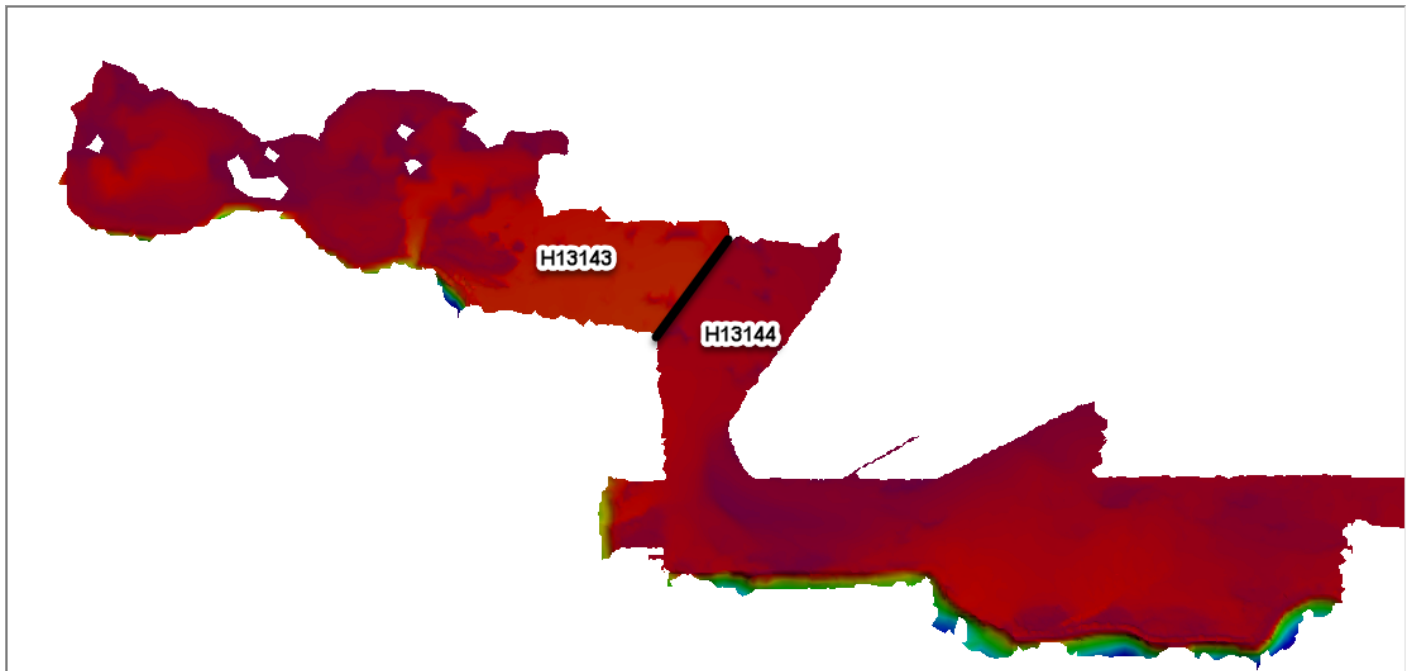


Figure 8: H13144 junctions at the southeastern edge of H13143

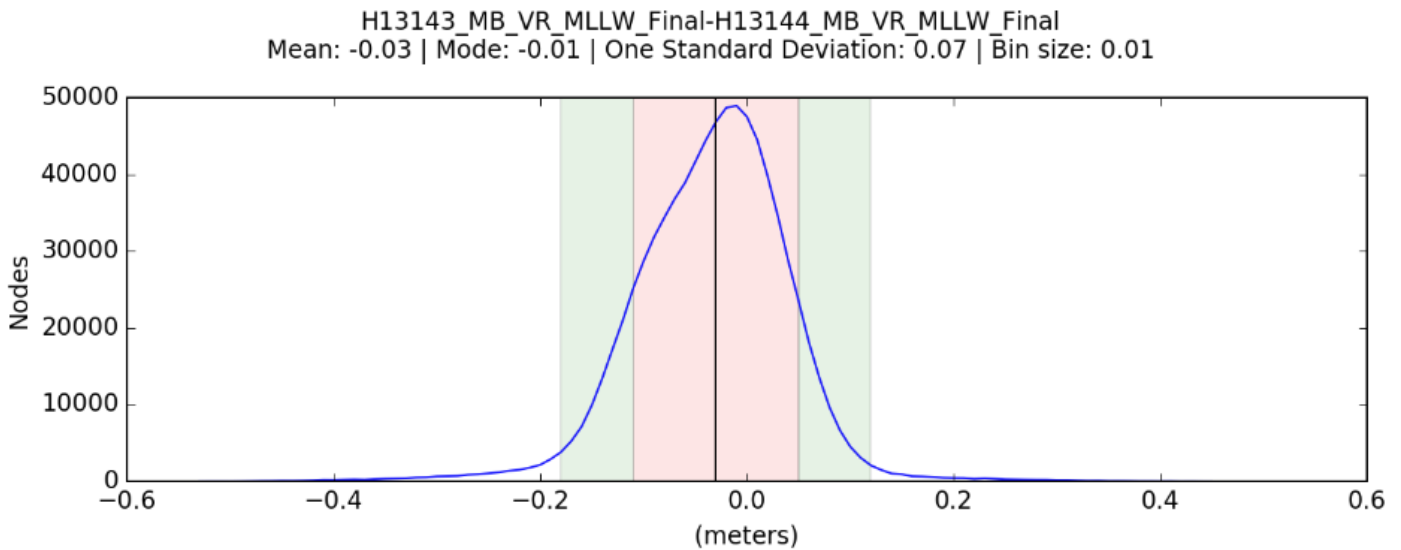


Figure 9: H13143 and H13144 surface difference comparison statistics

W00468

The south side of Survey H13143 junctioned with Survey W00468 (Figure 10). A difference surface comparison was conducted in accordance with procedures outlined in the DAPR using the H13143 Final VR CUBE surface and a geotiff of a VR surface provided to the field by the Project Manager.

The mean difference between bathymetric surface nodes was -0.42m with a standard deviation of 2.09m (Figure 11). The range of differences was -74.34m to 33.19m . Significant differences between surface nodes were located in areas covering a steep shelf running along the southern boundary of sheet H13143 or over highly dynamic areas of the sea floor. Surface differences over relatively flat areas were generally less than one meter in magnitude.

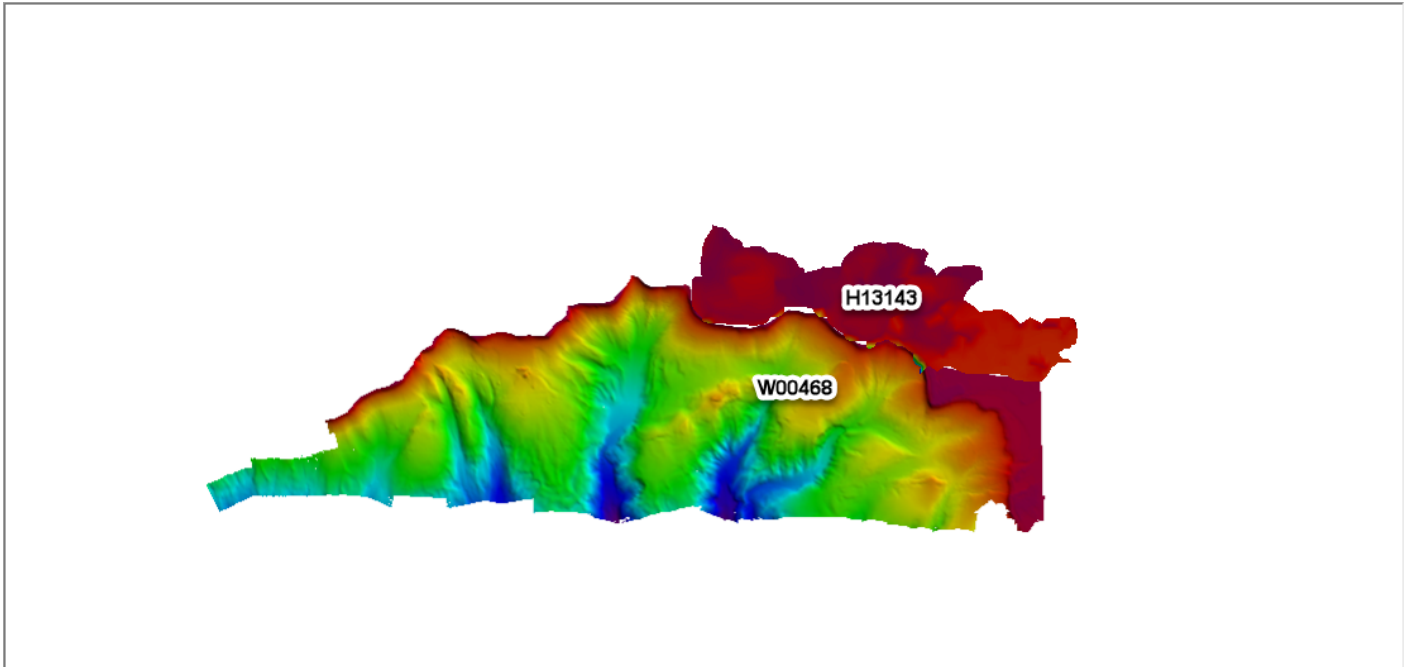


Figure 10: W00468 junctions on the southern edge of H13143 where there is a significant ledge feature present

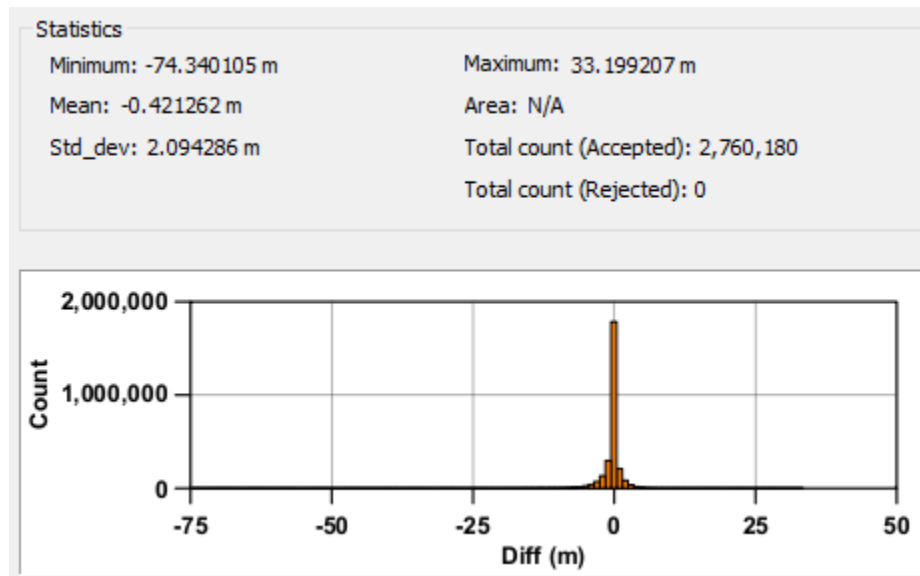


Figure 11: H13143

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

MBES Artifact

Details regarding an MBES outer beam artifact present in S-222 data in certain sea conditions are outlined in the DAPR.

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: Casts were conducted at the start of acquisition each day, and within four hours of each previous.

Moving Vessel Profiler (MVP) casts were conducted from S-222 no more than four times per hour. Sound speed was monitored by the survey watch to assess sound speed variation in the water column and conduct casts accordingly. Sound speed profiles were acquired from S-222 in accordance with HSSD 2018 standards using a Rolls Royce Brooke Ocean MVP 100.

Conductivity, Temperature, and Depth (CTD) casts were performed from HSL 2903 and HSL 2904 upon arrival to working grounds and within 4 hours of the previous cast as specified within the 2014 Field Procedures manual (FPM). CTD casts were conducted more frequently in areas where variation in the water column merited additional sound speed data. Sound speed profiles were acquired from HSL 2903 and 2904 in accordance with HSSD 2018 standards using the SBE 19 Plus V2.

Sound speed profile data were applied to S-222 MBES data in real time. HSL data were corrected by applying sound speed profiles nearest in distance in time (4hrs). All sound speed profile data were concatenated into a master file. Efforts were made to evenly distribute casts spatially and temporally across the entire survey area. A total of 94 sound speed measurements were collected within the survey limits of H13143 with eight additional measurements collected outside the data extents. Six of these measurements were collected within 250m of survey coverage as specified in the HSSD (2018), while two of the eight cast were collected at 646m and 1,732m from survey coverage. All cast locations were deemed to represent environmental conditions for local operating areas at the time of survey and selected to maximize operational efficiency (Figure 12).

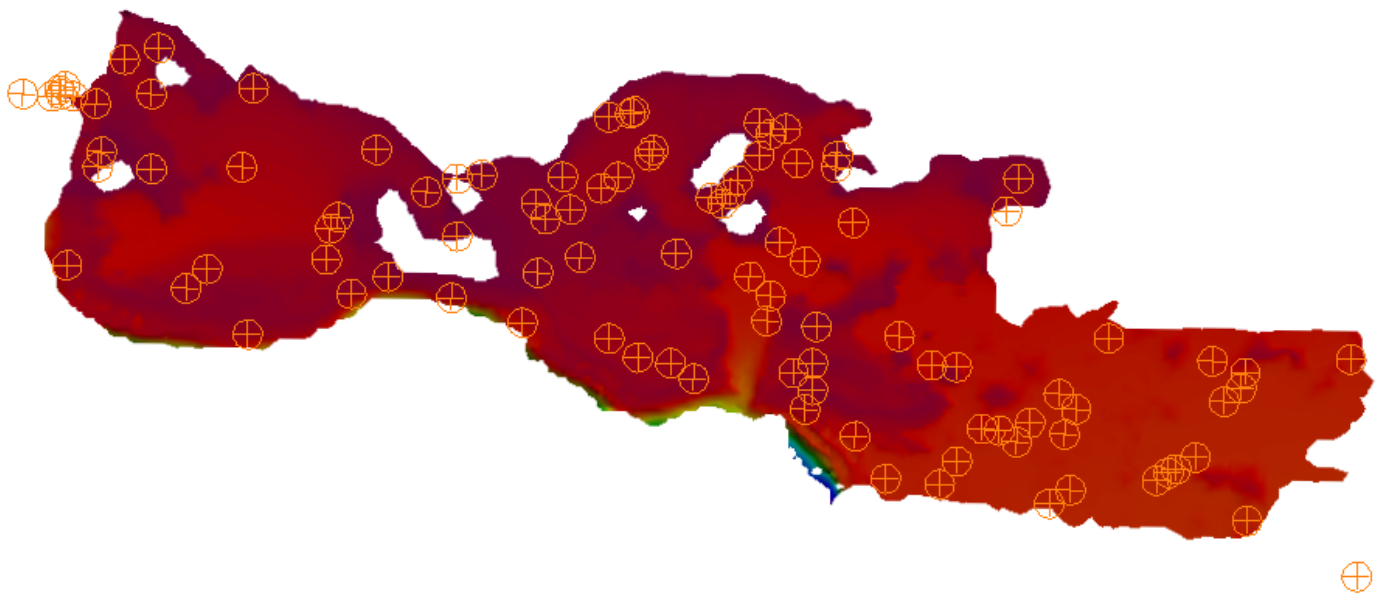


Figure 12: Distribution of SVP data on survey H13143 coverage

B.2.8 Coverage Equipment and Methods

S-222 collected Kongsberg 710 and 2040 MBES data concurrently while HSL 2903 and 2903 collected Kongsberg 2040 MBES to acquire 100% MBES coverage and meet complete coverage requirements per the project instructions.

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. Raw MBES backscatter was logged as part of the .all file of the Kongsberg 710 and 2040 systems. Backscatter was processed in QPS Fledermaus GeoCoder Toolbox (FMGT) software and the exported geotiffs are included in the final processed data package (Figures 13-17).

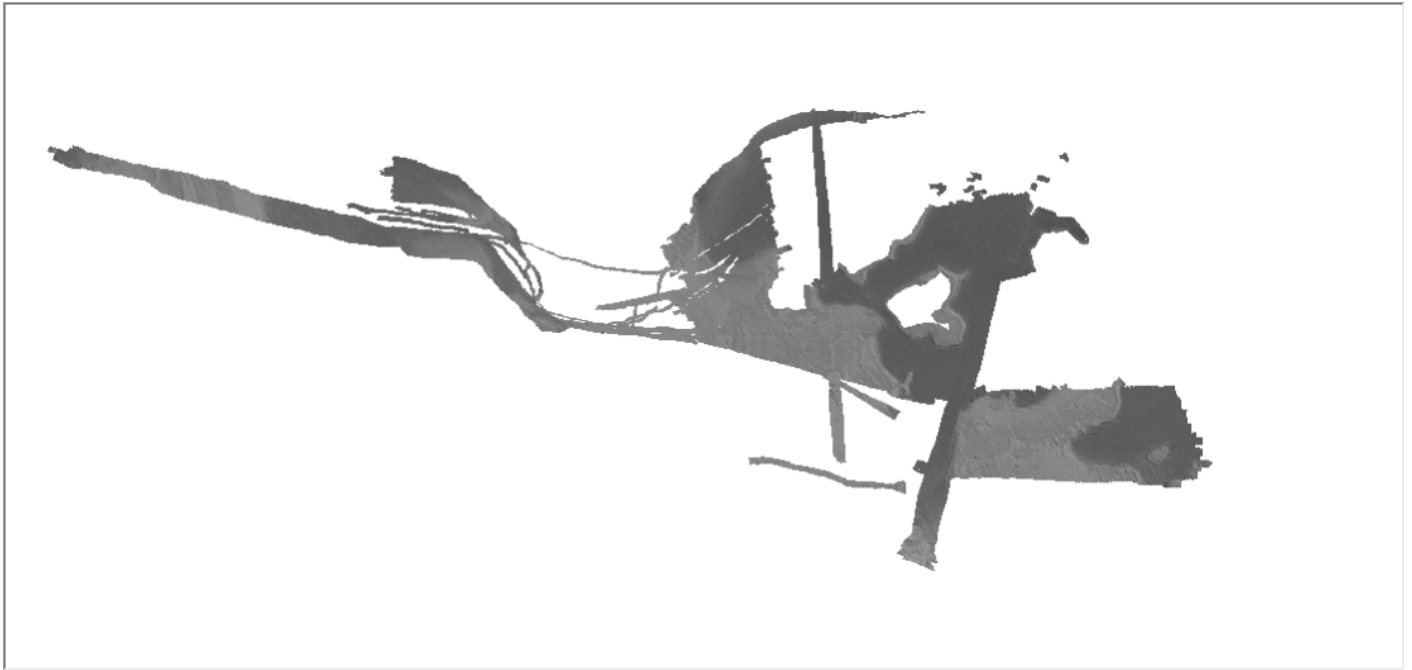


Figure 13: TJ 2903's 300 kHz acoustic backscatter at 1m resolution

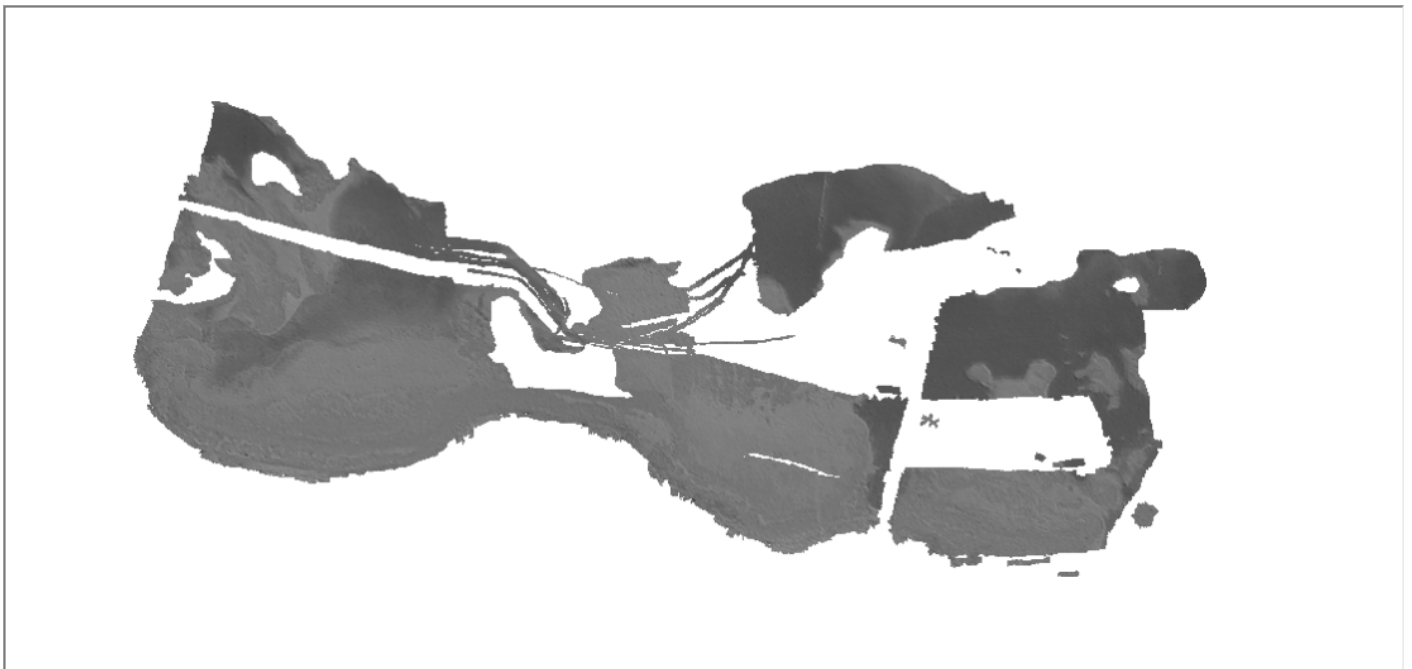


Figure 14: TJ 2904's 300 kHz acoustic backscatter at 1m resolution

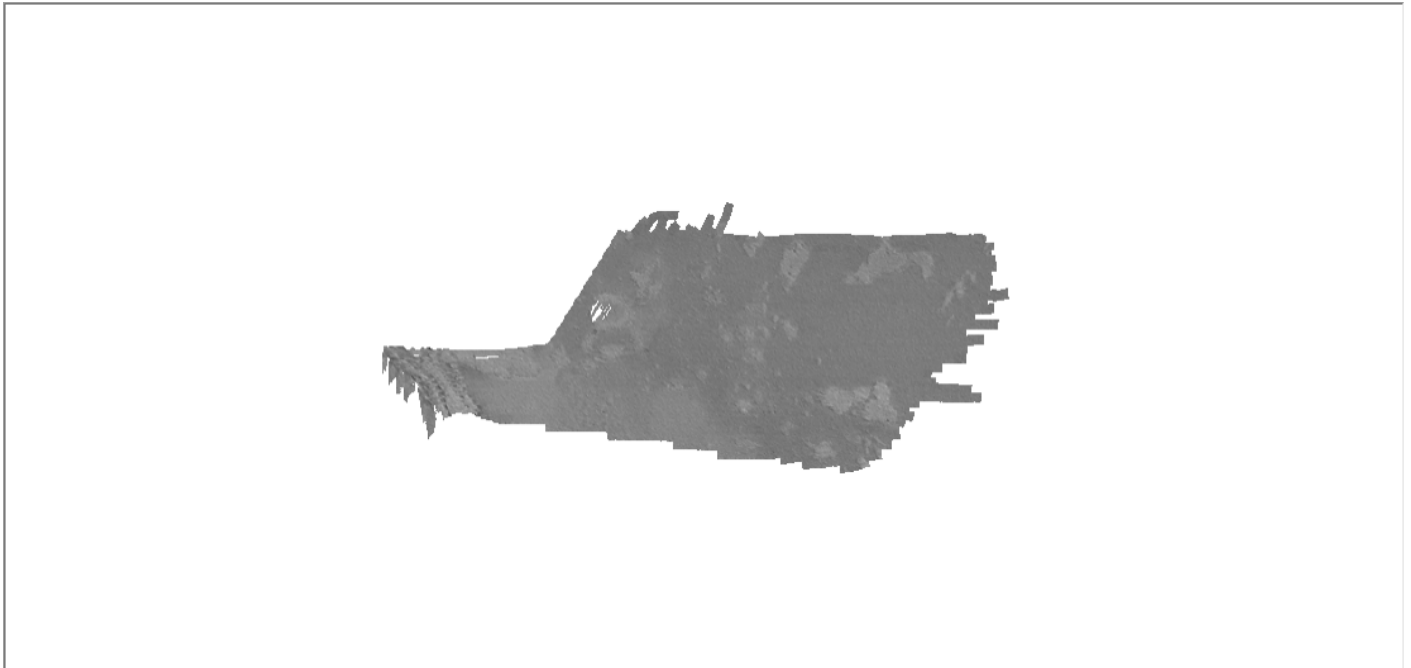


Figure 15: S222's 300 kHz acoustic backscatter at 1m resolution

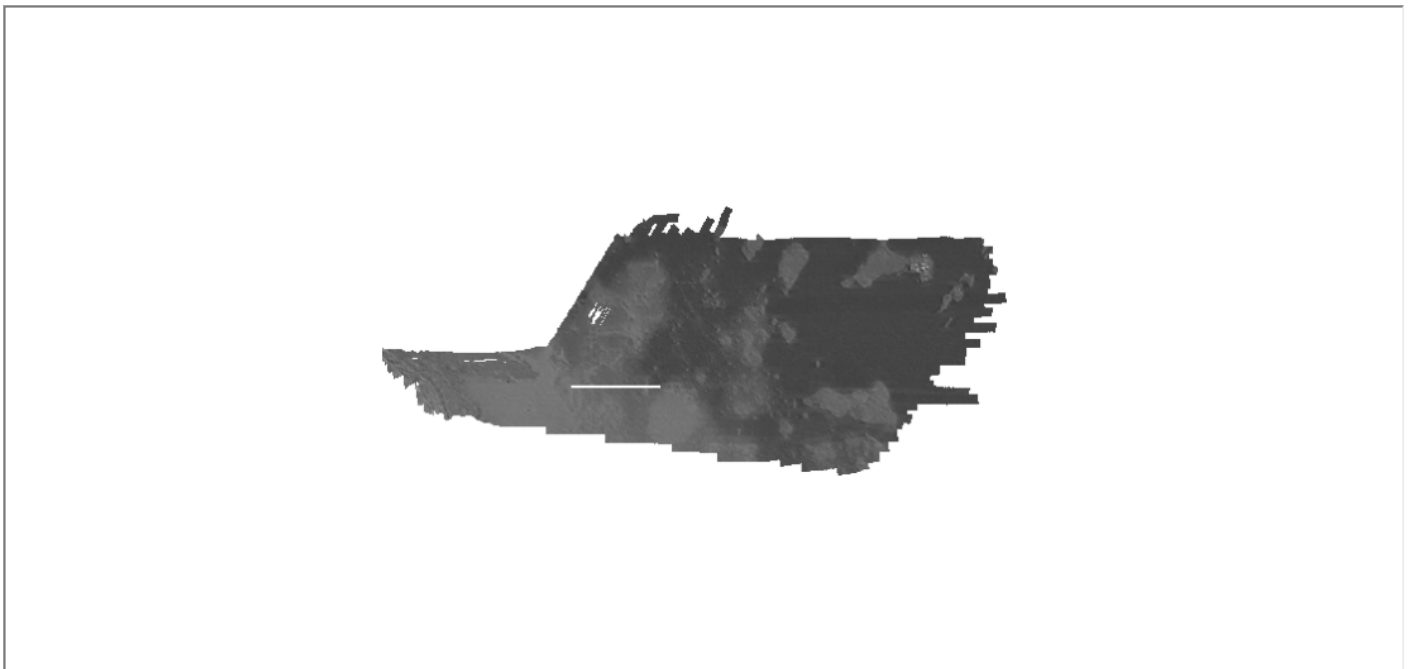


Figure 16: S222's 70 kHz acoustic backscatter at 1m resolution



Figure 17: Combined multibeam acoustic backscatter at 1m resolution

B.5 Data Processing

B.5.1 Primary Data Processing Software

The following Feature Object Catalog was used: NOAA Profile Version 5.8.

B.5.2 Surfaces

The following surfaces and/or BAGs were submitted to the Processing Branch (Table 10):

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13143_MB_VR_MLLW_Final.csar	CARIS VR Surface (CUBE)	Variable Resolution	2.308* meters - 259.909* meters	NOAA_VR	Complete MBES
H13143_MB_VR_MLLW.csar	CARIS VR Surface (CUBE)	Variable Resolution	2.308* meters - 259.909* meters	NOAA_VR	Complete MBES
H13143_2903_300kHz_1of4	MB Backscatter	1 meters	-	N/A	Complete MBES

* Depth range 1.029m - 255.507m

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
	Mosaic Geotiff				
H13143_2904_300kHz_2of4	MB Backscatter Mosaic Geotiff	1 meters	-	N/A	Complete MBES
H13143_S222_70kHz_3of4	MB Backscatter Mosaic Geotiff	1 meters	-	N/A	Complete MBES
H13143_S222_300kHz_4of4	MB Backscatter Mosaic Geotiff	1 meters	-	N/A	Complete MBES

Table 10: Submitted Surfaces

B.5.3 Data Density

Complete coverage requirements were met by 100% complete coverage multibeam as specified in section 5.2.2.3 of the HSSD 2018. All MBES data for H13143 meet density requirements (Figure 18).

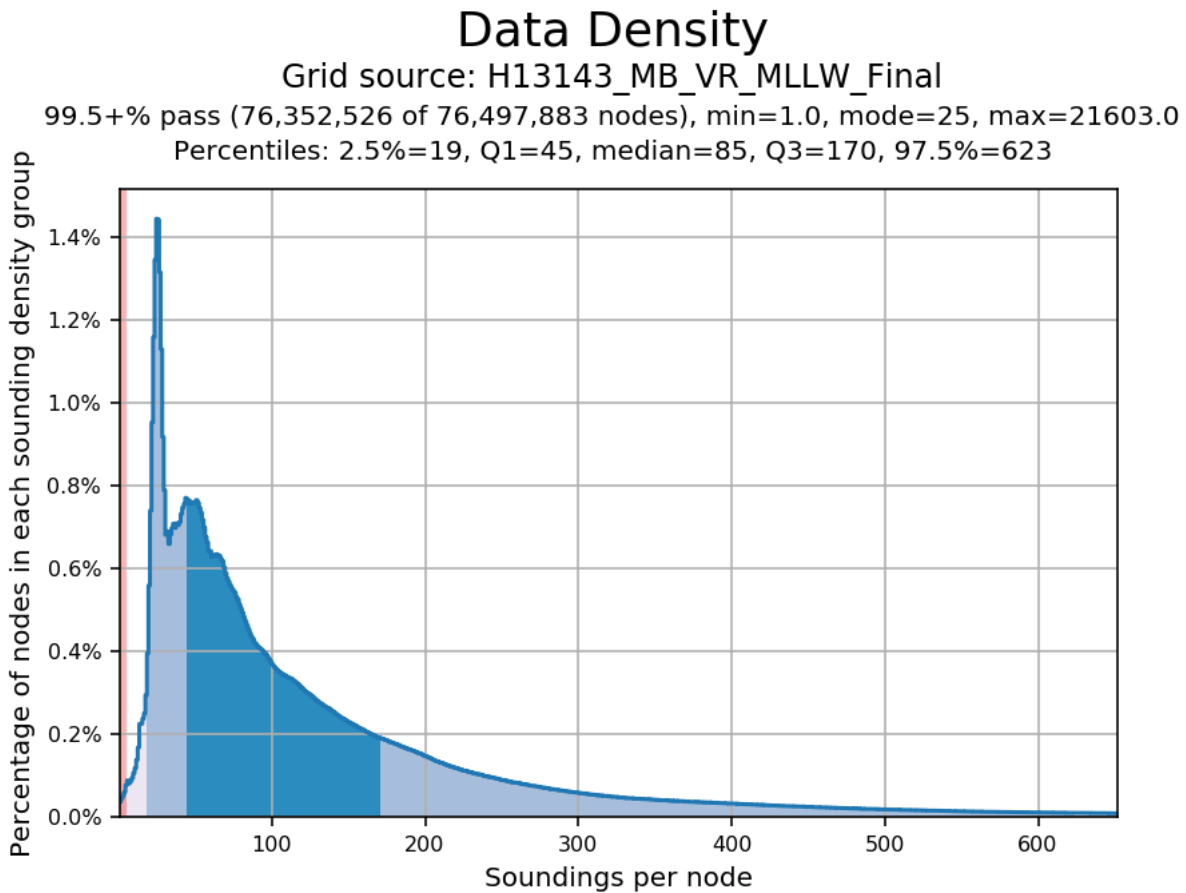


Figure 18: H13143 data density statistics

C. Vertical and Horizontal Control

No Horizontal and Vertical Control Report (HVCR) is required for this survey.

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:

Vdatum-WGS84_ACHARE_Polygon_ACHARE_Polygon_xyWGS84-MLLW_geoid12b.csar

All soundings submitted for H13143 are reduced to MLLW using VDatum techniques as outlined in the DAPR.

C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD 83). Survey H13143 data were acquired in the World Geodetic System of 1984 (WGS 84). Processing and product creation were completed in North American Datum of 1983 (NAD 83).

The projection used for this project is UTM 19N.

Trimble-RTX service was used with an Applanix POS MVv5 GNSS-INS system to obtain highly accurate ellipsoidally referenced position data to meet ERS specifications for H13143 MBES data.

D. Results and Recommendations

D.1 Chart Comparison

A chart comparison was conducted between survey H13143 and previously charted ENC's US5PR44M, US5PR42M, and US4PR41M in accordance with methods outlined in the DAPR.

The hydrographer recommends that further chart comparisons be conducted with available ortho imagery and contemporary LiDAR data.

D.1.1 Electronic Navigational Charts

The following are the largest scale ENCs, which cover the survey area (Table 11):

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US5PR44M	1:10000	10	02/29/2016	02/29/2016	NO
US5PR42M	1:20000	14	02/25/2016	02/25/2016	NO
US4PR41M	1:100000	10	06/29/2016	06/29/2016	NO

Table 11: Largest Scale ENCs

US5PR44M

A chart comparison conducted between survey H13143 and previously charted ENC US5PR44M soundings showed areas that were significantly shoaler than charted soundings (Figure 19). The hydrographer recommends contours for ENC US5PR44M be reviewed and updated.

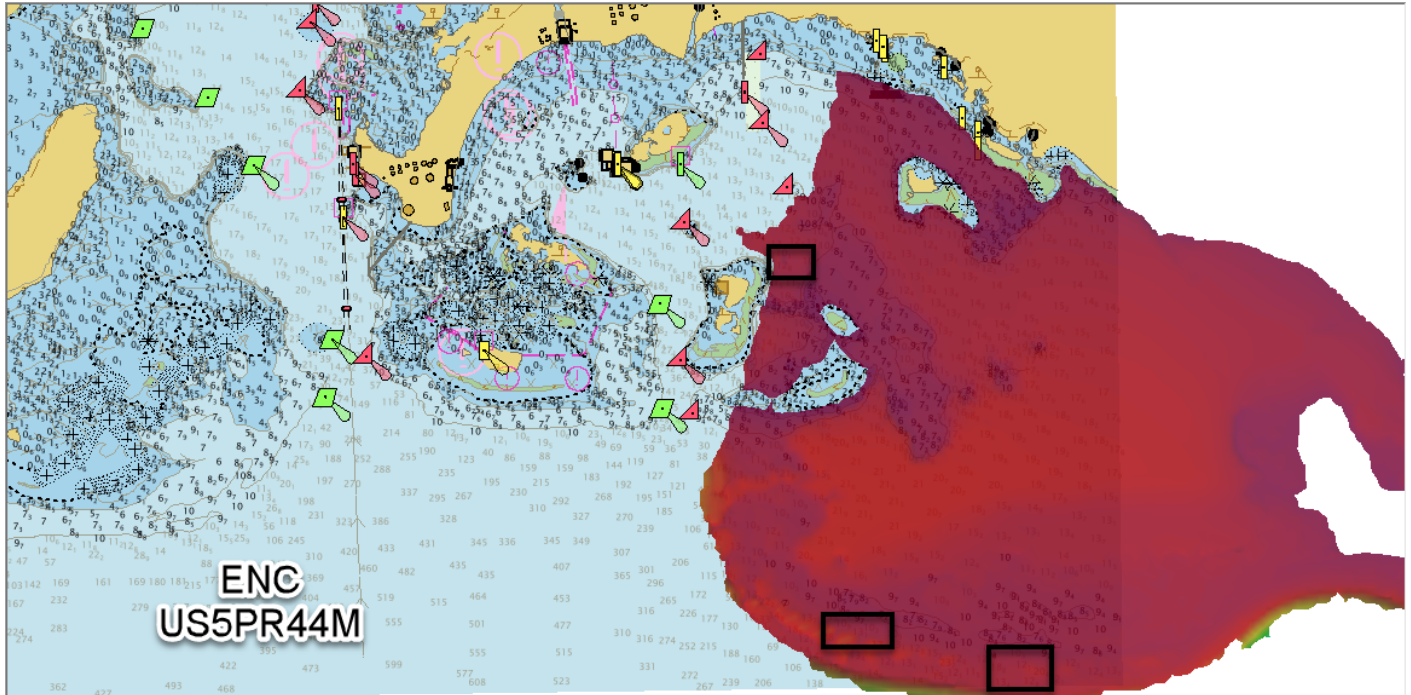


Figure 19: The western portion of Survey H13143 plotted over ENC US5PR44M. Areas within black boxes indicate significantly shoaler soundings than charted.

US5PR42M

A chart comparison conducted between survey H13143 and previously charted ENC US5PR42M soundings showed areas that were significantly shoaler than charted soundings (Figures 20 and 21). The hydrographer recommends contours for ENC US5PR42M be reviewed and updated.

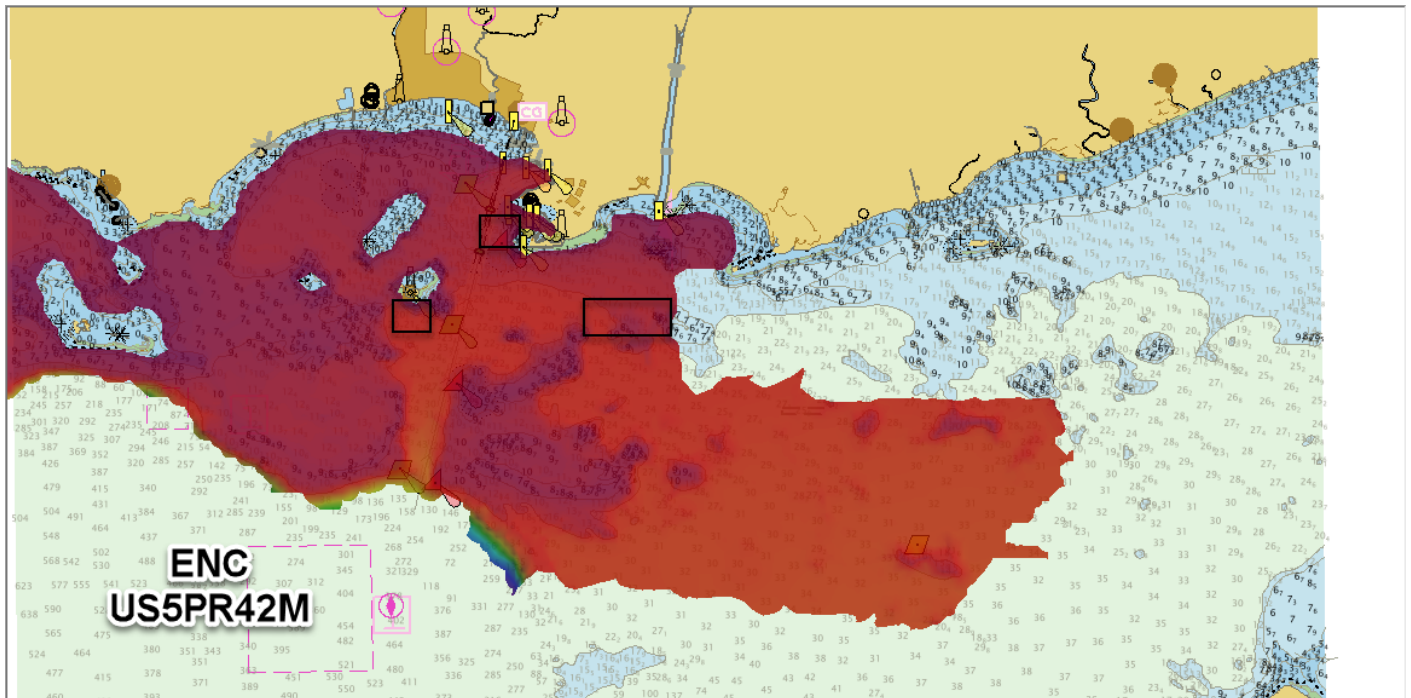


Figure 20: The eastern portion of Survey H13143 plotted over ENC US5PR42M. Areas within black boxes indicate significantly shallower soundings than charted.

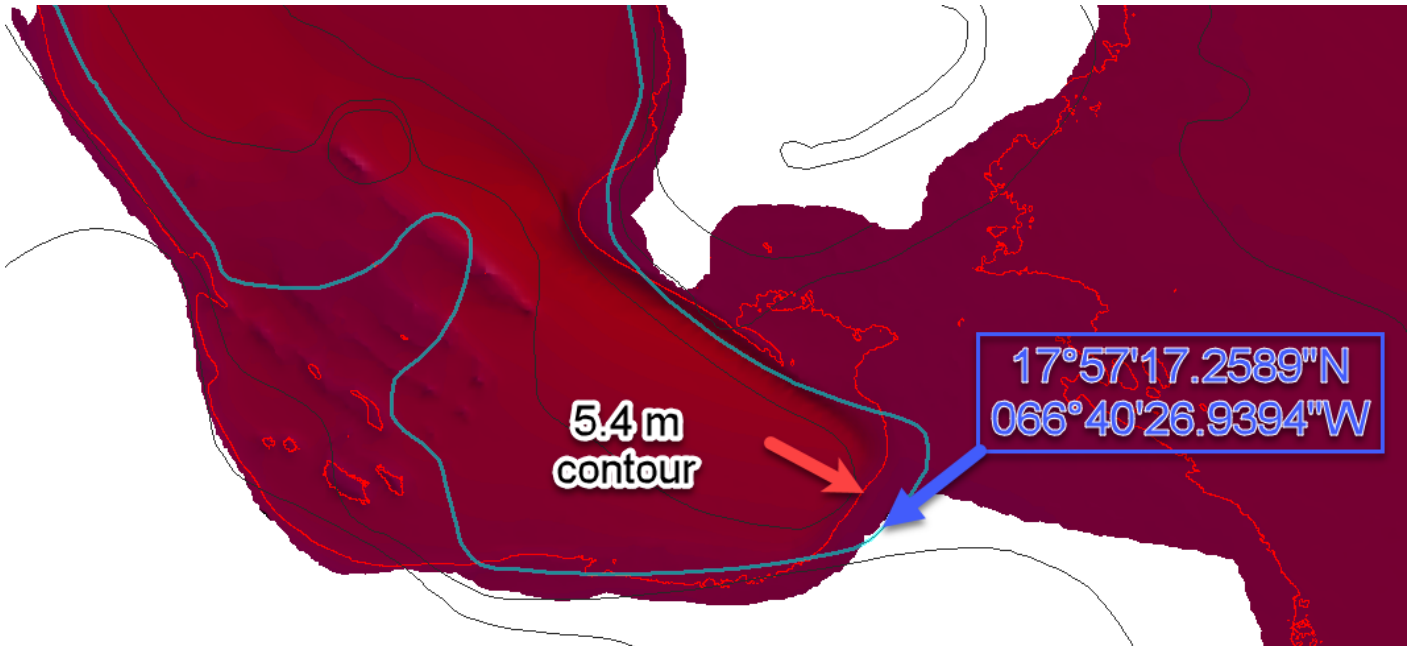


Figure 21: An example of an area north of the Arrecife Ratonos in need of contour updates. Data from Survey H13143 plotted over ENC US5PR42M. Blue line represents charted 5.4 m contour and the red line represents field created 5.4m contour from H13143 survey data.

US4PR41M

A chart comparison conducted between survey H13143 and previously charted ENC US4PR41M soundings showed no areas significantly shoaler than charted soundings.

D.1.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

D.1.3 Charted Features

47 features were investigated. Three features were deemed appropriate for updating, 14 features were deemed appropriate for deletion, and 28 features were deemed appropriate to be retained as charted. Reference the Final Feature File for further information.

D.1.4 Uncharted Features

25 uncharted features were investigated. No uncharted features were considered dangerous to navigation. One uncharted pipeline feature was submitted as a Danger to Navigation in accordance with Section 1.6.2.4 of the HSSD 2018 (see Sections D.1.5 and D.2.5 below). Reference the Final Feature File and Appendix II for further information.

D.1.5 Shoal and Hazardous Features

One Danger to Navigation Report was submitted for one uncharted submarine pipeline identified within the survey area. See Section D.2.5 below and Appendix II for further information.

D.1.6 Channels

A comparison between the soundings of MBES data acquired and the controlling depth areas of the entrance channel and turning basin of Ponce, Puerto Rico was conducted. There were no significant differences between the observed and charted depths.

D.1.7 Bottom Samples

Bottom samples were assigned for this survey, but were not acquired due to operational time constraints.

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

26 ATON features were assigned. Three ATON features were not observed. Two of the unobserved features were a beacon/light pair located near the piers on the southern side of the main Ponce turning basin. The third unobserved ATON was the private Ponce Ponce Yacht & Fishing Club Special Purpose Buoy located between Ponce and Isla Caja de Meurtos. ATON discrepancy reports were submitted to the USCG in accordance with HSSD 2018 for all unobserved ATON features. Nine ATON features were not addressed due to being in-shore of the NALL. The remaining ATON features were charted correctly and serving their intended purpose. Reference the Final Feature File and Appendix II for further information.

D.2.4 Overhead Features

No overhead features exist for this survey.

D.2.5 Submarine Features

One uncharted pipeline submarine pipeline is present within the survey area. The uncharted pipeline extends from the northern shoreline of the Bahia de Ponce south to the southern extent of the survey area (Box A in Figure 22 below). A DTON report was submitted in accordance with Section 1.6.2.4 of the HSSD 2018.

One charted submarine pipeline is present within the survey area (Box B in Figure 22 below). The pipeline is exposed (on the sea-floor) and a report was sent to the Bureau of Safety and Environmental Enforcement (BSEE) in accordance with the HSSD 2018.

Reference the Final Feature File and Appendix II for further information.

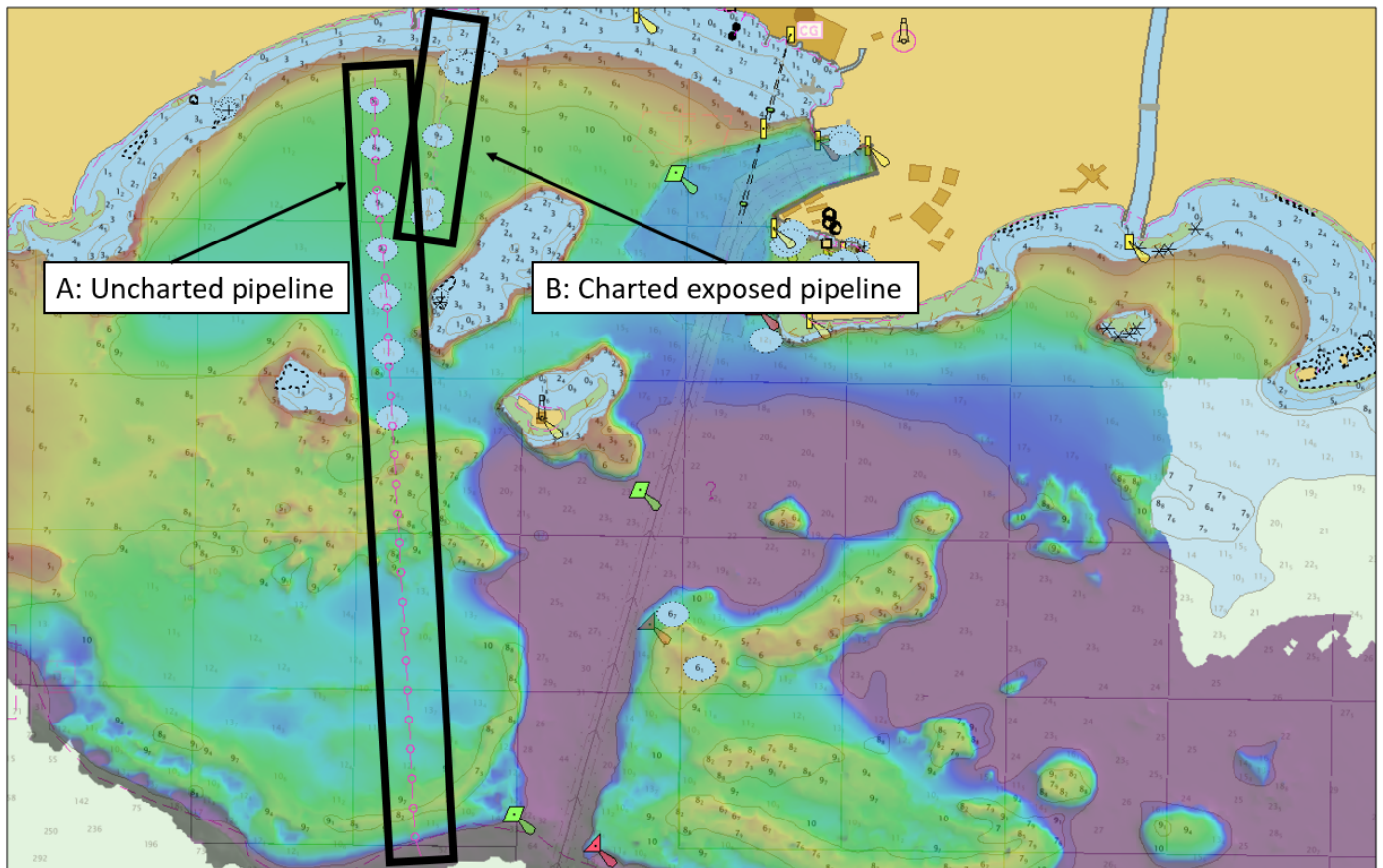


Figure 22: Uncharted and exposed pipeline in Survey H13143

D.2.6 Platforms

No platforms exist for this survey.

D.2.7 Ferry Routes and Terminals

One local ferry service was observed operating between Ponce and the Isla Caja de Muertos. The hydrographer recommends local authorities be contacted to ascertain the need for a charted ferry route.

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

A charted shoreline construction feature may have been under construction or being repaired at the time of survey. The charted feature is described as a pier or jetty. Only posts or pilings were observed. See Figure 23 below and Appendix II for further information.

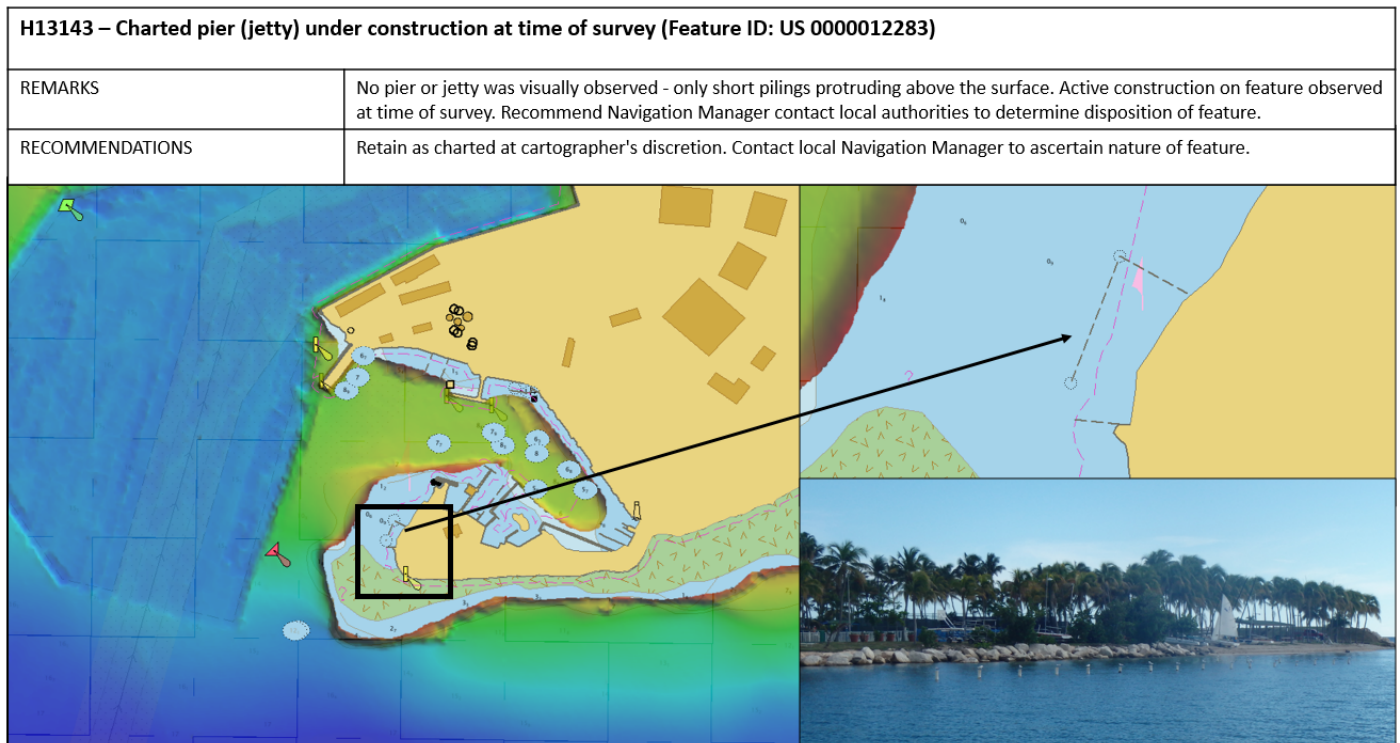


Figure 23: Charted pier/jetty under construction or repair at time of survey

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
Christiaan van Westendorp, CAPT/NOAA	Chief of Party	04/11/2019	 VAN WESTENDORP.CHRISTIAN.HENRY.1012828175 c=US, ou=U.S. Government, ou=DoD, ou=PKI ou=NOAA, cn=VAN WESTENDORP.CHRISTIAN.HENRY.1012828175 2019.04.11 18:37:54 -0500'
Charles Wisotzkey, LT/NOAA	Field Operations Officer	04/11/2019	 Digitally signed by WISOTZKEY.CHARLES.JUSTIN.13 00819660 Date: 2019.04.12 08:06:08 -0400'
Josh Hiteshew, Chief Survey Technician/ NOAA	Chief Survey Technician	04/11/2019	HITESHEW.JOSHUA. TAYLOR.153793965 2 Digitally signed by HITESHEW.JOSHUA.TAYLOR .1537939652 Date: 2019.04.12 12:25:19 Z

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	Continually 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
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
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
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 States Coast Guard
UTM	Universal Transverse Mercator
XO	Executive Officer
ZDA	Global Positioning System timing message
ZDF	Zone Definition File



OPS.Thomas Jefferson - NOAA Service Account <ops.thomas.jefferson@noaa.gov>

ATON discrepancy reports for Survey H13143

1 message

OPS.Thomas Jefferson - NOAA Service Account <ops.thomas.jefferson@noaa.gov>

Fri, Apr 5, 2019 at 12:14
PM

To: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>, "ChiefST.Thomas Jefferson - NOAA Service Account" <chiefst.thomas.jefferson@noaa.gov>, Louis Licata - NOAA Federal <louis.licata@noaa.gov>

All,

See attached ATON discrepancy reports for Survey H13143.

V/R,

LT Charles Wisotzkey, NOAA
Field Operations Officer, NOAA Ship *Thomas Jefferson*
439 West York Street
Norfolk, VA 23510
cell: (757) 647-0187
voip: (541) 867-8927
fax: (757) 512-8295
<http://www.moc.noaa.gov/tj/>

3 attachments

 **H13143_aton_discrepancy_report_3.pdf**
95K

 **H13143_aton_discrepancy_report_2.pdf**
95K

 **H13143_aton_discrepancy_report_1.pdf**
96K

Thank you for your input! The information you have provided has been processed and is shown below. You should print it for your information and so that you can remember the specifics of this outage in case we have to call you to gather more information.

You may return to our [home page](#) or click on your browser's BACK button to return to the page from which you came.

Name: Charles Wisotzkey

Email Address: charles.j.wisotzkey@noaa.gov

Telephone number:

Waterway/Area/State: Ponce and vicinities, Puerto Rico

Your Vessel's Name: NOAA Ship THOMAS JEFFERSON

Type of Vessel: Hydrographic Survey Vessel

DOC# / HIN / VIN / State #:

AID Name (from Light List):

Light List Number (LLNR):

Structure Discrepancy: Missing Dayboards

Buoy Discrepancy: None

Lighted ATON Discrepancy: None

Other type of discrepancy:

Hazard No

Comments: Ponce Harbor Pier Obstruction Light, USCG L.L.vol 3/#31985, was not observed during the course of survey operations conducted from 09/05/2018 to 11/05/2018.

Thank you for your input! The information you have provided has been processed and is shown below. You should print it for your information and so that you can remember the specifics of this outage in case we have to call you to gather more information.

You may return to our [home page](#) or click on your browser's BACK button to return to the page from which you came.

Name: Charles Wisotzkey

Email Address: charles.j.wisotzkey@noaa.gov

Telephone number: 2108965025

Waterway/Area/State: Ponce and vicinities, Puerto Rico

Your Vessel's Name: NOAA Ship THOMAS JEFFERSON

Type of Vessel:

DOC# / HIN / VIN / State #:

AID Name (from Light List):

Light List Number (LLNR):

Structure Discrepancy: Missing Dayboards

Buoy Discrepancy: None

Lighted ATON Discrepancy: None

Other type of discrepancy:

Hazard No

Comments: Rio Bucana East Jetty Light located at 17.967186N 066.600214W was not observed during survey operations from 09/05/2018 to 11/05/2018.

Thank you for your input! The information you have provided has been processed and is shown below. You should print it for your information and so that you can remember the specifics of this outage in case we have to call you to gather more information.

You may return to our [home page](#) or click on your browser's BACK button to return to the page from which you came.

Name: Charles J Wisotzkey

Email Address: ops.thomas.jefferson@noaa.gov

Telephone number:

Waterway/Area/State: Ponce and vicinities, Puerto Rico

Your Vessel's Name: NOAA Ship THOMAS JEFFERSON

Type of Vessel: Hydrographic Survey Vessel

DOC# / HIN / VIN / State #:

AID Name (from Light List):

Light List Number (LLNR):

Structure Discrepancy: None

Buoy Discrepancy: Missing

Lighted ATON Discrepancy: None

Other type of discrepancy:

Hazard No

Comments: Ponce Yacht & Fishing Club Special Purpose Buoy A charted at 17.92222N 066.56472W was not observed during survey operations from 09/05/2018 to 11/05/2018.

H13143 Danger to Navigation Report 1

Registry Number: H13143
State: Puerto Rico
Locality: San Juan and Ponce and Vicinities
Sub-locality: Bahia de Ponce
Project Number: OPR-I369-TJ-18
Survey Dates: 09/05/2018 - 11/05/2018

Uncharted pipeline feature observed in Survey H13143 complete coverage MBES data. DTON report submitted in accordance with section 1.6.2.4 Pipelines of the HSSD 2018.

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
25683	18th	05/01/2003	1:20,000 (25683_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	GP	[None]	17° 55' 47.9" N	066° 38' 31.4" W	---



Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

DTON Report for H13143 from NOAA Ship THOMAS JEFFERSON (S-222)

2 messages

Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

Wed, Apr 10, 2019 at 4:27 PM

To: NDB E-Mailbox <OCS.NDB@noaa.gov>, Corey personal cell Allen <corey.allen@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, Christina Belton - NOAA Affiliate <christina.belton@noaa.gov>, AHB Chief <ahb.chief@noaa.gov>, Louis Licate - NOAA Affiliate <louis.licate@noaa.gov>, Briana Hillstrom - NOAA Federal <Briana.Hillstrom@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <chiefst.thomas.jefferson@noaa.gov>

Good Afternoon,

Attached is a DTON Report (H13143_DTON_Report_1) for H13143 (Ponce,PR). This report is for one uncharted pipeline and is submitted in accordance with Section 1.6.2.4 of the 2018 edition of the HSSD. Please let us know if you have any questions or concerns.

V/R,


--

LT Charles J. Wisotzkey, NOAA
NOAA Ship Thomas Jefferson (S-222)

3 attachments

 **H13143_DTON_Report_1.xml**
4K

 **H13143_DTON_Report_1.pdf**
1531K

 **H13143_DTON_1.zip**
2203K

OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov>

Thu, Apr 11, 2019 at 4:51 PM

To: Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

Cc: Corey Allen <Corey.Allen@noaa.gov>, _NMAO MOA CO Thomas Jefferson <CO.Thomas.Jefferson@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <OPS.Thomas.Jefferson@noaa.gov>, Christina Belton - NOAA Federal <christina.belton@noaa.gov>, AHB Chief <AHB.Chief@noaa.gov>, Louis Licate - NOAA Federal <louis.licate@noaa.gov>, Briana Hillstrom - NOAA Federal <Briana.Hillstrom@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <ChiefST.Thomas.Jefferson@noaa.gov>, _NOS OCS PBA Branch <ocs.pba@noaa.gov>, _NOS OCS PBB Branch <ocs.pbb@noaa.gov>, _NOS OCS PBC Branch <ocs.pbc@noaa.gov>, _NOS OCS PBD Branch <ocs.pbd@noaa.gov>, _NOS OCS PBE Branch <ocs.pbe@noaa.gov>, _NOS OCS PBG Branch <ocs.pbg@noaa.gov>, Castle E Parker <Castle.E.Parker@noaa.gov>, Charles Porter - NOAA Federal <charles.porter@noaa.gov>, Chris Libeau <Chris.Libeau@noaa.gov>, James M Crocker <James.M.Crocker@noaa.gov>, Ken Forster <Ken.Forster@noaa.gov>, Kevin Jett - NOAA Federal <kevin.jett@noaa.gov>, Matt Kroll <Matt.Kroll@noaa.gov>, Michael Gaeta <Michael.Gaeta@noaa.gov>, NSD Coast Pilot <coast.pilot@noaa.gov>, PHB Chief <PHB.Chief@noaa.gov>, Tara Wallace <Tara.Wallace@noaa.gov>

DD-30698 has been registered by the Nautical Data Branch and directed to Products Branch G for processing.

The DtoN reported is a submerged pipeline in Bahia de Ponce, Puerto Rico. NDB is attempting to obtain more information in order to chart this pipeline.

The following charts have been assigned to the record:

25683 kapp 408

25677 kapp 412

25640 kapp 414

The following ENC's have been assigned to the record:

US5PR42M

US4PR41M

US3PR10M

References:

H13143

OPR-I369-TJ-18

This information was discovered and submitted by the crew of the NOAA Ship Thomas Jefferson.

Nautical Data Branch/[Marine Chart Division](#)/
Office of Coast Survey/[National Ocean Service](#)/
Contact: ocs.ndb@noaa.gov




[Quoted text hidden]

3 attachments

 **H13143_DTON_Report_1.xml**
4K

 **H13143_DTON_Report_1.pdf**
1531K

 **H13143_DTON_1.zip**
2203K



Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

Exposed Pipeline, Ponce PR

1 message

ChiefST.Thomas Jefferson - NOAA Service Account <chiefst.thomas.jefferson@noaa.gov> Wed, Apr 3, 2019 at 4:09 PM

To: pipelines@bsee.gov

Cc: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>

Good Afternoon,

NOAA Hydrographic Survey H13143 by the NOAA Ship *Thomas Jefferson* indicates that are two areas of exposed pipeline at the following locations:

17.969618N, 066.641782W; found 2018-09-21 at ~1740 UTC; charted position confirmed to be accurate.

17.968631N, 066.641911W; found 2018-09-21 at ~ 1800 UTC; charted position confirmed to be accurate.

V/r,

Josh

--

CHST Joshua Hiteshew, NOAA

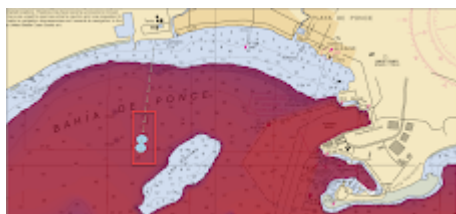
NOAA Ship *Thomas Jefferson*

757-647-0187 ship cell

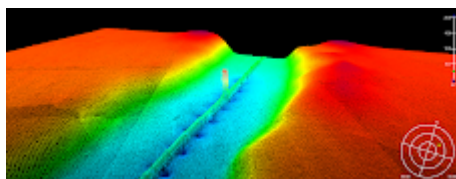
541-867-8927 voip

808-434-2706 irridium

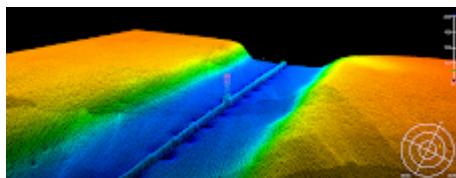
3 attachments

**image.png**

464K

**11_PipInt_Obstr.png**

641K

**112_PipInt_Obstr.png**

606K



Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

OPR-I369-TJ-18 USACE Channels San Juan and Ponce

1 message

Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>

Wed, Jun 13, 2018 at 3:28 PM

To: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, "CO.Thomas Jefferson - NOAA Service Account" <co.thomas.jefferson@noaa.gov>, "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>

Cc: Briana Hillstrom - NOAA Federal <Briana.Hillstrom@noaa.gov>

Hello again,

After reading the metadata more closely, these surveys are USACE surveys based upon the information, and not the TJ survey from 2017. The XYZ files are in State Plane, and depth units are in feet units; both requires converting to metric in order to view in BDB or HIPS. One can convert the XYZ using Excel and save as TXT for BDB import, or use the CARIS Info file for conversion upon import.

I have created a Google Drive and invited each of you for download. Recommend reading the XML metadata file for specific information concerning the surveys.

Google Drive location: <https://drive.google.com/drive/folders/1D3gaiOqLtAcLwktru2qMwQtSGRs13Fgp>

USACE eHydro internet site:

<https://www.arcgis.com/apps/opsdashboard/index.html#/4b8f2ba307684cf597617bf1b6d2f85d>

Regards,

Gene

Castle Eugene Parker

NOAA Office of Coast Survey

Atlantic Hydrographic Branch

Hydrographic Team Lead / Physical Scientist

castle.e.parker@noaa.gov

office (757) 364-7472

Ponce Entrance Channel survey end date 10/11/2017:

San Juan survey end date 4/16/2018:


rcgis.com/apps/opsdashboard/index.html#/4b8f2ba307684cf597617bf1b6d2f85d

Docs Cody Health Insuran Imported

veys powered by eHydro

Select Survey:
To download a survey, either click Download Data in the Survey List below or click on a survey footprint (green area) and then click Download Data.

<input type="checkbox"/>	District: CESAJ Name: SAN JUAN HARBOR Survey ID: SJ_01_SJH_20180417_CS_2018_130_1 Survey Date: 4/16/2018 Download Data
<input type="checkbox"/>	District: CESAJ Name: SAN JUAN HARBOR Survey ID: SJ_01_SJH_20180417_CS_2018_130_2 Survey Date: 4/16/2018 Download Data
<input type="checkbox"/>	District: CESAJ Name: SAN JUAN HARBOR Survey ID: SJ_01_SJH_20180417_CS_2018_130_FULL_SURVEY_MAP Survey Date: 4/16/2018 Download Data
<input type="checkbox"/>	District: CESAJ Name: SAN JUAN HARBOR Survey ID: SJ_01_SJH_20180417_CS_2018_130_3 Survey Date: 4/16/2018 Download Data
<input type="checkbox"/>	District: CESAJ





Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

Request for assistance for feature identification / information for charted pier on H13143

3 messages

Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov> Thu, Apr 11, 2019 at 10:29 AM
To: Louis Licate - NOAA Affiliate <louis.licate@noaa.gov>, Christina Belton - NOAA Federal <christina.belton@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, Briana Hillstrom - NOAA Federal <Briana.Hillstrom@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <chiefst.thomas.jefferson@noaa.gov>

Mr. Licate,

TJ surveyed the Ponce area in 2018.

We (more precisely, the cartographers at MCD) could use some more information about a charted pier / jetty feature near the Ponce yacht marina. It looked to us like active construction on the feature was taking place at the time of survey.

CDR Hillstrom suggested we contact you to start the information gathering process.

I've attached an S-57 file that includes the feature and a slide with a picture of the feature (October 2018). The object is located at 17.963624 N 066.619500 W.

We are about to hand the survey off to HSD, so they may be in contact with you about this.

Thanks,
Charles

--

LT Charles J. Wisotzkey, NOAA
NOAA Ship Thomas Jefferson (S-222)

2 attachments

 **H13143_marina_area_pier.000**
5K

 **h13143_marina_area_pier.pdf**
311K

Lou Licate - NOAA Navigation Manager <louis.licate@noaa.gov> Thu, Apr 11, 2019 at 11:08 AM
To: Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>
Cc: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, Briana Hillstrom - NOAA Federal <Briana.Hillstrom@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <chiefst.thomas.jefferson@noaa.gov>

I will inquire about this and send the response to MCD. Thanks for letting me know!

Lou Licate
NOAA Navigation Manager
Florida, Puerto Rico, & U.S. Virgin Islands

909 SE 1st AVE
Miami, FL 33131
202-253-9536

[Quoted text hidden]

Briana Hillstrom - NOAA Federal <Briana.Hillstrom@noaa.gov>
To: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>
Cc: Castle Parker <castle.e.parker@noaa.gov>, AHB Chief <ahb.chief@noaa.gov>

Thu, Apr 11, 2019 at 11:10 AM

Thanks, Charles. Please make sure this gets into the DR correspondence appendix.

[Quoted text hidden]

--
CDR Briana Welton Hillstrom, NOAA
Prospective Commanding Officer
NOAA Ship *Thomas Jefferson* (S-222)
439 W York St, Norfolk, VA 23510
office: 757-364-7460
cell: 520-227-9269

Ship Cell1: (757)647-0187 Cell2: (757)418-0629
VoIP: (541)867-8927/8928 Iridium: (808)434-2706
In-Port Norfolk: (757)441-6322/6323



Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

Coast Pilot Review Report for OPR-I369-TJ-18 Puerto Rico Ports

1 message

Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

Fri, Apr 12, 2019 at 10:54 AM

To: OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov>, _NOS OCS NSD Coast Pilot <coast.pilot@noaa.gov>

Cc: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, _OMAO MOA OPS Thomas Jefferson

<ops.thomas.jefferson@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <chiefst.thomas.jefferson@noaa.gov>

All,

Please see attached Coast Pilot Review Notes (OPR-I369-TJ-18_Coast Pilot Review Report.pdf).

The only suggested edits concern the entry for the port of Las Mareas and are in Paragraph 508.

Entries referencing depths should be updated in accordance with submitted bathy grids.

--

LT Charles J. Wisotzkey, NOAA
NOAA Ship Thomas Jefferson (S-222)

2 attachments

 **OPR-I369-TJ-18CoastPilotReport_original.pdf**
2311K

 **OPR-I369-TJ-18_Coast Pilot Review Report.pdf**
2264K



ChiefST.Thomas Jefferson - NOAA Service Account <chiefst.thomas.jefferson@noaa.gov>

Survey Outlines for project OPR_I369_TJ_18

1 message

Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

Wed, Nov 7, 2018 at 7:30 PM

To: survey.outlines@noaa.gov

Cc: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <chiefst.thomas.jefferson@noaa.gov>, michael hewlett - NOAA Federal <michael.hewlett@noaa.gov>, Joshua Hiteshew - NOAA Federal <joshua.hiteshew@noaa.gov>, Kevin Brown - NOAA Federal <kevin.w.brown@noaa.gov>, Sydney Catoire - NOAA Federal <sydney.catoire@noaa.gov>, Jacquelyn Putnam - NOAA Federal <jacquelyn.putnam@noaa.gov>

All concerned,

Survey outlines for all surveys conducted by TJ on project OPR_I369_TJ_18 attached; the files can also be downloaded from the following link:

<https://drive.google.com/open?id=1QDb9YsXRQvIXX8y6o0ct2bMhJjQ-uhfm>

- Charles

--

LT Charles J. Wisotzkey, NOAA
NOAA Ship Thomas Jefferson (S-222)

 **OPR_I369_TJ_18_Survey_Outlines_20181107.zip**
8471K



Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>

OPR-I369-TJ-18 NCEI Data

2 messages

Calandria DeCastro <calandria.m.decastro@noaa.gov>

Thu, Mar 21, 2019 at 1:43 PM

To: _NODC Submissions <nodc.submissions@noaa.gov>

Cc: ops.thomas.jefferson@noaa.gov, Christina Belton - NOAA Federal <christina.belton@noaa.gov>


Good afternoon,

Attached is the NCEI Sound Speed Data for Project OPR-I369-TJ-18.

V/r,

--

LT Calandria DeCastro, NOAA
OPS in Training, NOAA Ship *Thomas Jefferson*
Ship Land Line: 757-441-6322
Ship Cell: 757-647-0187
Ship Iridium: 808-434-2706

 **OPR-I369_TJ-18_20190321.zip**
1582K

Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>


Fri, Apr 5, 2019 at 10:58 AM

To: _OMAO MOA ChiefST Thomas Jefferson <chiefst.thomas.jefferson@noaa.gov>

[Quoted text hidden]

--

LT Charles J. Wisotzkey, NOAA
NOAA Ship Thomas Jefferson (S-222)

 **OPR-I369_TJ-18_20190321.zip**
1582K

APPROVAL PAGE

H13143

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NCEI for archive

- Descriptive Report
- Data Acquisition and Processing Report
- Collection of Bathymetric Attributed Grids (BAGs)
- Processed survey data and records
- Geospatial PDF of survey products
- Collection of backscatter mosaics

The survey evaluation and verification have been conducted according to current OCS specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: _____
Commander Meghan McGovern, NOAA
Chief, Atlantic Hydrographic Branch