H13141

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

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area
Registry Number:	H13141

LOCALITY

State(s):	Puerto Rico
General Locality:	San Juan and Ponce and Vicinities
Sub-locality:	Bahia de Guayanilla

2018

CHIEF OF PARTY
Christiaan van Westendorp, CAPT/NOAA

LIBRARY & ARCHIVES

Date:

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

H13141

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 Guayanilla**
Scale:	**5000**
Dates of Survey:	**08/20/2018 to 11/03/2018**
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 3
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 7
B.2.1 Crosslines 7
B.2.2 Uncertainty 8
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 15
B.3 Echo Sounding Corrections 15
B.3.1 Corrections to Echo Soundings 15
B.3.2 Calibrations 16
B.4 Backscatter 16
B.5 Data Processing 21
B.5.1 Primary Data Processing Software 21
B.5.2 Surfaces 22
C. Vertical and Horizontal Control 23
C.1 Vertical Control 23
C.2 Horizontal Control 24
D. Results and Recommendations 24
D.1 Chart Comparison 24
D.1.1 Electronic Navigational Charts 24
D.1.2 Maritime Boundary Points 27
D.1.3 Charted Features 27
D.1.4 Uncharted Features 28
D.1.5 Shoal and Hazardous Features 28
D.1.6 Channels 28
D.1.7 Bottom Samples 30
D.2 Additional Results 31
D.2.1 Shoreline 31
D.2.2 Prior Surveys 31
D.2.3 Aids to Navigation 32
D.2.4 Overhead Features 32

D.2.5 Submarine Features....32
D.2.6 Platforms....33
D.2.7 Ferry Routes and Terminals....33
D.2.8 Abnormal Seafloor and/or Environmental Conditions....33
D.2.9 Construction and Dredging....34
D.2.10 New Survey Recommendation....34
D.2.11 Inset Recommendation....34
E. Approval Sheet....35
F. Table of Acronyms....36

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. 8
Table 8: Survey Specific Sound Speed TPU Values. 8
Table 9: Junctioning Surveys....10
Table 10: Submitted Surfaces....22
Table 11: Largest Scale ENCs....24
Table 12: Orthometric Imagery....28

List of Figures

Figure 1: Survey layout for H13141, plotted over RNC 25681_1. Orange outline represents the survey limits set forth by the Project Instructions....2
Figure 2: An example of an area in which the NALL was not able to be reached due to the conditions in which survey operations were being conducted. Within this specific graphic, the areas marked by a purple box are the areas in which the NALL was met....3
Figure 3: H13141 crossline/mainscheme comparison....8
Figure 4: H13141 uncertainty standards....9
Figure 5: Survey H13141 MBES data outlined in orange in order to show overlapping data with junction surveys, plotted over RNC 25681....10
Figure 6: Survey H13141 MBES data outlined in orange in order to show overlapping data with junction survey H13143, plotted over RNC 25681....11
Figure 7: H13141 and H13143 surface difference comparison statistics....12
Figure 8: Survey H13141 MBES data outlined in orange in order to show overlapping data with junction survey W00468, plotted over RNC 25681....13
Figure 9: H13141 and W00468 surface difference comparison statistics....13
Figure 10: SVP cast distribution....15

Figure 11: Artifact present in data using Trimble RTX trajectory data (left) not present in data using Marinestar Precise Point Positioning (PPP) trajectory data (right)..... 16
Figure 12: HSL 2903's 300kHz multibeam acoustic backscatter at 1m resolution..... 17
Figure 13: HSL 2903's 200kHz multibeam acoustic backscatter at 1m resolution..... 18
Figure 14: HSL 2904's 300kHz multibeam acoustic backscatter at 1m resolution..... 19
Figure 15: HSL 2904's 200kHz multibeam acoustic backscatter at 1m resolution..... 20
Figure 16: Combined multibeam acoustic backscatter at 1m resolution..... 21
Figure 17: H13141 data density standards..... 23
Figure 18: Field created contours within the Bahia de Guayanilla shown in orange, plotted over ENC US5PR44M. Soundings shown are ENC soundings..... 25
Figure 19: Field created contours within the Bahia de Tallaboa shown in orange, plotted over ENC US5PR44M. Soundings shown are ENC soundings..... 26
Figure 20: Field created contours within the Bahia de Tallaboa shown in orange, plotted over ENC US5PR44M. Soundings shown are ENC soundings..... 26
Figure 21: Field created contours within the Bahia de Tallaboa shown in orange, plotted over ENC US5PR44M. Soundings shown are ENC soundings..... 27
Figure 22: Channel depth area for the main pier of Bahia de Tallaboa..... 29
Figure 23: Channel depth area for outdated channel within Bahia de Tallaboa..... 30
Figure 24: H13141 revised bottom sample plan plotted over H13141 backscatter data..... 31
Figure 25: H13141 exposed pipeline..... 33

Descriptive Report to Accompany Survey H13141

Project: OPR-I369-TJ-18

Locality: San Juan and Ponce and Vicinities

Sublocality: Bahia de Guayanilla

Scale: 1:5000

August 2018 - November 2018

NOAA Ship *Thomas Jefferson*

Chief of Party: Christiaan van Westendorp, CAPT/NOAA

A. Area Surveyed

Survey H13141, located in the Bahia de Guayanilla and surrounding area, was conducted in accordance with coverage requirements set forth in the Project Instructions OPR-I369-TJ-18.

A.1 Survey Limits

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

Northwest Limit	Southeast Limit
17° 59' 35.06" N 66° 47' 17.34" W	17° 57' 18.75" N 66° 44' 2.21" W

Table 1: Survey Limits

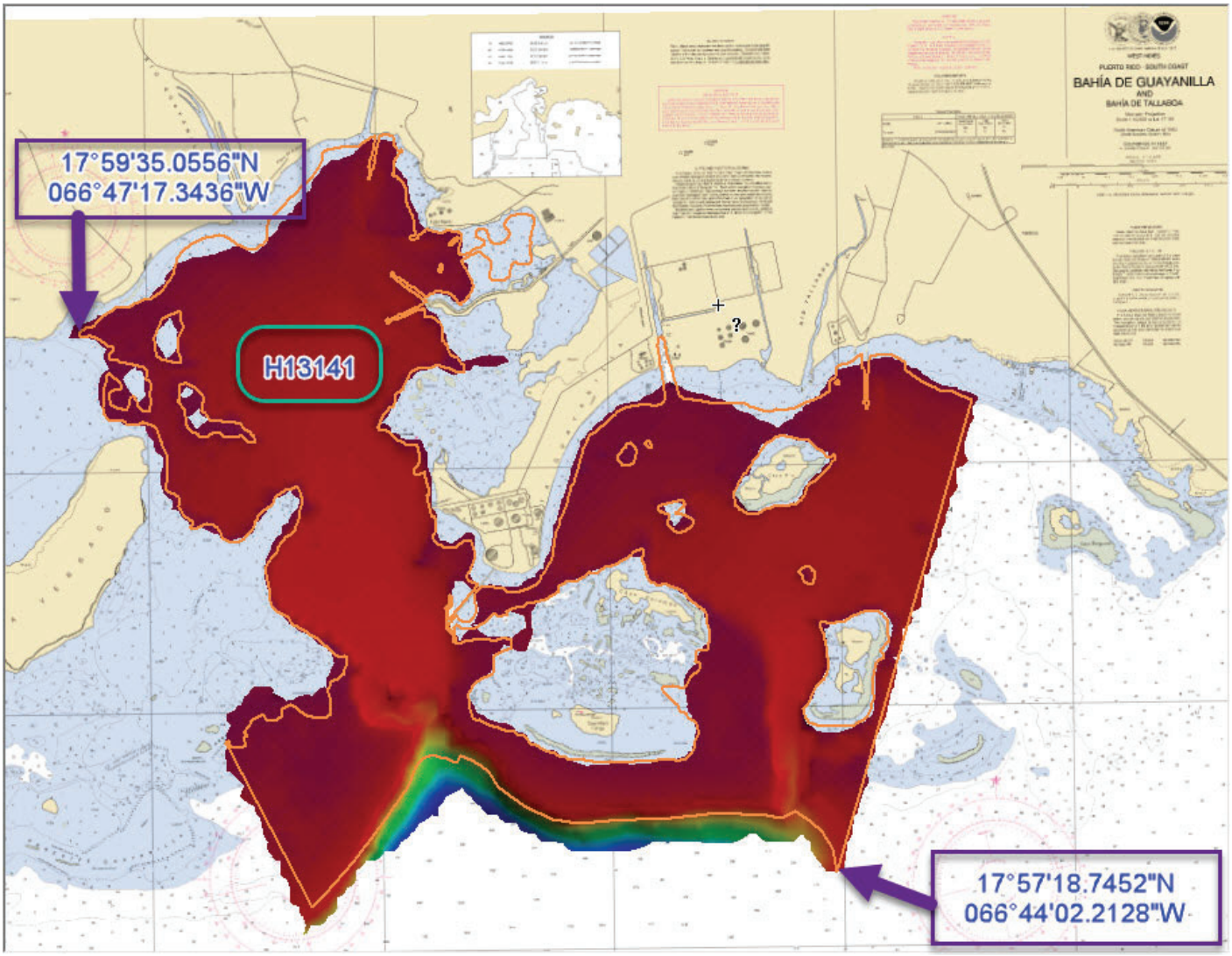


Figure 1: Survey layout for H13141, plotted over RNC 25681_1. Orange outline represents the survey limits set forth by the Project Instructions.

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. However, some areas were not surveyed to the Navigable Area Limit Line (NALL) because the conditions within those areas were deemed too dangerous for survey operations (Figure 2).

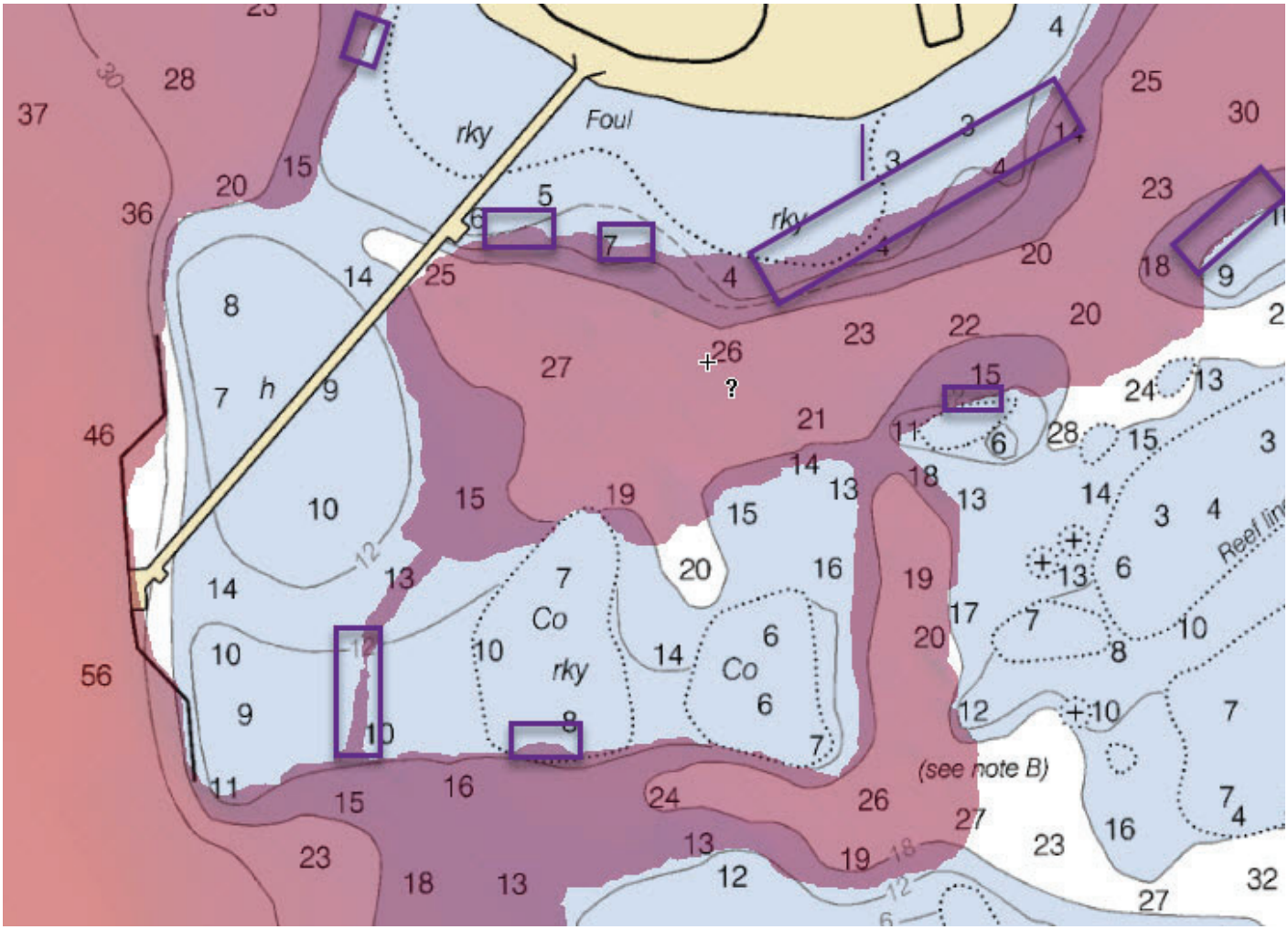


Figure 2: An example of an area in which the NALL was not able to be reached due to the conditions in which survey operations were being conducted. Within this specific graphic, the areas marked by a purple box are the areas in which the NALL was met.

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	Object Detection Coverage (Refer to HSSD Section 5.2.2.2)

Table 2: Survey Coverage

Survey coverage was in accordance with the requirements listed above and in the HSSD (2018).

A.5 Survey Statistics

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

	HULL ID	*2903*	*2904*	*Total*
LNM	SBES Mainscheme	0	0	0
	MBES Mainscheme	257.66	205.56	463.22
	Lidar Mainscheme	0	0	0
	SSS Mainscheme	0	0	0
	SBES/SSS Mainscheme	0	0	0
	MBES/SSS Mainscheme	0	0	0
	SBES/MBES Crosslines	1.6	17.61	19.21
	Lidar Crosslines	0	0	0
Number of Bottom Samples				11
Number Maritime Boundary Points Investigated				0
Number of DPs				0
Number of Items Investigated by Dive Ops				0
Total SNM				4.975

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
08/20/2018	232
08/21/2018	233

Survey Dates	Day of the Year
08/22/2018	234
08/23/2018	235
08/24/2018	236
08/25/2018	237
08/26/2018	238
~~08/27/2018~~	~~239~~
08/28/2018	240
08/29/2018	241
~~08/30/2018~~	~~242~~
~~08/31/2018~~	~~243~~
~~09/03/2018~~	~~246~~
~~09/04/2018~~	~~247~~
~~09/05/2018~~	~~248~~
~~09/06/2018~~	~~249~~
09/07/2018	250
11/03/2018	307

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 discussed in the following sections.

B.1.1 Vessels

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

Hull ID	***2903***	***2904***
LOA	8.5 meters	8.5 meters
Draft	1.2 meters	1.2 meters

Table 5: Vessels Used

B.1.2 Equipment

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

Manufacturer	**Model**	**Type**
Kongsberg Maritime	EM 2040	MBES
Teledyne RESON	SVP 70	Sound Speed Sensor
Teledyne RESON	SVP 71	Sound Speed Sensor
Applanix	POS MV 320 v5	Positioning and Attitude System
Sea-Bird Scientific	SBE 19plus V2	Conductivity, Temperature, and Depth Sensor

Table 6: Major Systems Used

B.2 Quality Control

B.2.1 Crosslines

Multibeam/single beam echo sounder/side scan sonar crosslines acquired for this survey totaled 4.15% of mainscheme acquisition.

HSL 2903 and 2904 collected 19.21 linear nautical miles of MBES crosslines and, or 4.15% of mainscheme MBES data. 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

-0.02 with a standard deviation of 0.12 (Figure 3). Visual inspection of the difference surface indicated no systematic issues.

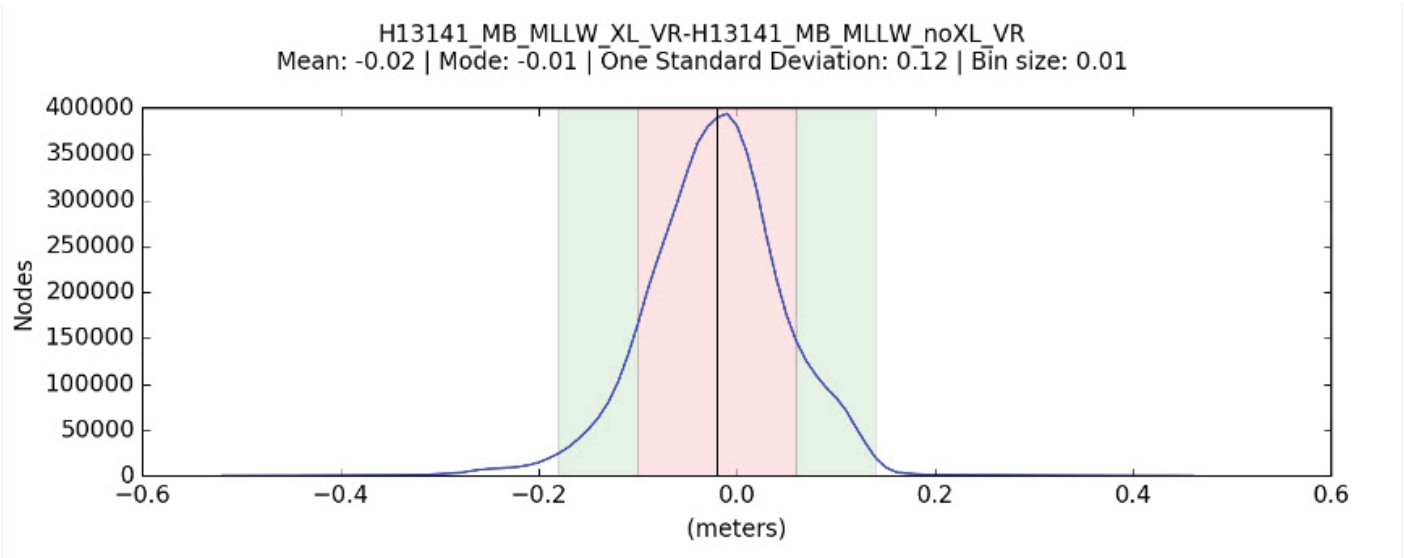


Figure 3: H13141 crossline/mainscheme comparison.

B.2.2 Uncertainty

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

Method	Measured	Zoning
ERS via VDATUM	0.0 meters	0.12 meters

Table 7: Survey Specific Tide TPU Values.

Hull ID	Measured - CTD	Measured - MVP	Surface
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 4).

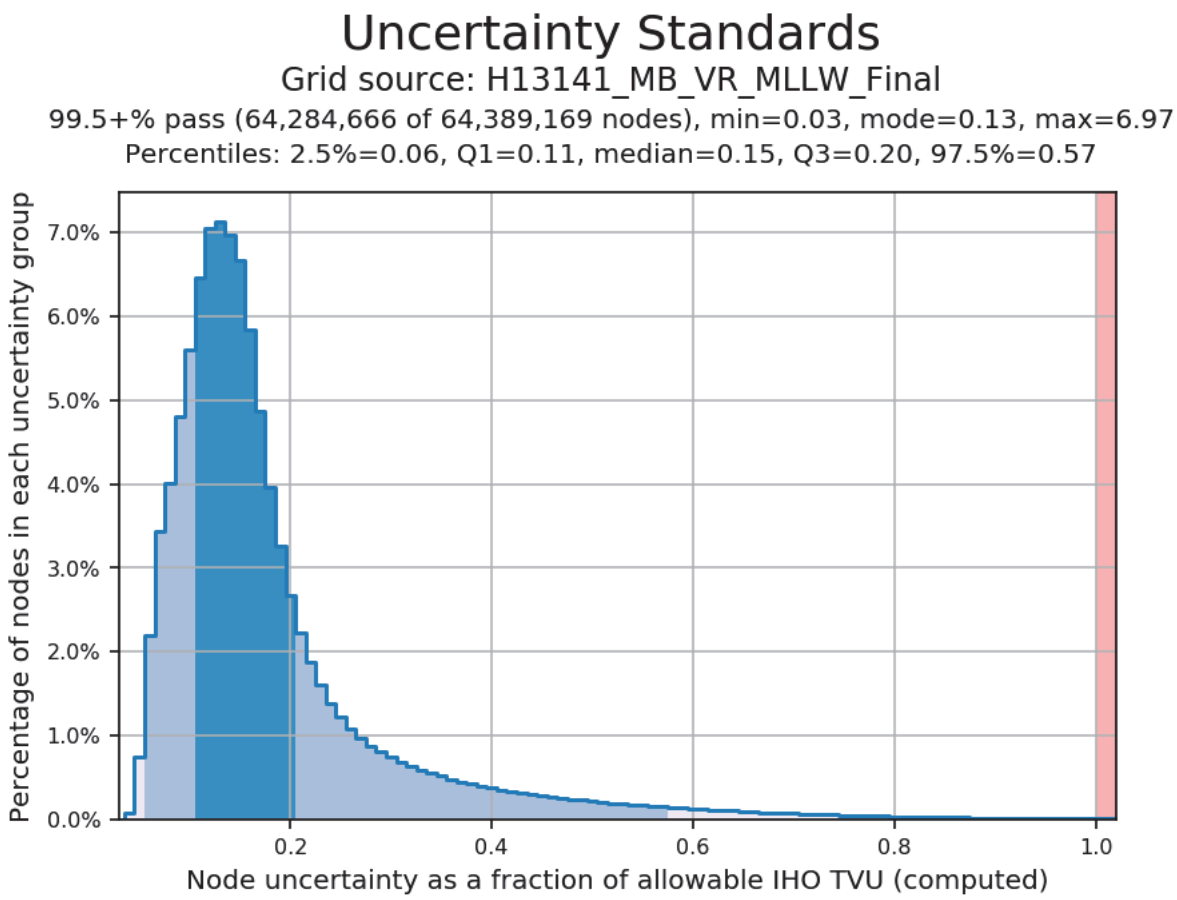


Figure 4: H13141 uncertainty standards.

B.2.3 Junctions

There are two contemporary surveys that junction with survey H13141 (Figure 5).

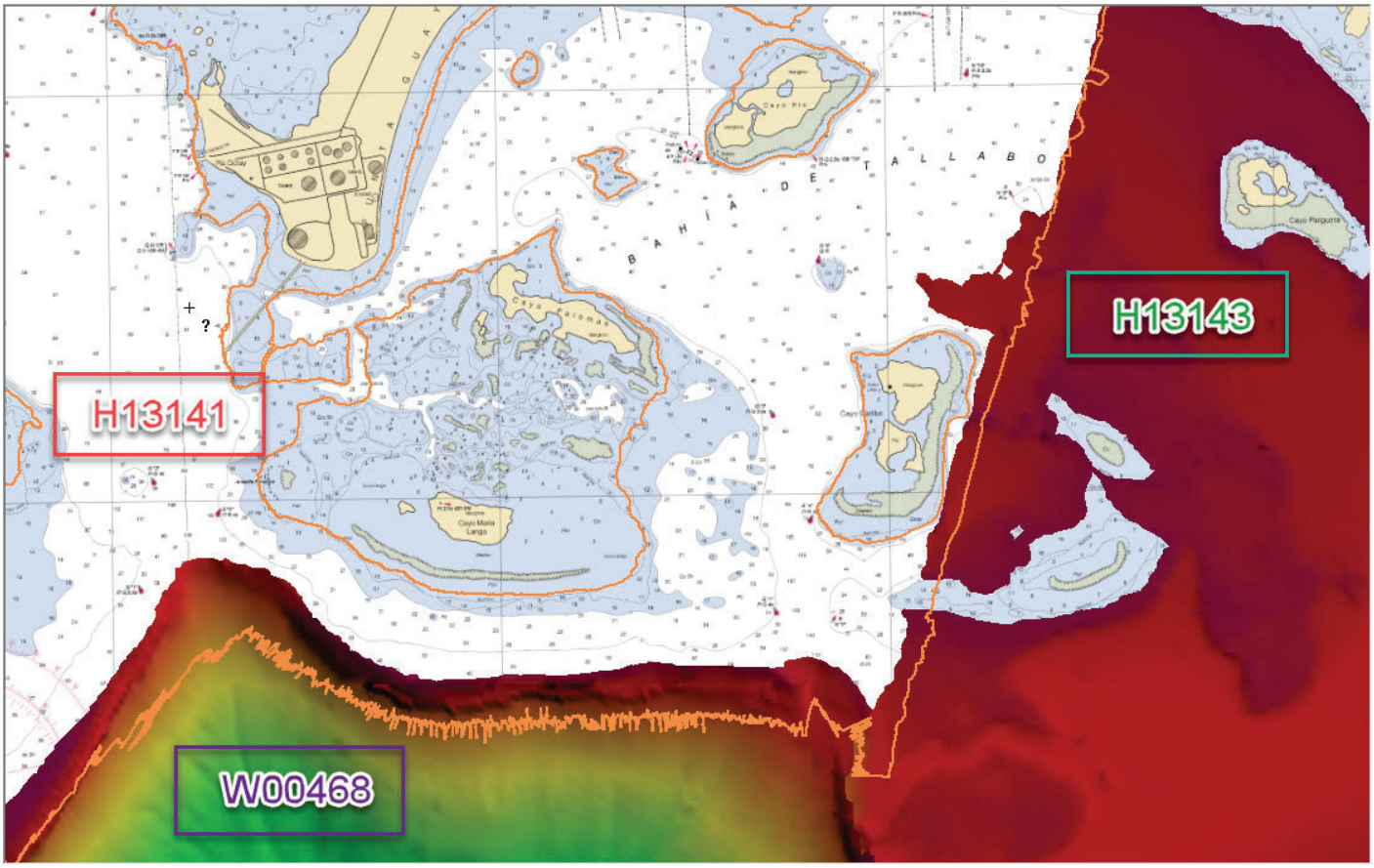


Figure 5: Survey H13141 MBES data outlined in orange in order to show overlapping data with junction surveys, plotted over RNC 25681.

The following junctions were made with this survey (Table 9):

Registry Number	Scale	Year	Field Unit	Relative Location
H13143	1:5000	2018	NOAA Ship THOMAS JEFFERSON	SE
W00468	1:20000	2018	NOAA Ship NANCY FOSTER	S

Table 9: Junctioning Surveys

H13143

The east side of Survey H13141 junctioned with Survey H13143 (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 H13141 and H13143 are in general agreement (Figure 7).

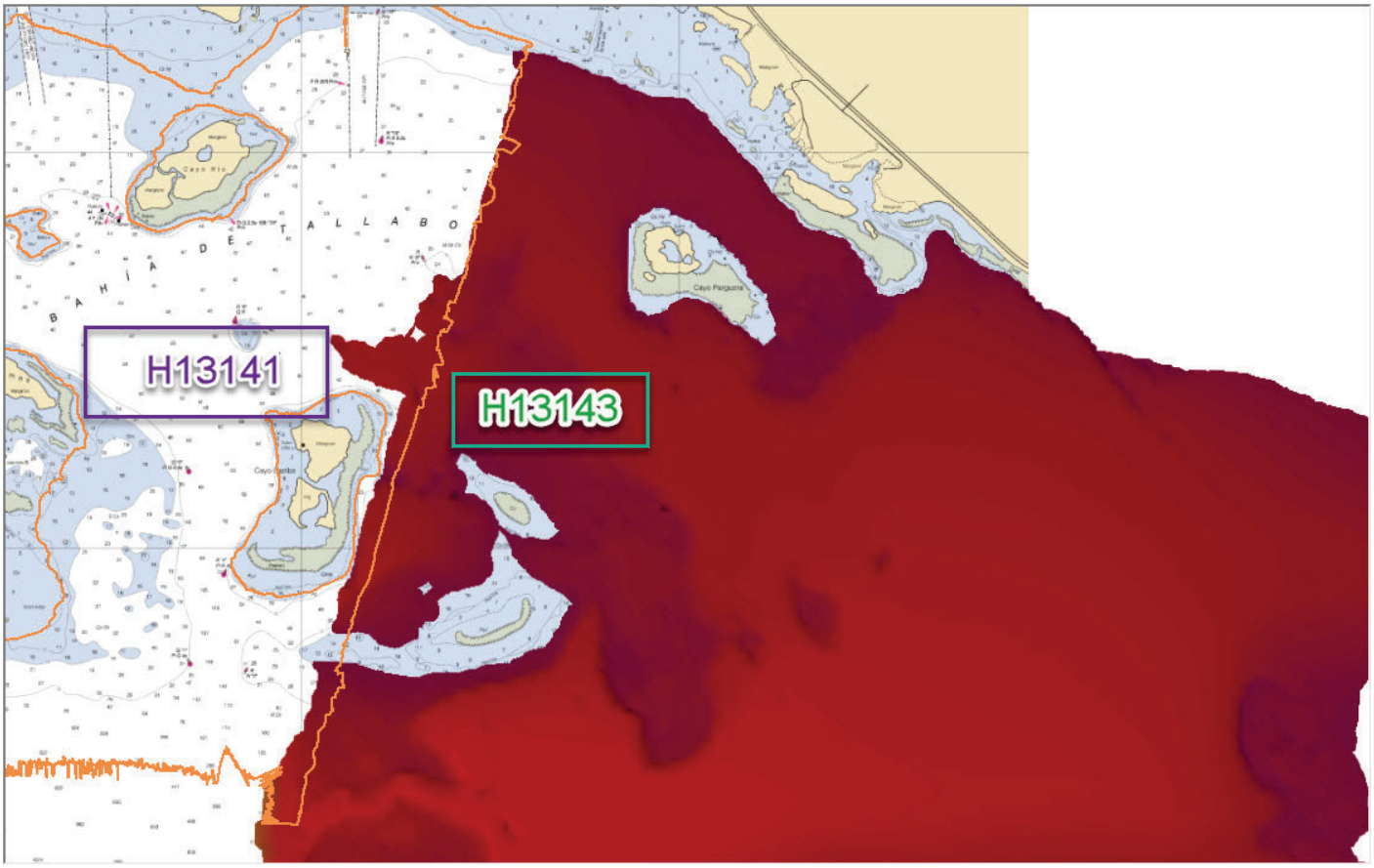


Figure 6: Survey H13141 MBES data outlined in orange in order to show overlapping data with junction survey H13143, plotted over RNC 25681.

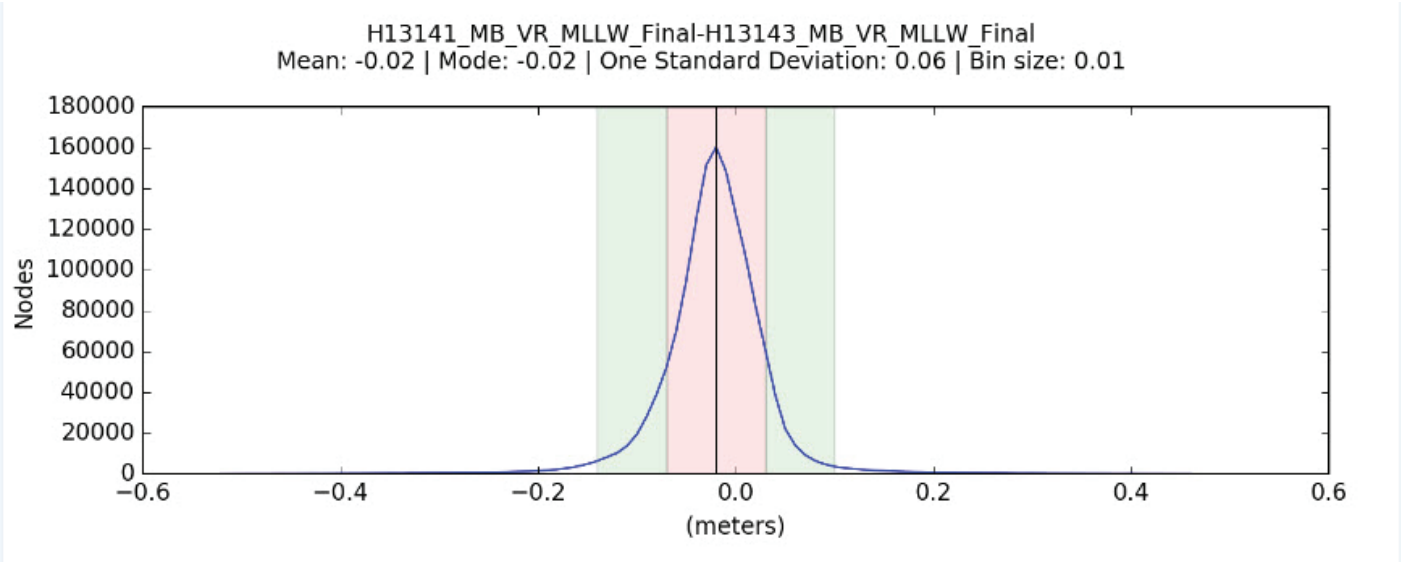


Figure 7: H13141 and H13143 surface difference comparison statistics.

W00468

The south side of Survey H13141 junctioned with Survey W00468 (Figure 8). A difference surface comparison was conducted in accordance with procedures outlined in the DAPR using the H13141 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 1.18m with a standard deviation of 2.26m (Figure 9). The range of differences was -21.850m to 27.928m. Significant differences between surface nodes were located in areas covering a steep shelf running along the southern boundary of sheet H13141 or over highly dynamic areas of the sea floor. Surface differences over relatively flat areas were generally less than one meter in magnitude.

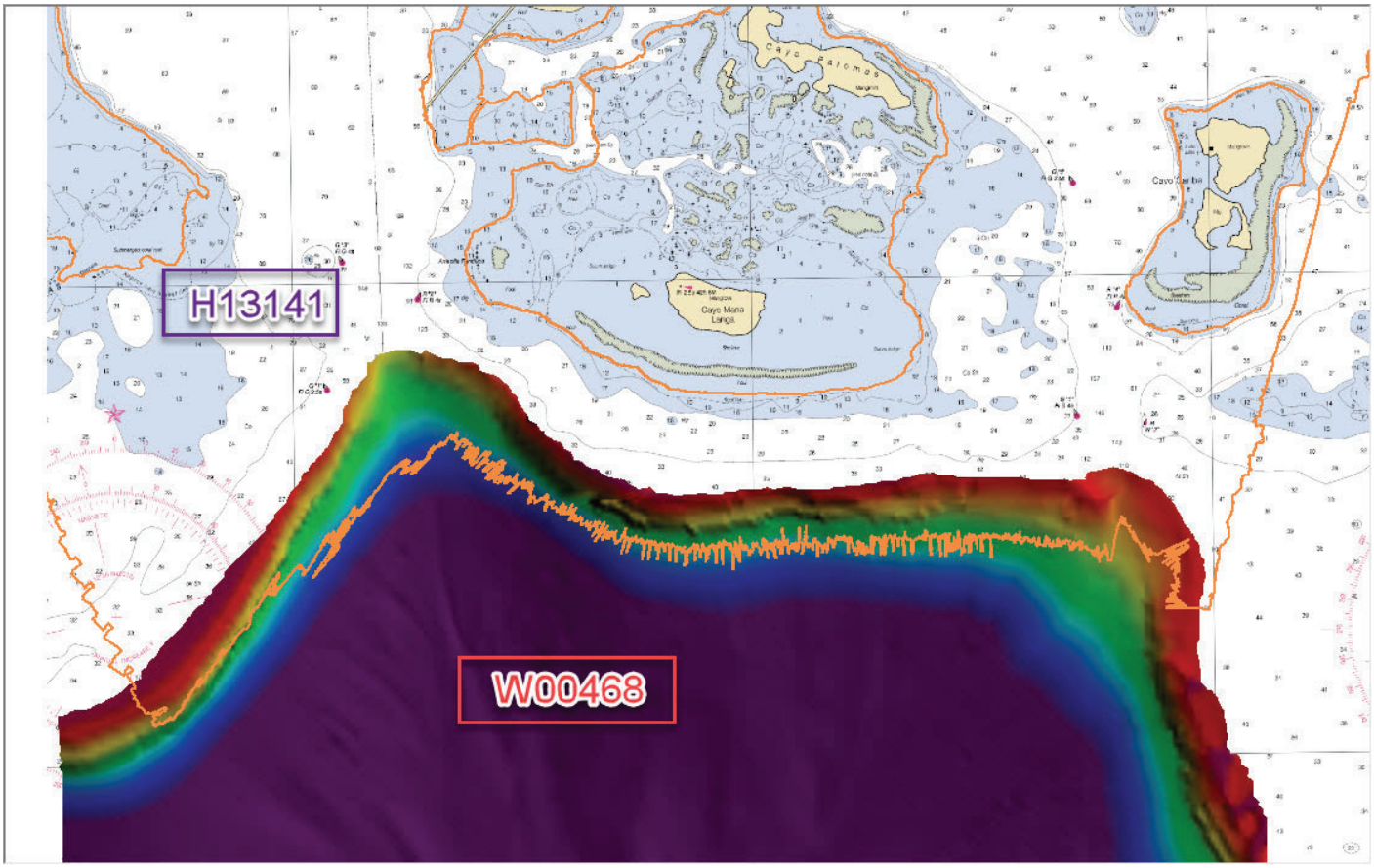


Figure 8: Survey H13141 MBES data outlined in orange in order to show overlapping data with junction survey W00468, plotted over RNC 25681.

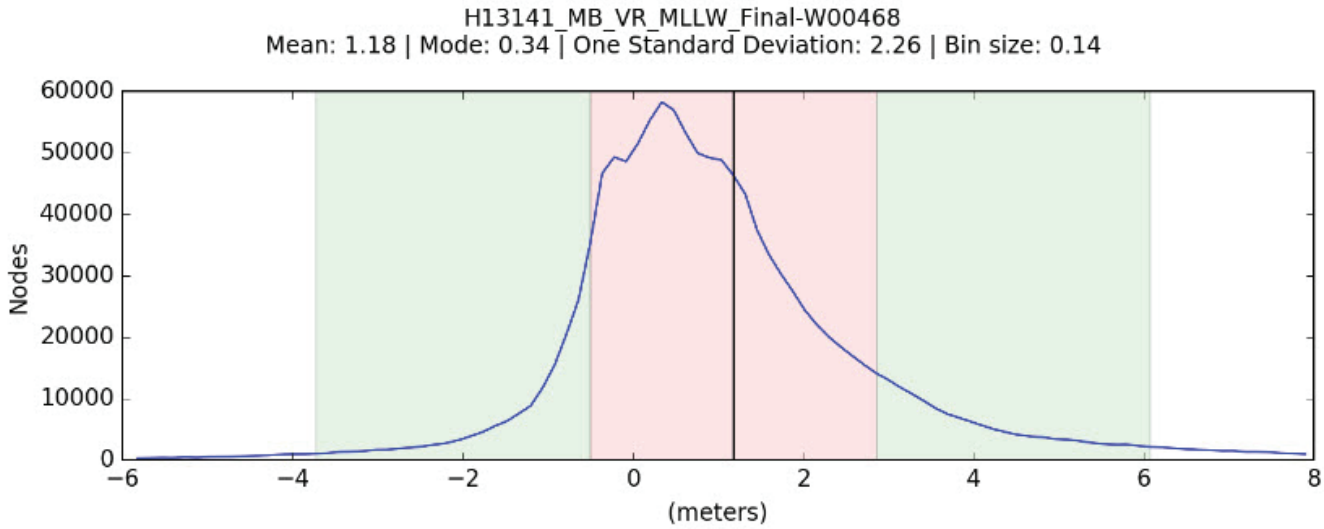


Figure 9: H13141 and W00468 surface difference comparison statistics.

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

Cast locations were selected to sample water most representative of local environmental survey conditions (Figure 10).

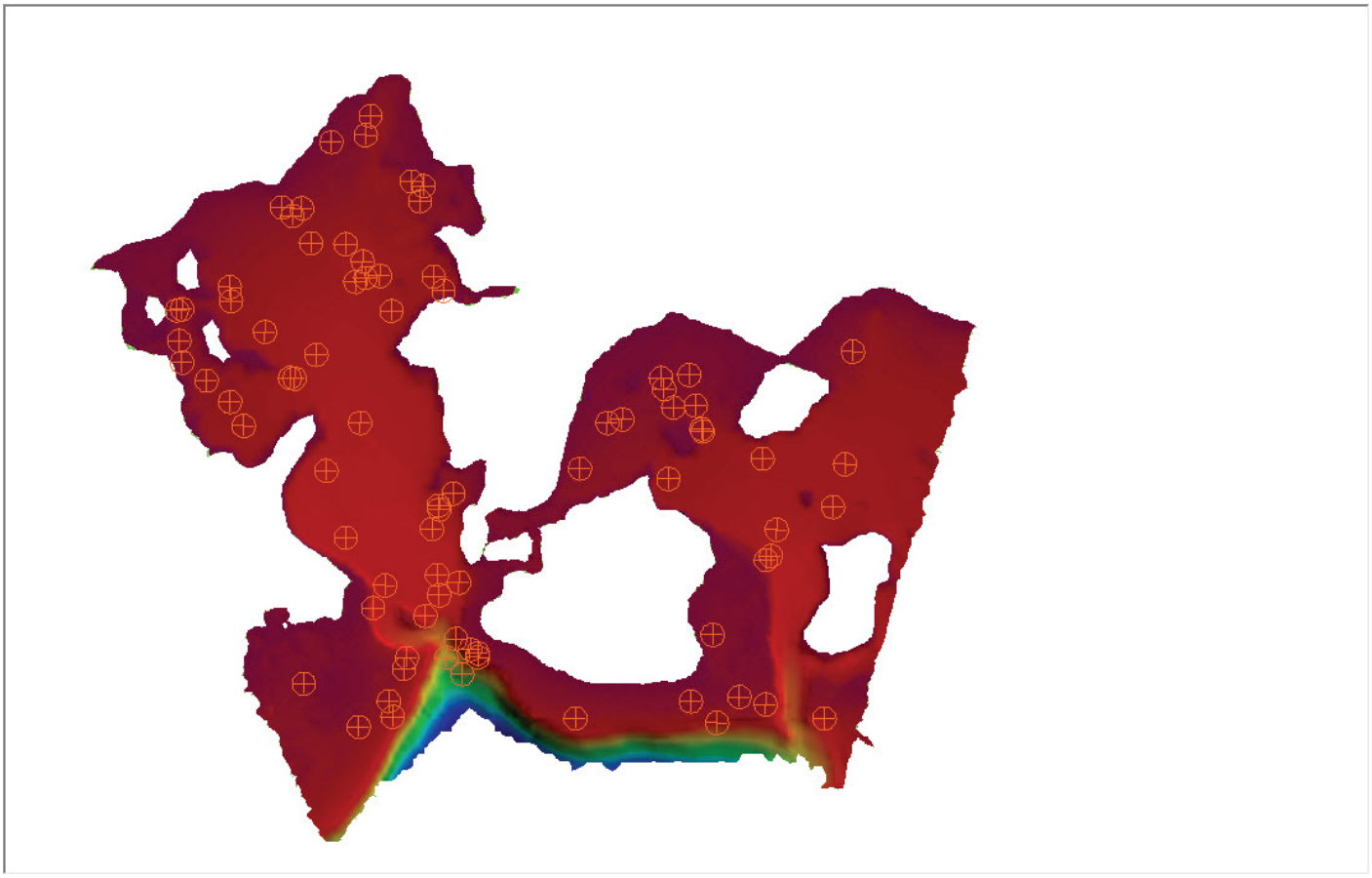


Figure 10: SVP cast distribution.

B.2.8 Coverage Equipment and Methods

HSL 2903 and 2904 acquired 100% MBES data to meet object detection coverage requirements on survey H13141, as specified in the project instructions, using Kongsberg EM2040's.

B.3 Echo Sounding Corrections

B.3.1 Corrections to Echo Soundings

All data reduction procedures conform to those detailed in the DAPR with the exception of line 0056_20180823_165540_2904_EM2040 of day 2018-235. Efforts to apply Delayed Heave to line 0056_20180823_165540_2904_EM2040 of day 2018-235 were not successful. Realtime Heave was used to correct for heave motion for line 0056_20180823_165540_2904_EM2040.

Marinestar positioning data was used to remedy bad RTX positional data (Figure 11). See section C.2 for more detailed information.

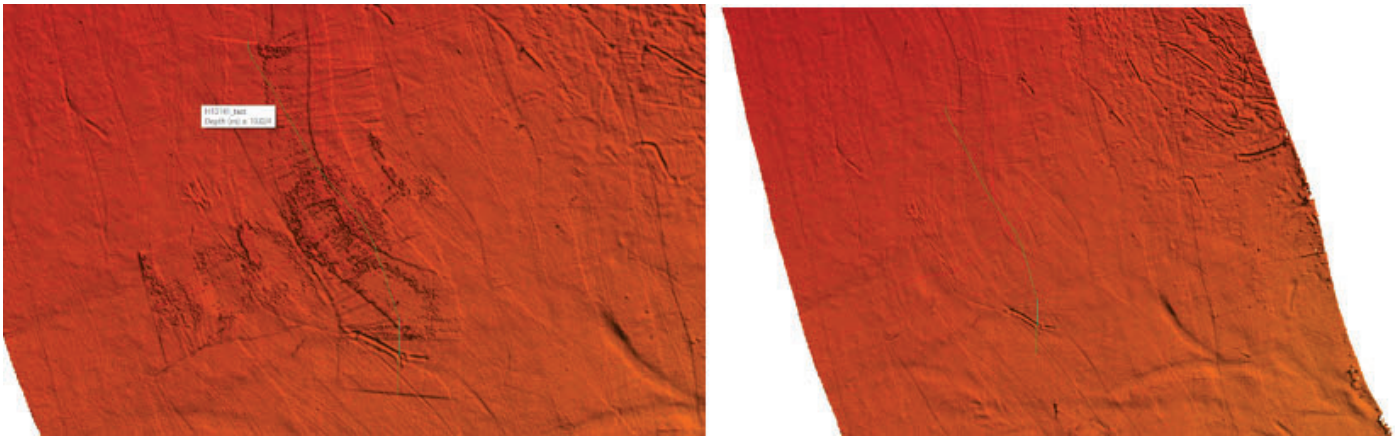


Figure 11: Artifact present in data using Trimble RTX trajectory data (left) not present in data using Marinestar Precise Point Positioning (PPP) trajectory data (right).

B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

B.4 Backscatter

Raw MBES backscatter was logged as part of the .all file of the Kongsberg EM2040 systems. Backscatter was processed in QPS Fledermaus GeoCoder Toolbox (FMGT) software, and the exported geotiff's are included in the final processed data package (Figures 12-16).

Figure 12: HSL 2903's 300kHz multibeam acoustic backscatter at 1m resolution.

Figure 13: HSL 2903's 200kHz multibeam acoustic backscatter at 1m resolution.

Figure 14: HSL 2904's 300kHz multibeam acoustic backscatter at 1m resolution.

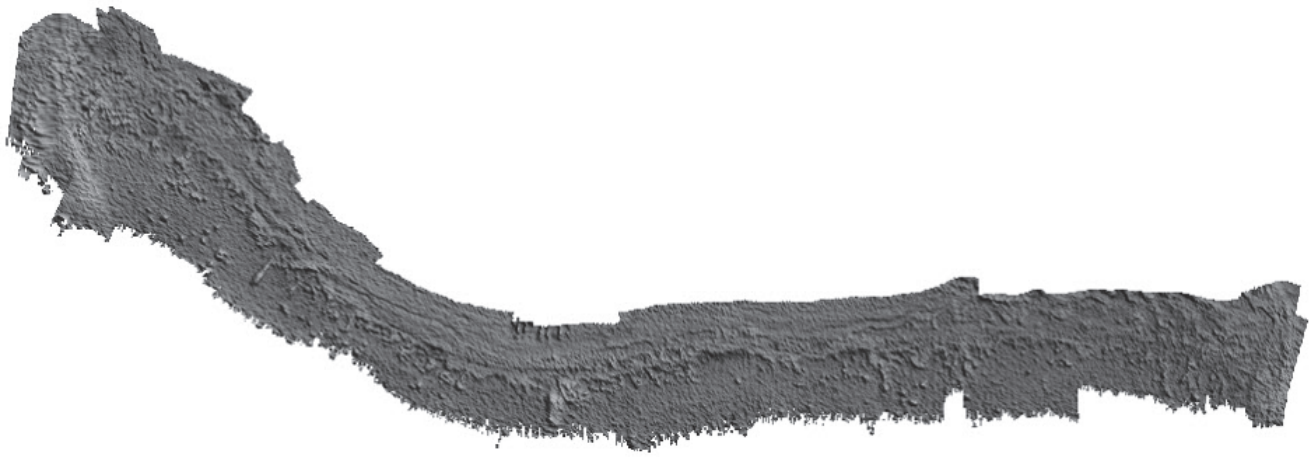


Figure 15: HSL 2904's 200kHz multibeam acoustic backscatter at 1m resolution.

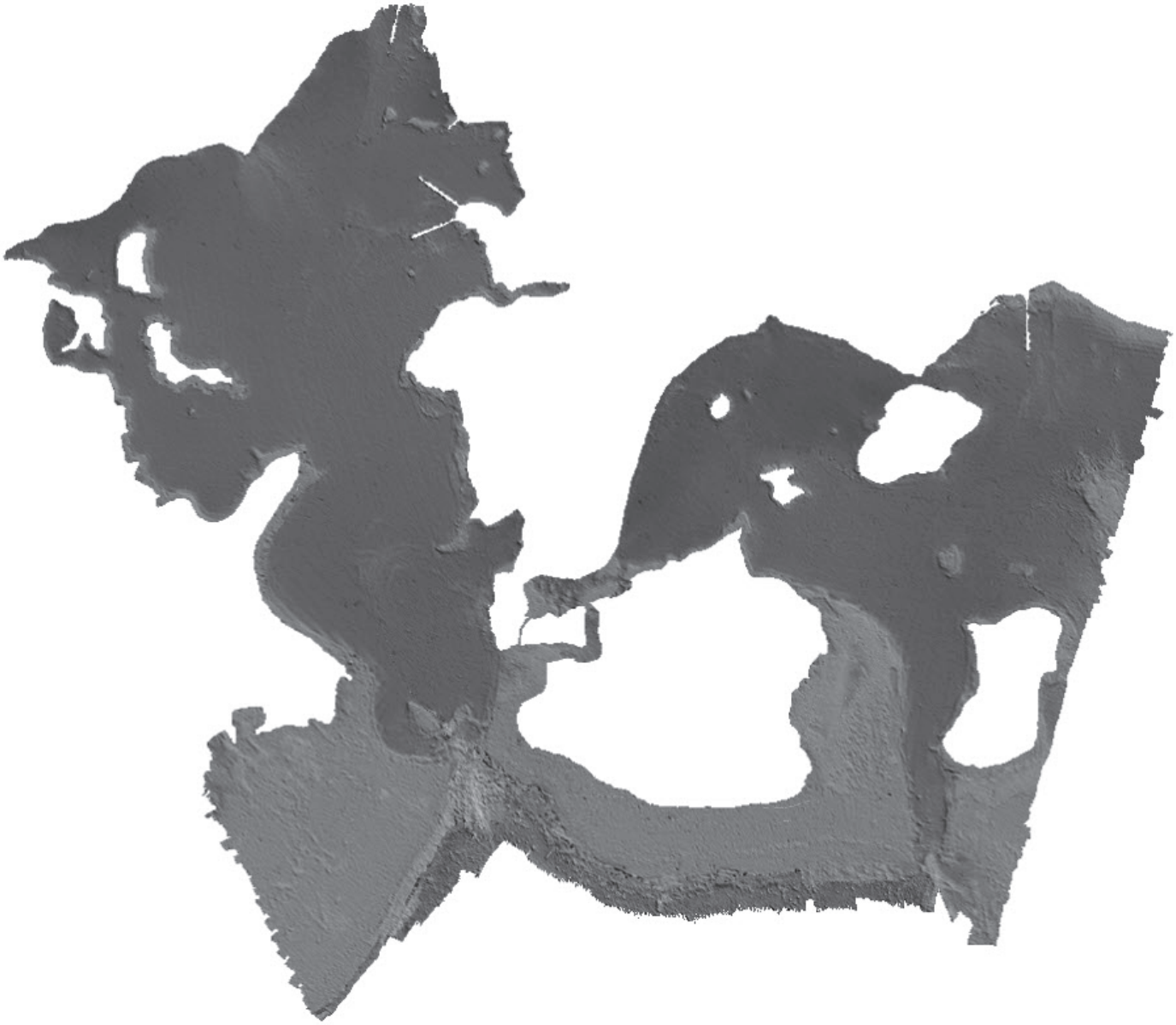


Figure 16: Combined multibeam acoustic backscatter at 1m resolution.

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
H13141_MB_VR_MLLW	CARIS VR Surface (CUBE)	Variable Resolution	1.277 meters - 241.698 meters	NOAA_VR	Object Detection
H13141_MB_VR_MLLW_Final	CARIS VR Surface (CUBE)	Variable Resolution	1.277 meters - 241.698 meters	NOAA_VR	Object Detection
H13141_MBAB_1m_TJ2903_300kHz_1of4	MB Backscatter Mosaic Geotiff	1 meters	-	N/A	Object Detection
H13141_MBAB_1m_TJ2904_300kHz_2of4	MB Backscatter Mosaic Geotiff	1 meters	-	N/A	Object Detection
H13141_MBAB_1m_TJ2903_200kHz_3of4	MB Backscatter Mosaic Geotiff	1 meters	-	N/A	Object Detection
H13141_MBAB_1m_TJ2904_200kHz_4of4	MB Backscatter Mosaic Geotiff	1 meters	-	N/A	Object Detection

Table 10: Submitted Surfaces

Object Detection coverage requirements were met by 100% Object Detection multibeam coverage as specified under section 5.2.2.1 of the HSSD (2018). All bathymetric grids for H13141 meet density requirements per the HSSD 2018 (Figure 17).

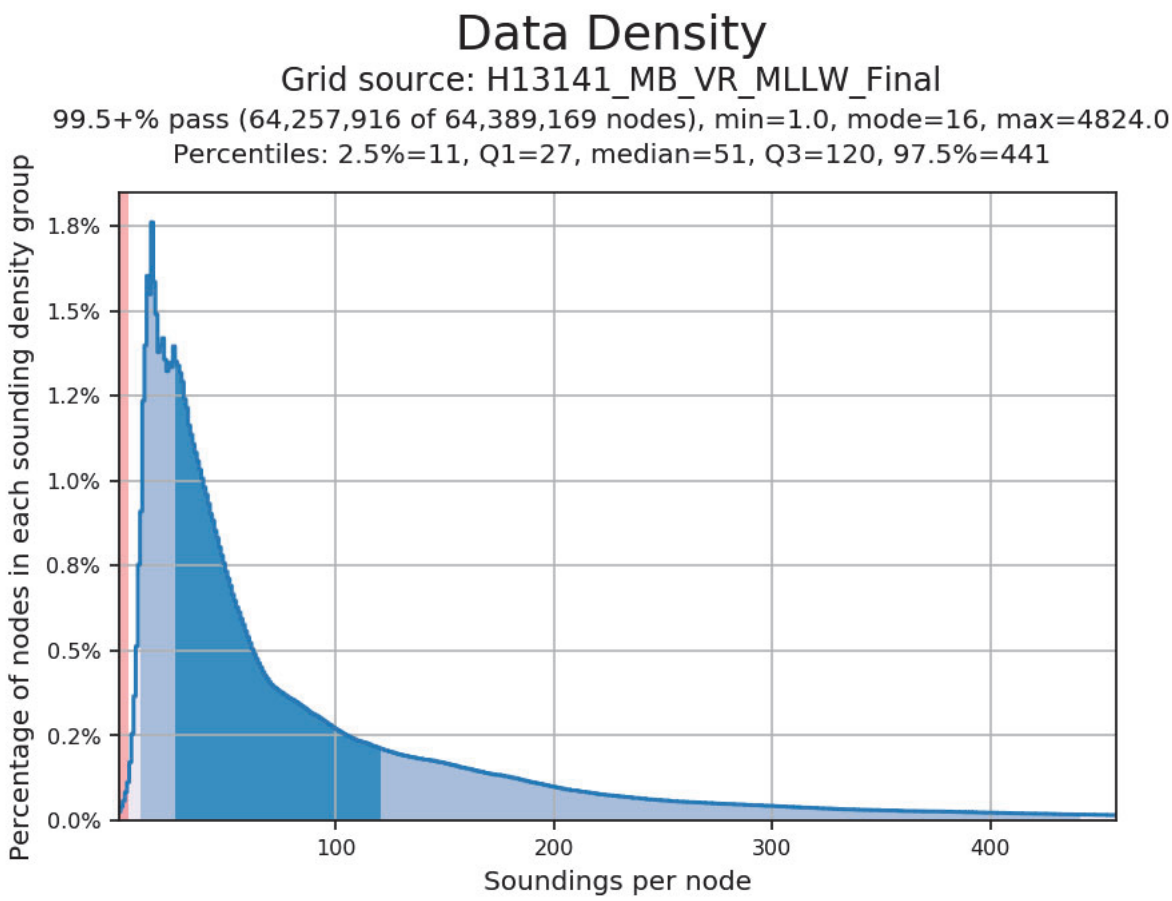


Figure 17: H13141 data density standards.

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

C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD 83). Survey H13141 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 H13141 MBES data, except for line 0334_20180822_210651_2903 of day 2018-234_b. The Fugro Marinestar G2 real-time precise point positioning service was used for line 0334_20180822_210651_2903 of day 2018-234_b to meet ERS specifications for GNSS positioning.

D. Results and Recommendations

D.1 Chart Comparison

A chart comparison was conducted between survey H13141 soundings and previously charted ENC soundings using procedures outlined in the DAPR.

D.1.1 Electronic Navigational Charts

The following is the largest scale ENC that covers 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

Table 11: Largest Scale ENCs

US5PR44M

There were a total of three soundings determined by the hydrographer to be considered significantly shoaler than charted soundings and were submitted as a Danger to Navigation (DtoN) report. Reference the relevant DtoN Report documents for further information. Depth contours were compared between H13141 and ENC

US5PR44M at depths specified within the ENC (Figures 18-21). The hydrographer recommends contours for ENC US5PR44M be reviewed and updated.

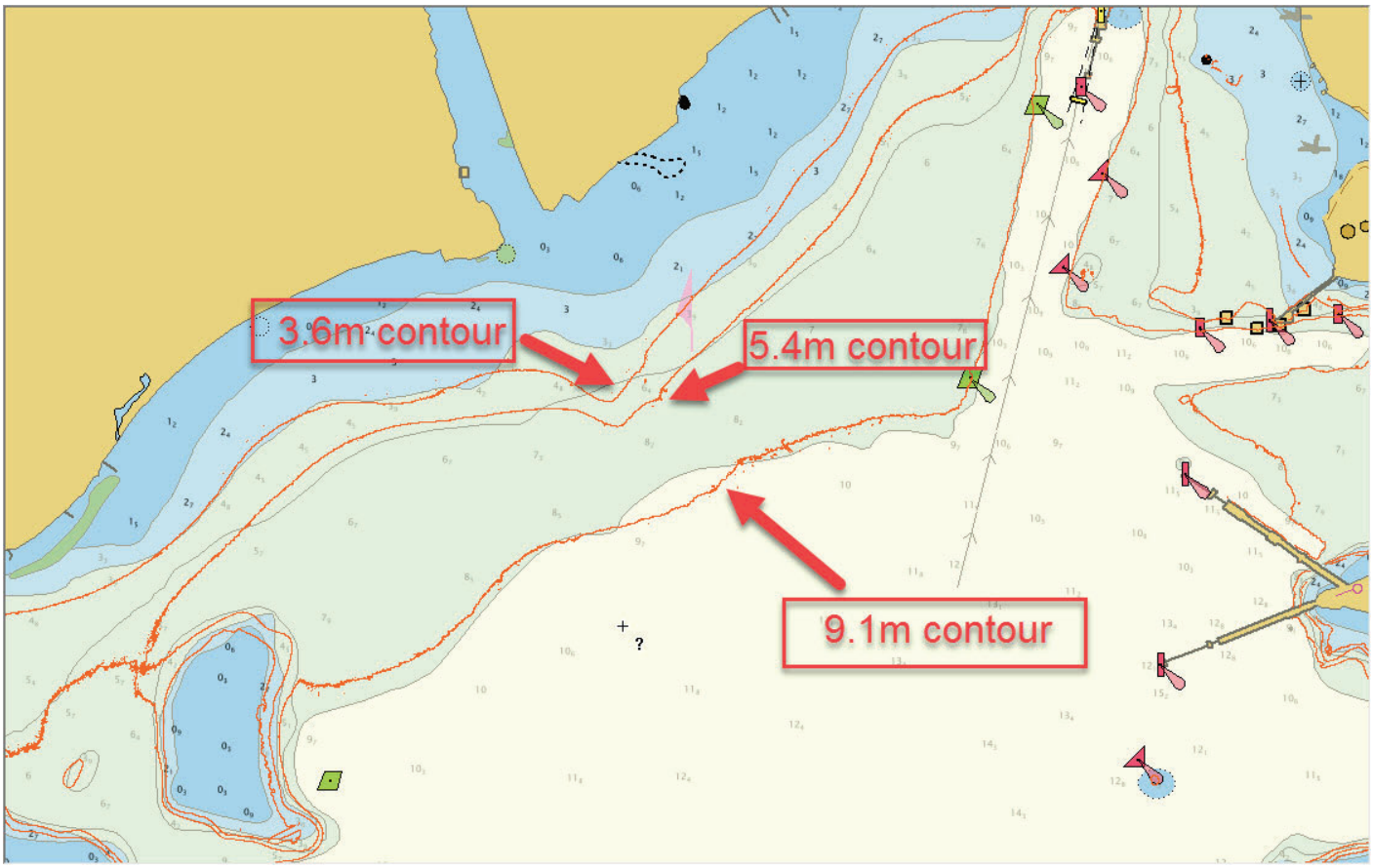


Figure 18: Field created contours within the Bahia de Guayanilla shown in orange, plotted over ENC US5PR44M. Soundings shown are ENC soundings.

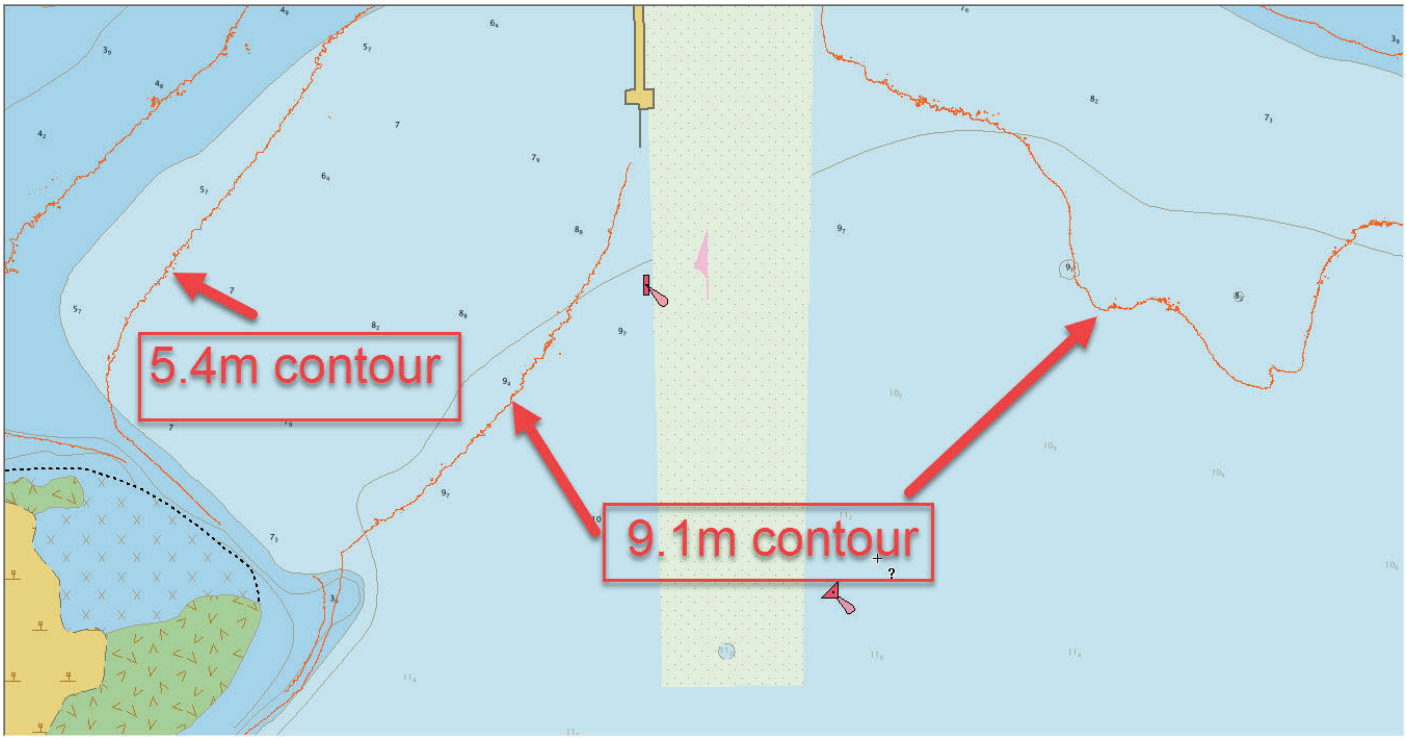


Figure 19: Field created contours within the Bahia de Tallaboa shown in orange, plotted over ENC US5PR44M. Soundings shown are ENC soundings.

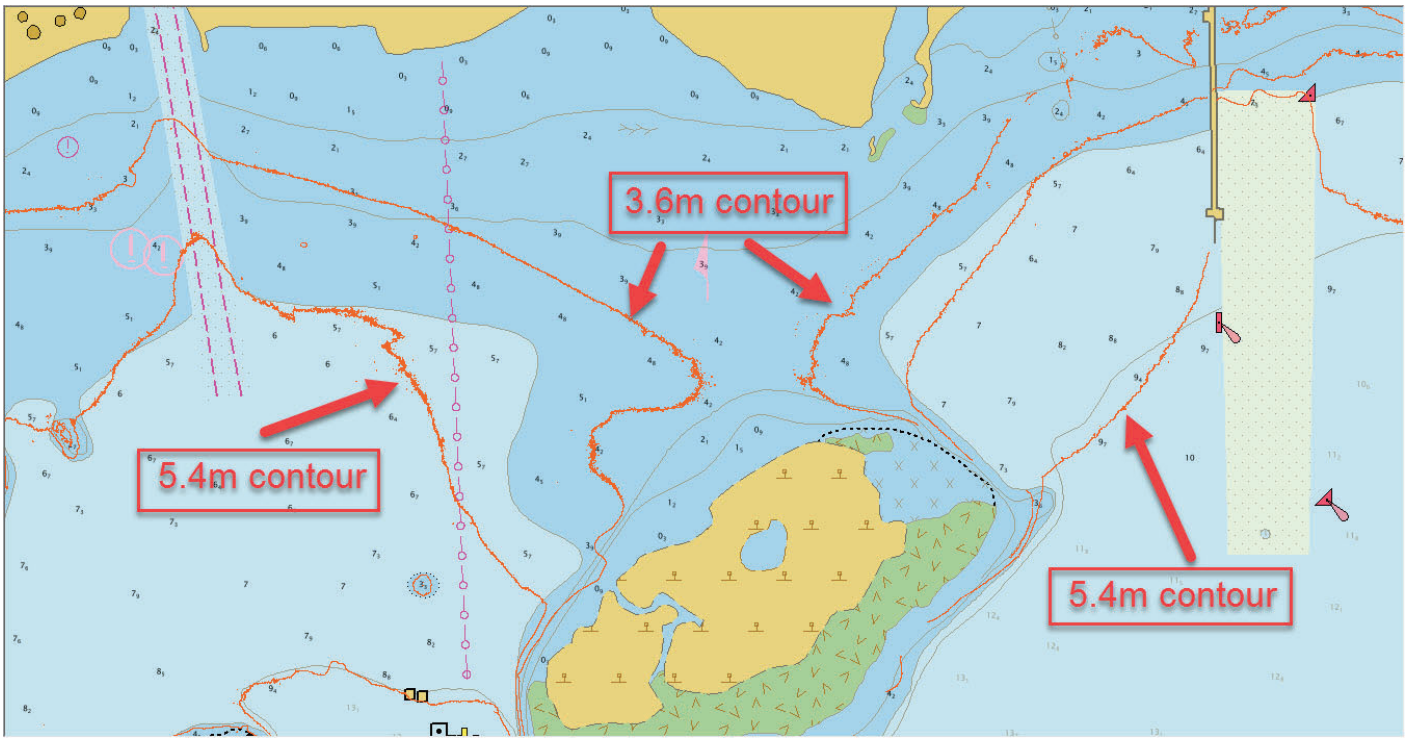


Figure 20: Field created contours within the Bahia de Tallaboa shown in orange, plotted over ENC US5PR44M. Soundings shown are ENC soundings.

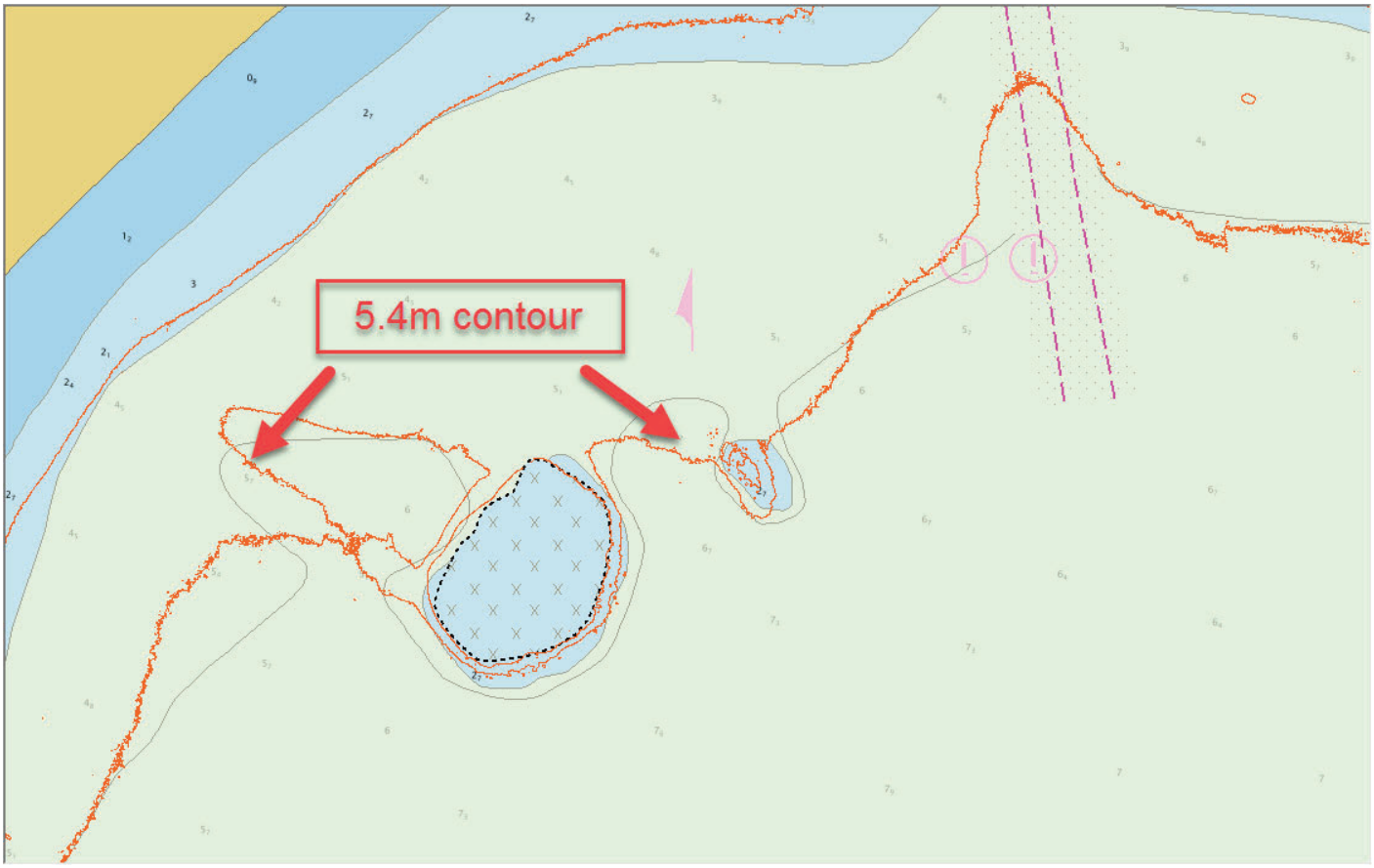


Figure 21: Field created contours within the Bahia de Tallaboa shown in orange, plotted over ENC US5PR44M. Soundings shown are ENC soundings.

D.1.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

D.1.3 Charted Features

A total of 146 charted features were investigated. 17 features were deemed appropriate for updating, 48 features were deemed appropriate for deletion, and 81 features were deemed appropriate to be retained as charted. 12 of the features selected to be updated are obstruction areas which indicate Guayanilla's reef shelfs, however, these features were not fully investigated due to being inshore of the Navigable Area Limit Line (NALL). Reference the Final Feature File for further information.

D.1.4 Uncharted Features

18 uncharted features were identified and investigated. Two of the uncharted features were considered dangerous to navigation (see D.1.5). One feature is a Hulk, one feature is a wreck, and the remaining 14 of the features that were not deemed DtoNs are obstructions. Reference the Final Feature File for further information.

The following orthometric imagery was used (Table 12):

File Name	Source	Source Image Date
18JUN07150723-S3DS_R1C1-058266093010_01_P001.TIF	DigitalGlobe, Inc	06/07/2018
18JUN07150723-S3DS_R1C2-058266093010_01_P001.TIF	DigitalGlobe, Inc	06/07/2018

Table 12: Orthometric Imagery

D.1.5 Shoal and Hazardous Features

Two obstructions and three shoal soundings were deemed dangers to navigation (DtoNs). Reference the Final Feature File and relevant DtoN Report documents for further information.

D.1.6 Channels

A comparison between the soundings of H13141 and two charted channel areas located within the Bahia de Tallaboa was conducted. Significant differences exist (up to 12 feet shoaler than charted) between the observed and charted depths (Figures 22-23). These differences were not submitted as DtoNs due to confirmation from the local pilots that these areas are not used by vessels that would be impacted by the observed differences.

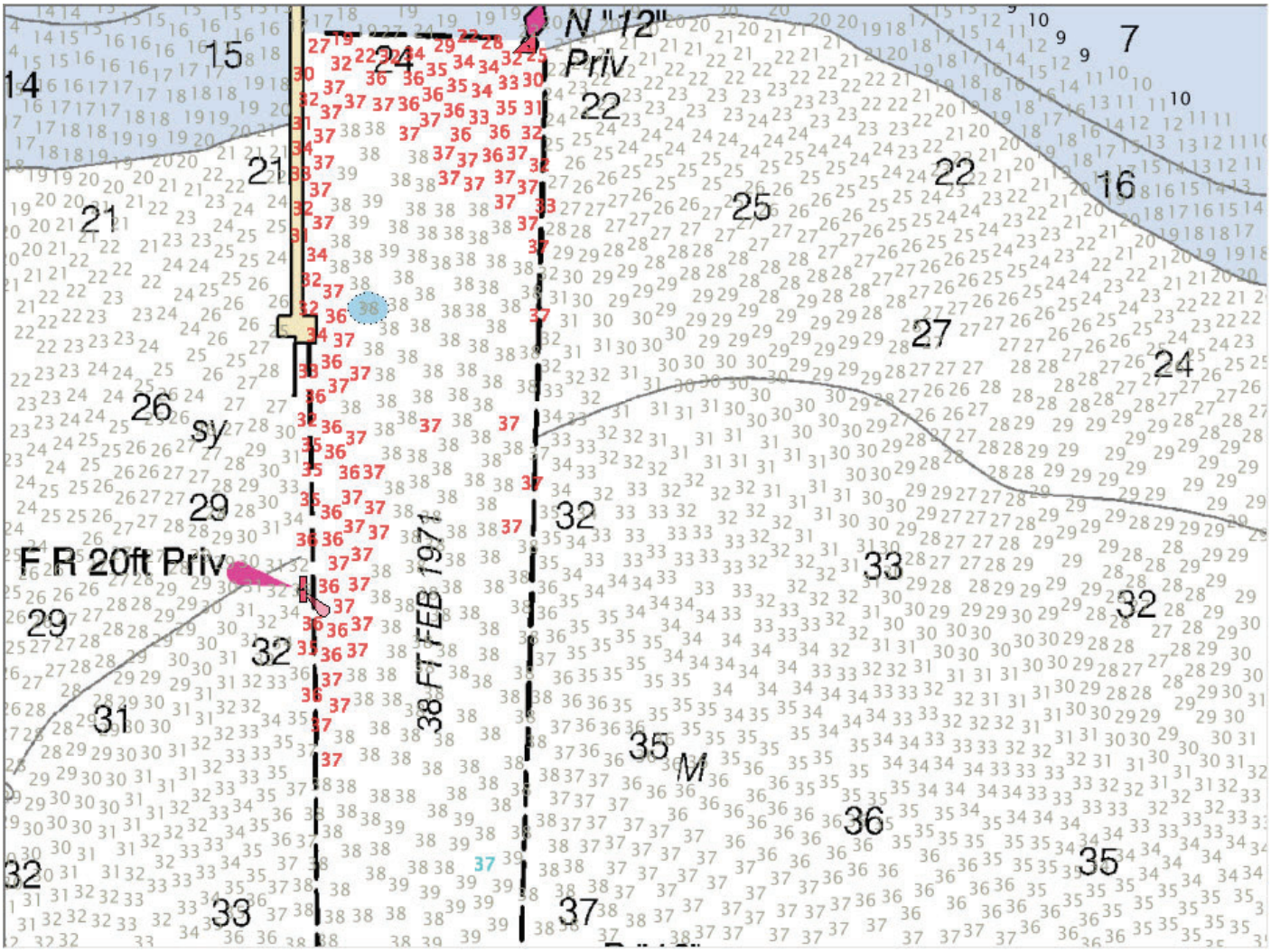


Figure 22: Channel depth area for the main pier of Bahia de Tallaboa.

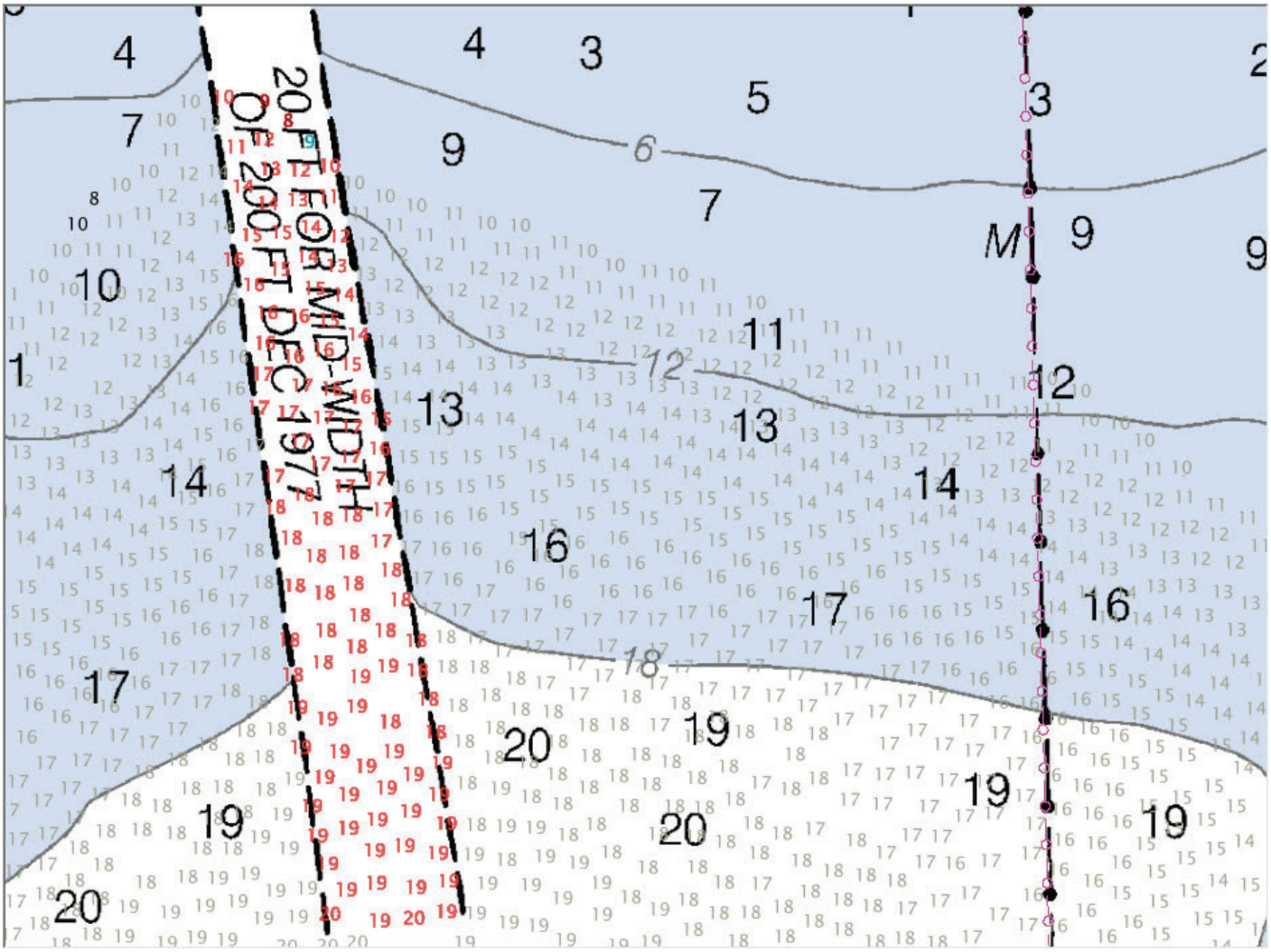


Figure 23: Channel depth area for outdated channel within Bahia de Tallaboa.

D.1.7 Bottom Samples

The number and distribution of bottom samples were adjusted from the sample plan provided by the Project Manager after an analysis of preliminary backscatter mosaics. 11 bottom samples were collected by HSL 2904. The revised sample plan was designed to cover the distinct bottom types within the survey sheet limits (Figure 24). Reference the Final Feature File for further information.

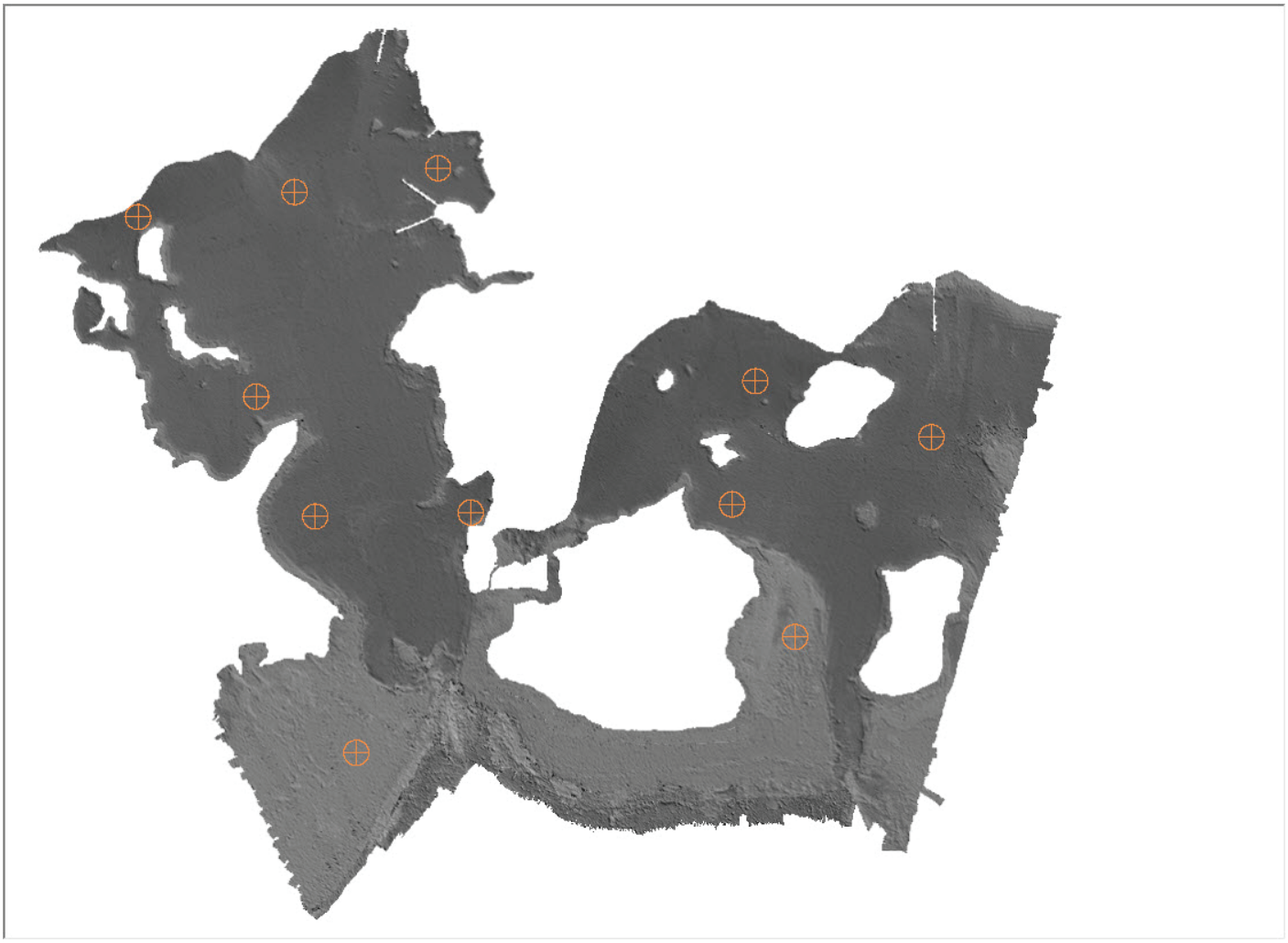


Figure 24: H13141 revised bottom sample plan plotted over H13141 backscatter data.

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

61 aids to navigation (AtoN) were investigated while conducting survey H13141. Six AtoNs were off station. AtoN Discrepancy Reports were submitted to the Coast Guard Navigation Center in accordance with HSSD requirements. A Coast Guard buoy tender was in the vicinity of Bahia de Guayanilla and Tallaboa servicing AtoNs while survey H13141 was in progress. Reference the Final Feature File and relevant AtoN Discrepancy Report documents for further information.

D.2.4 Overhead Features

No overhead features exist for this survey.

D.2.5 Submarine Features

Two charted submarine pipelines were present within the survey area. One pipeline was exposed and reported to BSEE in accordance with the HSSD 2018 (Figure 25). Reference the Final Feature File and Survey Correspondence documents for further information.

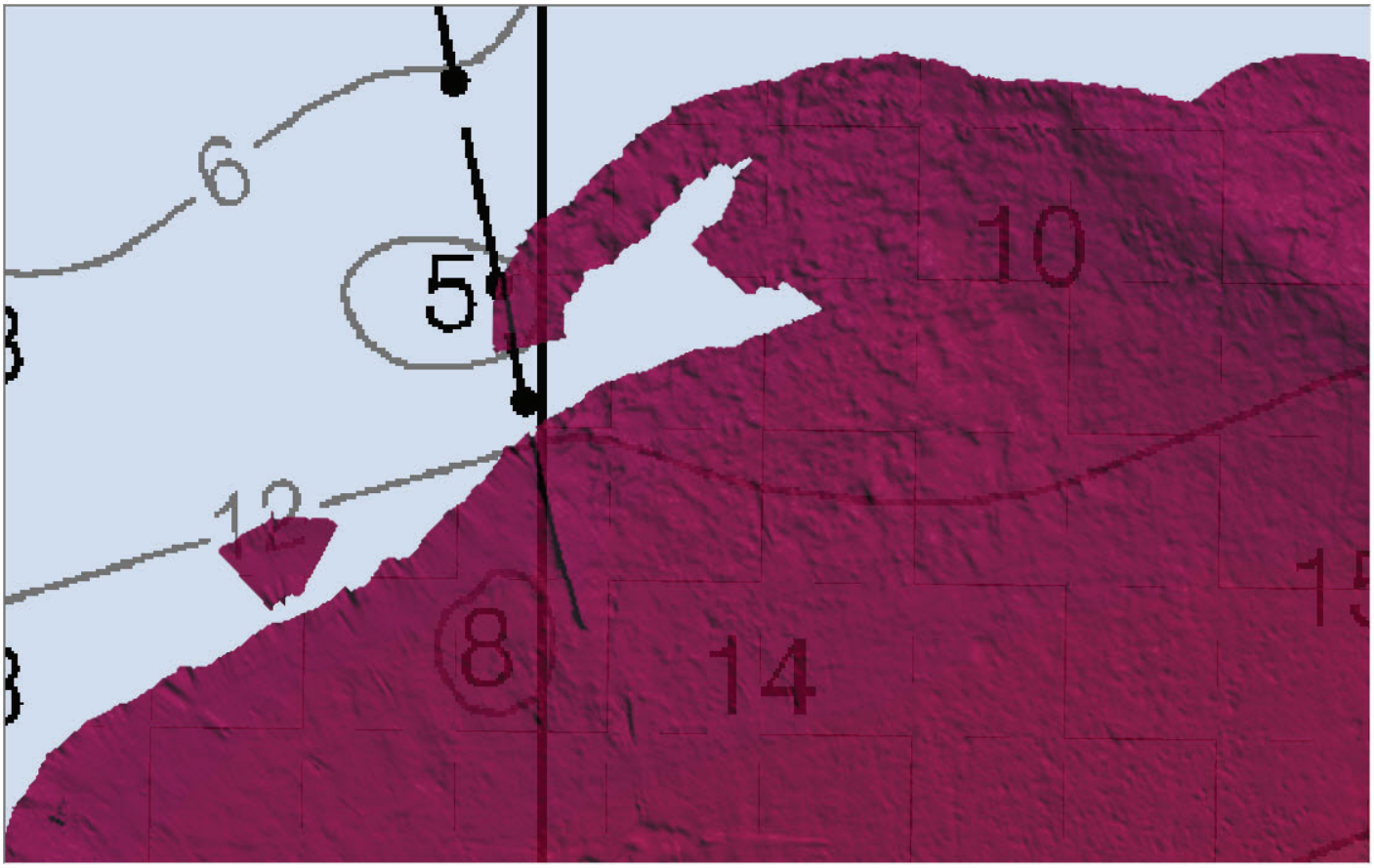


Figure 25: H13141 exposed pipeline.

D.2.6 Platforms

A total of three offshore platforms were located within the survey limits of H13141. Offshore platforms are positioned accurately. Reference the Final Feature File for further information.

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 are known to 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
CAPT Christiaan van Westendorp, NOAA	Commanding Officer / Chief of Party	04/01/2019	VAN WESTENDORP.CHRISTIAAN.HENRY.1012828175 c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=NOAA, cn=VAN WESTENDORP.CHRISTIAAN.HENRY.1012828175 2019.04.04 10:16:29 -04'00'
LT Charles J. Wisotzkey, NOAA	Field Operations Officer	04/01/2019	Digitally signed by WISOTZKEY.CHARLES.JUSTIN.1300819660 Date: 2019.04.08 08:37:17 -04'00'
Joshua Hiteshew	Chief Hydrographic Survey Technician	04/01/2019	HITESHEW.JOSHUA.TAYLOR.1537939652 Digitally signed by HITESHEW.JOSHUA.TAYLOR.1537939652 Date: 2019.04.04 14:29:07 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 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
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 Stated Coast Guard
UTM	Universal Transverse Mercator
XO	Executive Officer
ZDA	Global Positiong System timing message
ZDF	Zone Definition File

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

ATON discrepancy for H13141 - Bahia de Guayanilla

1 message

Joshua Hiteshew - NOAA Federal <joshua.hiteshew@noaa.gov> Tue, Mar 12, 2019 at 6:49 PM
To: Louis Licate - NOAA Federal <louis.licate@noaa.gov>, Christina Belton - NOAA Federal <christina.belton@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <chiefst.thomas.jefferson@noaa.gov>

In accordance with Section 1.6.2.2. of HSSD 2018:

Please see attached. Observed and submitted on or about November 3, 2018.

V/r,

Josh

--
CHST Joshua Hiteshew, NOAA
NOAA ship Thomas Jefferson
439 W York St, Norfolk, VA 23510

H13141_ATON_discrepency.pdf
6009K

Print-friendly

ATON DISCREPANCY REPORT FORM

Navigation Center Website Privacy Act Statement

Authority: 5 U.S.C 301; 14 U.S.C. 93(a) and (c); 14 U.S.C 632; 33 U.S.C 1223

Purpose: The Coast Guard Navigation Center will use this information to disseminate navigation safety notices and updates to individuals upon request and to receive reports of aid to navigation outages, issues or discrepancies.

Routine Uses: Coast Guard personnel will use this information to disseminate safety notices and updates and to aid in the repair or investigate reports of navigation outages, issues or discrepancies. Any external disclosures of data within this record will be made in accordance with DHS/ALL-002, Department of Homeland Security General Contact Lists, 73 Federal Register 71659, November 25, 2008, and DHS/USCG-013, Marine Information for Safety and Law Enforcement System of Records, 74 Federal Register 30305, June 25, 2009.

Disclosure: Furnishing this information is voluntary; however, failure to furnish the requested information may hinder your request for navigation safety related information.

* Denotes a required field

Your Name:* (Our Privacy Policy)	Josh Hiteshew
Your Email Address:*	joshua.hiteshew@noaa.gov
Your Phone number:	[redacted]
Waterway/Area:*	Bahia de Guayanilla State:* PR
Your Vessel's Name:	NOAA ship Thomas Jefferson
Type of Vessel:	Hydrographic survey vessel
DOC#/ HIN / VIN / State #:	S222
AID Name (from Light List):	Bahia de Tallaboa Lighted Buoy 10
Light List Number (LLNR):	32050
Structure Discrepancy:*	Destroyed: ○ Damaged: ○ Leaning: ○ Missing Dayboards: ○ None: ◉
or *Buoy Discrepancy:	Missing: ○ Off Station: ◉ Sinking: ○ Adrift: ○ AIS ATON: ○ None: ○
or *Lighted ATON Discrepancy:	Extinguished: ○ Improper Characteristic: ○ Burning Dim: ○ None: ◉
or *Other type of discrepancy:	
* Does a hazard to navigation exist?	Yes: ○ No: ◉

Please enter any additional comments or suggestions:

Buoy is off station at 17/58/58.29N, 066/43/39.04W

ATON DISCREPANCY REPORT FORM

Navigation Center Website Privacy Act Statement

Authority: 5 U.S.C 301; 14 U.S.C. 93(a) and (c); 14 U.S.C 632; 33 U.S.C 1223

Purpose: The Coast Guard Navigation Center will use this information to disseminate navigation safety notices and updates to individuals upon request and to receive reports of aid to navigation outages, issues or discrepancies.

Routine Uses: Coast Guard personnel will use this information to disseminate safety notices and updates and to aid in the repair or investigate reports of navigation outages, issues or discrepancies. Any external disclosures of data within this record will be made in accordance with DHS/ALL-002, Department of Homeland Security General Contact Lists, 73 Federal Register 71659, November 25, 2008, and DHS/USCG-013, Marine Information for Safety and Law Enforcement System of Records, 74 Federal Register 30305, June 25, 2009.

Disclosure: Furnishing this information is voluntary; however, failure to furnish the requested information may hinder your request for navigation safety related information.

* Denotes a required field

Your Name:* (Our Privacy Policy)	Josh Hiteshew
Your Email Address:*	joshua.hiteshew@noaa.gov
Your Phone number:	[redacted]
Waterway/Area:*	Bahia de Guayanilla State:* PR
Your Vessel's Name:	NOAA ship Thomas Jefferson
Type of Vessel:	Hydrographic survey vessel
DOC#/ HIN / VIN / State #:	S222
AID Name (from Light List):	PPG Industries Lighted Buoy 4
Light List Number (LLNR):	32165
Structure Discrepancy:*	Destroyed: ○ Damaged: ○ Leaning: ○ Missing Dayboards: ○ None: ◉
or *Buoy Discrepancy:	Missing: ○ Off Station: ◉ Sinking: ○ Adrift: ○ AIS ATON: ○ None: ○
or *Lighted ATON Discrepancy:	Extinguished: ○ Improper Characteristic: ○ Burning Dim: ○ None: ◉
or *Other type of discrepancy:	
* Does a hazard to navigation exist?	Yes: ○ No: ◉

Please enter any additional comments or suggestions:

Buoy is off station at 18/00/05.41N, 66/46/01.11W

Print-friendly

ATON DISCREPANCY REPORT FORM

Navigation Center Website Privacy Act Statement

Authority: 5 U.S.C 301; 14 U.S.C. 93(a) and (c); 14 U.S.C 632; 33 U.S.C 1223

Purpose: The Coast Guard Navigation Center will use this information to disseminate navigation safety notices and updates to individuals upon request and to receive reports of aid to navigation outages, issues or discrepancies.

Routine Uses: Coast Guard personnel will use this information to disseminate safety notices and updates and to aid in the repair or investigate reports of navigation outages, issues or discrepancies. Any external disclosures of data within this record will be made in accordance with DHS/ALL-002, Department of Homeland Security General Contact Lists, 73 Federal Register 71659, November 25, 2008, and DHS/USCG-013, Marine Information for Safety and Law Enforcement System of Records, 74 Federal Register 30305, June 25, 2009.

Disclosure: Furnishing this information is voluntary; however, failure to furnish the requested information may hinder your request for navigation safety related information.

* Denotes a required field

Your Name:* (Our Privacy Policy)	Josh Hiteshew
Your Email Address:*	joshua.hiteshew@noaa.gov
Your Phone number:	[redacted]
Waterway/Area:*	Bahia de Guayanilla State:* PR
Your Vessel's Name:	NOAA ship Thomas Jefferson
Type of Vessel:	Hydrographic survey vessel
DOC#/ HIN / VIN / State #:	S222
AID Name (from Light List):	Bahia de Tallaboa Buoy 8
Light List Number (LLNR):	32045
Structure Discrepancy:*	Destroyed: ○ Damaged: ○ Leaning: ○ Missing Dayboards: ○ None: ◉
or *Buoy Discrepancy:	Missing: ○ Off Station: ◉ Sinking: ○ Adrift: ○ AIS ATON: ○ None: ○
or *Lighted ATON Discrepancy:	Extinguished: ○ Improper Characteristic: ○ Burning Dim: ○ None: ◉
or *Other type of discrepancy:	
* Does a hazard to navigation exist?	Yes: ○ No: ◉

Please enter any additional comments or suggestions:

Buoy is off station at 17/58/36.49N, 066/43/31.99W

Print-friendly

ATON DISCREPANCY REPORT FORM

Navigation Center Website Privacy Act Statement

Authority: 5 U.S.C 301; 14 U.S.C. 93(a) and (c); 14 U.S.C 632; 33 U.S.C 1223

Purpose: The Coast Guard Navigation Center will use this information to disseminate navigation safety notices and updates to individuals upon request and to receive reports of aid to navigation outages, issues or discrepancies.

Routine Uses: Coast Guard personnel will use this information to disseminate safety notices and updates and to aid in the repair or investigate reports of navigation outages, issues or discrepancies. Any external disclosures of data within this record will be made in accordance with DHS/ALL-002, Department of Homeland Security General Contact Lists, 73 Federal Register 71659, November 25, 2008, and DHS/USCG-013, Marine Information for Safety and Law Enforcement System of Records, 74 Federal Register 30305, June 25, 2009.

Disclosure: Furnishing this information is voluntary; however, failure to furnish the requested information may hinder your request for navigation safety related information.

* Denotes a required field

Your Name:* (Our Privacy Policy)	Josh Hiteshew
Your Email Address:*	joshua.hiteshew@noaa.gov
Your Phone number:	[redacted]
Waterway/Area:*	Bahia de Guayanilla State:* PR
Your Vessel's Name:	NOAA ship Thomas Jefferson
Type of Vessel:	Hydrographic survey vessel
DOC#/ HIN / VIN / State #:	S222
AID Name (from Light List):	PPG Industries Lighted Buoy 2
Light List Number (LLNR):	32155
Structure Discrepancy:*	Destroyed: ○ Damaged: ○ Leaning: ○ Missing Dayboards: ○ None: ◉
or *Buoy Discrepancy:	Missing: ◉ Off Station: ○ Sinking: ○ Adrift: ○ AIS ATON: ○ None: ○
or *Lighted ATON Discrepancy:	Extinguished: ○ Improper Characteristic: ○ Burning Dim: ○ None: ◉
or *Other type of discrepancy:	
* Does a hazard to navigation exist?	Yes: ○ No: ◉

Please enter any additional comments or suggestions:

Buoy not found visually or by object detection multibeam coverage.

ATON DISCREPANCY REPORT FORM

Navigation Center Website Privacy Act Statement

Authority: 5 U.S.C 301; 14 U.S.C. 93(a) and (c); 14 U.S.C 632; 33 U.S.C 1223

Purpose: The Coast Guard Navigation Center will use this information to disseminate navigation safety notices and updates to individuals upon request and to receive reports of aid to navigation outages, issues or discrepancies.

Routine Uses: Coast Guard personnel will use this information to disseminate safety notices and updates and to aid in the repair or investigate reports of navigation outages, issues or discrepancies. Any external disclosures of data within this record will be made in accordance with DHS/ALL-002, Department of Homeland Security General Contact Lists, 73 Federal Register 71659, November 25, 2008, and DHS/USCG-013, Marine Information for Safety and Law Enforcement System of Records, 74 Federal Register 30305, June 25, 2009.

Disclosure: Furnishing this information is voluntary; however, failure to furnish the requested information may hinder your request for navigation safety related information.

* Denotes a required field

Your Name:* (Our Privacy Policy)	Josh Hiteshew
Your Email Address:*	joshua.hiteshew@noaa.gov
Your Phone number:	[redacted]
Waterway/Area:*	Bahia de Guayanilla State:* PR
Your Vessel's Name:	NOAA ship Thomas Jefferson
Type of Vessel:	Hydrographic survey vessel
DOC#/ HIN / VIN / State #:	S222
AID Name (from Light List):	Bahia de Tallaboa Lighted Buoy 5
Light List Number (LLNR):	32020
Structure Discrepancy:*	Destroyed: ○ Damaged: ○ Leaning: ○ Missing Dayboards: ○ None: ◉
or *Buoy Discrepancy:	Missing: ○ Off Station: ◉ Sinking: ○ Adrift: ○ AIS ATON: ○ None: ○
or *Lighted ATON Discrepancy:	Extinguished: ○ Improper Characteristic: ○ Burning Dim: ○ None: ◉
or *Other type of discrepancy:	
* Does a hazard to navigation exist?	Yes: ○ No: ◉

Please enter any additional comments or suggestions:

```
Buoy is off station at 17/58/12.56N, 066/44/18.06W
```

ATON DISCREPANCY REPORT FORM

Navigation Center Website Privacy Act Statement

Authority: 5 U.S.C 301; 14 U.S.C. 93(a) and (c); 14 U.S.C 632; 33 U.S.C 1223

Purpose: The Coast Guard Navigation Center will use this information to disseminate navigation safety notices and updates to individuals upon request and to receive reports of aid to navigation outages, issues or discrepancies.

Routine Uses: Coast Guard personnel will use this information to disseminate safety notices and updates and to aid in the repair or investigate reports of navigation outages, issues or discrepancies. Any external disclosures of data within this record will be made in accordance with DHS/ALL-002, Department of Homeland Security General Contact Lists, 73 Federal Register 71659, November 25, 2008, and DHS/USCG-013, Marine Information for Safety and Law Enforcement System of Records, 74 Federal Register 30305, June 25, 2009.

Disclosure: Furnishing this information is voluntary; however, failure to furnish the requested information may hinder your request for navigation safety related information.

* Denotes a required field

Your Name:* (Our Privacy Policy)	Josh Hiteshew
Your Email Address:*	joshua.hiteshew@noaa.gov
Your Phone number:	[redacted]
Waterway/Area:*	Bahia de Guayanilla State:* PR
Your Vessel's Name:	NOAA ship Thomas Jefferson
Type of Vessel:	Hydrographic survey vessel
DOC#/ HIN / VIN / State #:	S222
AID Name (from Light List):	PPG Industries Lighted Buoy 3
Light List Number (LLNR):	32160
Structure Discrepancy:*	Destroyed: ○ Damaged: ○ Leaning: ○ Missing Dayboards: ○ None: ◉
or *Buoy Discrepancy:	Missing: ◉ Off Station: ○ Sinking: ○ Adrift: ○ AIS ATON: ○ None: ○
or *Lighted ATON Discrepancy:	Extinguished: ○ Improper Characteristic: ○ Burning Dim: ○ None: ◉
or *Other type of discrepancy:	
* Does a hazard to navigation exist?	Yes: ○ No: ◉

Please enter any additional comments or suggestions:

Buoy not found visually or by object detection multibeam coverage.

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

Exposed charted pipelines found in NOAA Survey H13141 in Bahia de Tallaboa

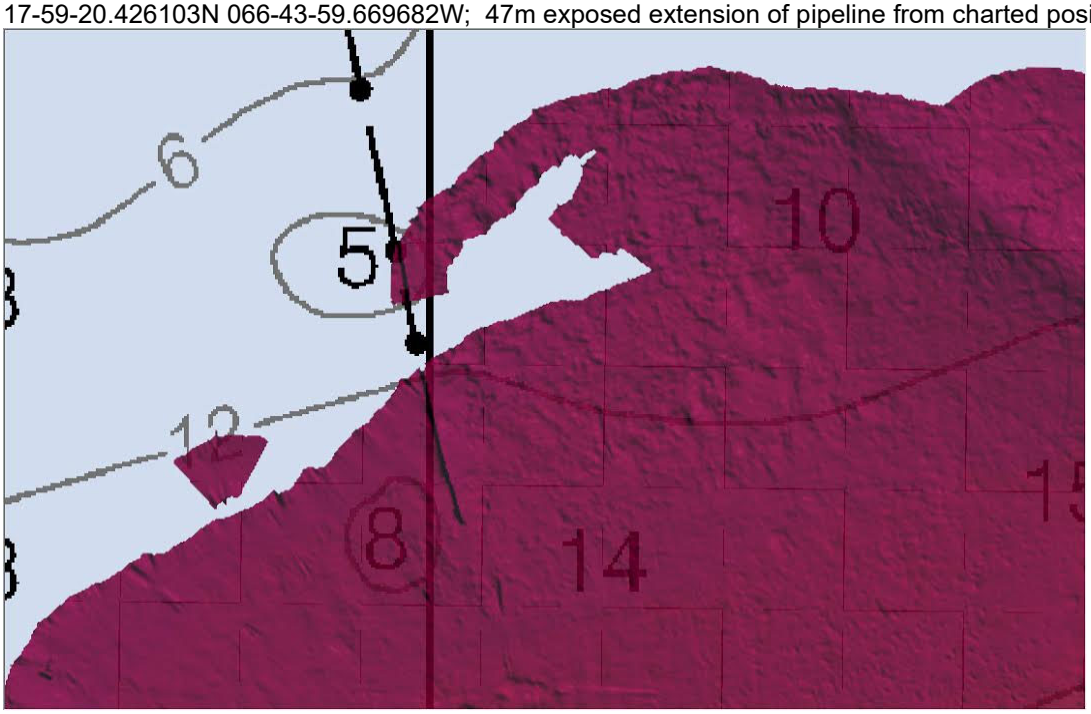
1 message

ChiefST.Thomas Jefferson - NOAA Service Account <chiefst.thomas.jefferson@noaa.gov> Thu, Feb 7, 2019 at 10:23 AM
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 morning,

NOAA Hydrographic Survey H13141 by the NOAA Ship *Thomas Jefferson* indicates there is one area of exposed pipeline at the following location(s):

17-59-20.426103N 066-43-59.669682W; 47m exposed extension of pipeline from charted position.



V/r,

Josh

--
CST Joshua Hiteshew, NOAA
NOAA Ship *Thomas Jefferson*
757-647-0187 ship cell
541-867-8927 voip
808-434-2706 irridium

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

Anti-DTON H13141 OPR-I369-TJ-18

6 messages

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Sat, Sep 15, 2018 at 4:56 PM
To: _NOS OCS HSD AHB Danger to Navigation <ahb.dton@noaa.gov>
Cc: Briana Welton - NOAA Federal <Briana.Hillstrom@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, Corey personal cell Allen <corey.allen@noaa.gov>, Christina Belton - NOAA Affiliate <christina.belton@noaa.gov>, Douglas Wood <douglas.wood@noaa.gov>, Joshua Hiteshew - NOAA Federal <joshua.hiteshew@noaa.gov>

Good afternoon,

Attached is the Anti-DTON Report for H13141. It consists of the following disproval:

- Charted 24ft obstn along pierface in Bahia de Guayanilla was disproved with object detection multibeam echosounder. From discussions with the local Puerto Rico South Coast Pilot, they regularly pull 28ft draft fuel barges and tankers alongside that pier.

LT Anthony Klemm, NOAA
Field Operations Officer
NOAA Ship *Thomas Jefferson*
439 W York Street
Norfolk, VA 23510
757-647-0187

Learn about NOAA nautical charts - www.nauticalcharts.noaa.gov

H13141_Anti-DTON.zip
1872K

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Mon, Sep 17, 2018 at 7:20 AM
To: NDB E-Mailbox <OCS.NDB@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

[Quoted text hidden]

H13141_Anti-DTON.zip
1872K

OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> Tue, Sep 18, 2018 at 11:00 AM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Hi Anthony,

This anti-DtoN submission has a timestamp of 08/03/2001, which is outside the survey date range of 8/20/2018 - 9/7/2018. Would you please verify? In this case, if the date needs to be corrected and it's easier, NDB can redline the report because there's only one feature in the submission.

Thanks!
Diane

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

[Quoted text hidden]

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Tue, Sep 18, 2018 at 11:20 AM
To: NDB E-Mailbox <ocs.ndb@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Hi Diane,

Please the redline the date/timestamp to 9/7/2018. We'll be more careful next time.

Thanks for your help! FYI, I'm updating the H13140 report now. Hopefully I'll get it back to you soon.

Best,
Anthony

LT Anthony Klemm, NOAA
Field Operations Officer
NOAA Ship *Thomas Jefferson*
439 W York Street
Norfolk, VA 23510
757-647-0187

Learn about NOAA nautical charts - www.nauticalcharts.noaa.gov

[Quoted text hidden]

OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> Tue, Sep 18, 2018 at 11:37 AM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Perfect; thanks!

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

[Quoted text hidden]

OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> Tue, Sep 18, 2018 at 3:02 PM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>

Cc: _OMAO MOA OPS Thomas Jefferson <ops.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>, Nautical Data Branch <OCS.NDB@noaa.gov>, NSD Coast Pilot <coast.pilot@noaa.gov>, PHB Chief <PHB.Chief@noaa.gov>, Tara Wallace <Tara.Wallace@noaa.gov>

DD-29889 has been registered by the Nautical Data Branch and directed to Products Branch G for processing.

The Anti-DtoN reported consists of the disproval of one charted submerged obstruction located in Bahia de Guayanilla, Puerto Rico.

The following chart is affected:
25681 kapp 407

The following ENC is affected:
US5PR44M

References:
H13141
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]

H13141_Anti-DTON.zip
1872K

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

DTON H13141 OPR-I369-TJ-18

3 messages

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Sat, Sep 15, 2018 at 4:44 PM
To: _NOS OCS HSD AHB Danger to Navigation <ahb.dton@noaa.gov>
Cc: Briana Welton - NOAA Federal <Briana.Hillstrom@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, Corey personal cell Allen <corey.allen@noaa.gov>, Christina Belton - NOAA Affiliate <christina.belton@noaa.gov>, Douglas Wood <douglas.wood@noaa.gov>, Joshua Hiteshew - NOAA Federal <joshua.hiteshew@noaa.gov>

Good afternoon,

Attached is the DTON Report for H13141. It consists of the follow features:

- 1.1) Foul area full of debris (trees?) near the mouth of the Rio Guayanilla. This area is used for anchoring (as described in the Coast Pilot, and by field unit observation)
- 1.2) 9ft depth observed near pierface next to 16ft charted sounding. Large vessels have been observed using the pier in a Mediterranean-mooring fashion, offloading large fuel-carrying tractor trailers
- 1.3) Uncharted 10ft coral head observed near charted 24ft sounding. This area may be where vessels would consider anchoring due to the protection from the nearby mangrove cay.
- 1.4 and 1.5) 30 and 27ft depths observed near charted 33 and 32ft soundings (respectively) very near deep-draft LNG terminal in Bahia de Tallaboa

Also attached is the .000 S-57 file (in NOAA Profile 5.8) so cartographers can access the recommended foul area geometry.

Please let me know if you have any questions.

Best regards,
Anthony

LT Anthony Klemm, NOAA
Field Operations Officer
NOAA Ship *Thomas Jefferson*
439 W York Street
Norfolk, VA 23510
757-647-0187

Learn about NOAA nautical charts - www.nauticalcharts.noaa.gov

2 attachments

H13141_DTON.zip
10565K

H13141_DTON.000
5K

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Mon, Sep 17, 2018 at 7:19 AM
To: NDB E-Mailbox <OCS.NDB@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

[Quoted text hidden]

2 attachments

H13141_DTON.zip
10565K

H13141_DTON.000
5K

OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> Mon, Sep 17, 2018 at 3:05 PM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>
Cc: _NOS OCS HSD AHB Danger to Navigation <ahb.dton@noaa.gov>, Briana Hillstrom - NOAA Federal <Briana.Hillstrom@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <OPS.Thomas.Jefferson@noaa.gov>, _NMAO MOA CO Thomas Jefferson <CO.Thomas.Jefferson@noaa.gov>, Corey Allen <Corey.Allen@noaa.gov>, Christina Belton - NOAA Federal <christina.belton@noaa.gov>, Douglas Wood - NOAA Federal <douglas.wood@noaa.gov>, Joshua Hiteshew - NOAA Federal <joshua.hiteshew@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-29881 has been registered by the Nautical Data Branch and directed to Products Branch G for processing.

The DtoNs reported are several shoals and obstructions in Bahia de Guayanilla and Bahia de Tallaboa.

The following chart is affected:
25681 kapp 407

The following ENC is affected:
US5PR44M

References:
H13141
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]

---

2 attachments

H13141_DTON.zip
10565K

H13141_DTON.000
5K

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

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Marine and Aviation Operations,
Marine Operation Center-Atlantic, NOAA Ship Thomas Jefferson
Norfolk, Virginia 23510

April 16, 2018

MEMORANDUM FOR: Jay Nunenkamp
Environmental Compliance Coordinator, NOAA Office of Coast Survey

FROM: ENS Jacquelyn Putnam, NOAA
Junior Officer, NOAA Ship *Thomas Jefferson*

SUBJECT: Recipients of Marine Species Awareness Training

The following personnel of NOAA Ship *Thomas Jefferson* completed the required Marine Species Awareness Training (MSAT) on April 4, 2018:

- LCDR Meghan McGovern
- LT Anthony Klemm
- LT Charles Wisotzkey
- ENS Dale Gump
- ENS Sydney Catoire
- ENS Garrison Grant
- ENS Jacquelyn Putnam
- ENS Taylor Krabiel
- JUE Sharon Gilliam
- EU Andy Medina
- WP Michael Wilson
- ET Thomas Loftin
- ET Richard Conway
- CHST Allison Stone
- HST Kim Glomb
- HST Joshua Hiteshew
- HST Tracey McMillan
- HAST Kevin Brown
- CB Bernard Pooser
- BGL Robert Bayliss
- SS Francine Grains
- SS James Brzostek

- AB Patrick Osborn
- AB Tom Bascom
- AB Stephen Lovett
- GVA Joshua Thompson
- CC Ace Burke
- 2C Patrick Fennel
- 2C Nester Poblete

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Marine and Aviation Operations
NOAA Ship *Thomas Jefferson* (S222)
439 West York St, Norfolk, VA 23510

3/29/2018

MEMORANDUM FOR: Corey Allen
Acting Chief, Operations Branch
Hydrographic Surveys Division

VAN WESTENDORP.CHRISTIAAN.HENRY.1012828175
c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=NOAA, cn=VAN WESTENDORP.CHRISTIAAN.HENRY.1012828175
2018.03.30 09:57:32 -04'00'

FROM: Commander Christiaan van Westendorp, NOAA
Commanding Officer, NOAA Ship *Thomas Jefferson*

SUBJECT: Waiver request – WGS84 Datum, CY2018 Projects

Thomas Jefferson requests a waiver of the HSSD 2017 and HSSD 2018 Section 2.2 Horizontal Datum requirement to acquire and submit survey data in WGS84 rather than NAD83 for all projects in calendar year 2018.

Justification

Retaining the current procedure and configurations will reduce the possibility of errors.

Decision

Waiver is: Granted _____ Denied _____

cc: OPS, *Thomas Jefferson*
HCST, *Thomas Jefferson*

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Marine and Aviation Operations
NOAA Ship *Thomas Jefferson* (S222)
439 West York St, Norfolk, VA 23510

August 7, 2018

MEMORANDUM FOR: Christina Belton
Project Manager, OPR-I369-TJ-18
Hydrographic Surveys Division Operations Branch

FROM: Commander Chris van Westendorp, NOAA
Commanding Officer, NOAA Ship *Thomas Jefferson*

VAN WESTENDORP.CHRISTIAAN.HENRY.1012828175
c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=NOAA, cn=VAN WESTENDORP.CHRISTIAAN.HENRY.1012828175
2018.08.07 18:17:52 -05'00'

SUBJECT: Waiver request to modify OPR-I369-TJ-18 sheet extents

Thomas Jefferson requests a waiver of Project Instructions OPR-I369-TJ-18 based on available lidar.

Justification

In consultation with the Chief of AHB and with assistance from AHB's PS James Miller in planning for OPR-I369-TJ-18 (Puerto Rico), we discovered high quality topobathy lidar datasets (1m DEMs) from the USACE CZMIL system, flown in 2016. Combined with the RSD lidar datasets also available on NOAA's Digital Coast data repository, we created a 5m lidar DEM in common areas with our assigned project. We assess that existing lidar coverage satisfies Coast Survey's requirements in non-object detection areas of OPR-I369-TJ-18 due to observed high quality of existing and relatively recently acquired datasets available, especially in 200m set line spacing requirement areas (outlined green in Figure 1).

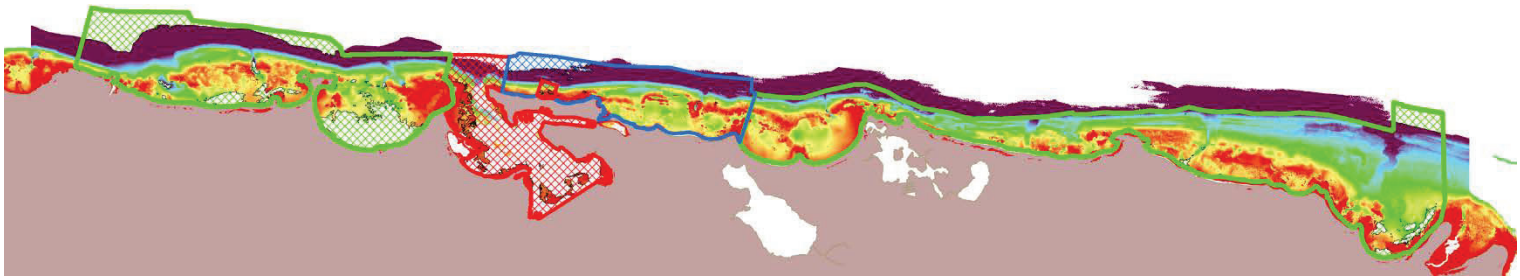


Figure 1: Extents of USACE and RSD lidar coverage overlapping H13041

We intend/propose to clip the assigned sheets with set line spacing and complete coverage requirements to existing lidar coverage extents that have been preliminarily reviewed (ESDRed) by PS James Miller and deemed suitable for charting. For sheets with object detection requirements, the lidar will be used for reconnaissance and to outline the 3.5m NALL. In the areas clipped to lidar coverage, we will identify assigned features to investigate where safe and practicable to do so, more fully developing significant features and providing proper hydrographic feature attribution.

We also intend to collect adequate overlap in junction areas, and identify lidar data areas for small reference surfaces and further empirical accuracy evaluation.

Similarly, one southern assigned complete coverage sheet significantly overlaps with the eastern edge of recently acquired EM710 MBES from a *Nancy Foster* mapping project (NCCOS, preliminary products shared by Tim Battista). We intend to junction with the NF survey data and clip our sheet extent accordingly (Figure 2):

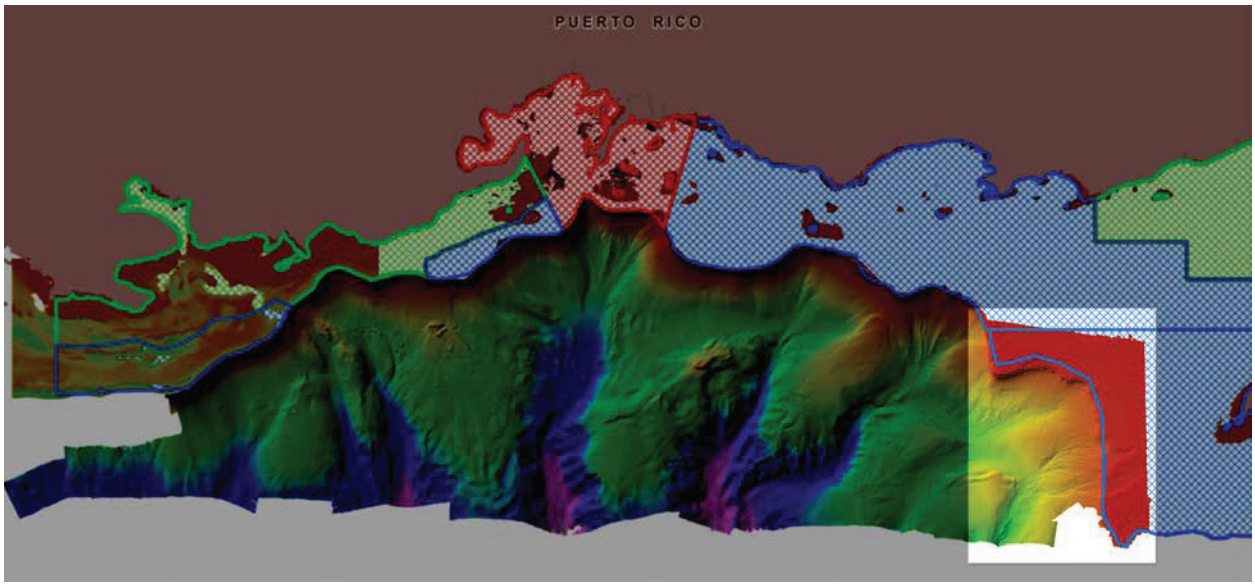


Figure 2: *Nancy Foster* survey extents overlapping H13144

These actions will reduce the assigned project area from 308 SNM to ~250 SNM. The Chief of AHB and I agree that using this existing high quality data increases operational safety, efficiency, and overall productivity.

<u>*Decision*</u>

Waiver is:

BELTON.CHRISTINA.KIA.1501618345 Digitally signed by BELTON.CHRISTINA.KIA.1501618345 Date: 2018.08.13 06:59:53 -04'00'

Granted

Denied

cc: Chief, HSD OPS
Chief, AHB
OPS, *Thomas Jefferson*
HCST, *Thomas Jefferson*

APPROVAL PAGE

H13141

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
- Collection of Bathymetric Attributed Grids (BAGs)
- Processed survey data and records
- Geospatial PDF of survey products

The survey evaluation and verification has 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.

Meghan McGovern Date: 2020.09.22 13:27:04 -04'00'

Approved:_____

Commander Meghan McGovern, NOAA
Chief, Atlantic Hydrographic Branch