H13140

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

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area
Registry Number:	H13140

LOCALITY

State(s):	Puerto Rico
General Locality:	San Juan and Ponce and Vicinities
Sub-locality:	Punta Miquillo to Punta Fraile

2018

CHIEF OF PARTY
Briana Hillstrom, CDR/ NOAA

LIBRARY & ARCHIVES

Date:

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H13140**

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:	**Punta Miquillo to Punta Fraile**
Scale:	**5000**
Dates of Survey:	**09/13/2018 to 10/12/2018**
Instructions Dated:	**06/05/2018**
Project Number:	**OPR-I369-TJ-18**
Field Unit:	**NOAA Ship *Thomas Jefferson***
Chief of Party:	**Briana Hillstrom, CDR/ 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:

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

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Descriptive Report to Accompany Survey H13140

Project: OPR-I369-TJ-18

Locality: San Juan and Ponce and Vicinities

Sublocality: Punta Miquillo to Punta Fraile

Scale: 1:5000

September 2018 - October 2018

NOAA Ship *Thomas Jefferson*

Chief of Party: Briana Hillstrom, CDR/ NOAA

A. Area Surveyed

Survey H13140 is located within the San Juan Harbor, in the vicinity of San Juan, Puerto Rico (Figure 1 and Figure 2). Survey data were acquired in accordance with the requirements set forth by the Project Instructions(PI) OPR-I369-TJ-18 and the Hydrographic Surveys Specifications and Deliverables (HSSD) dated April 2018.

A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
18° 28' 32.72" N 66° 7' 49.63" W	18° 26' 28.91" N 66° 5' 8.58" W

Table 1: Survey Limits

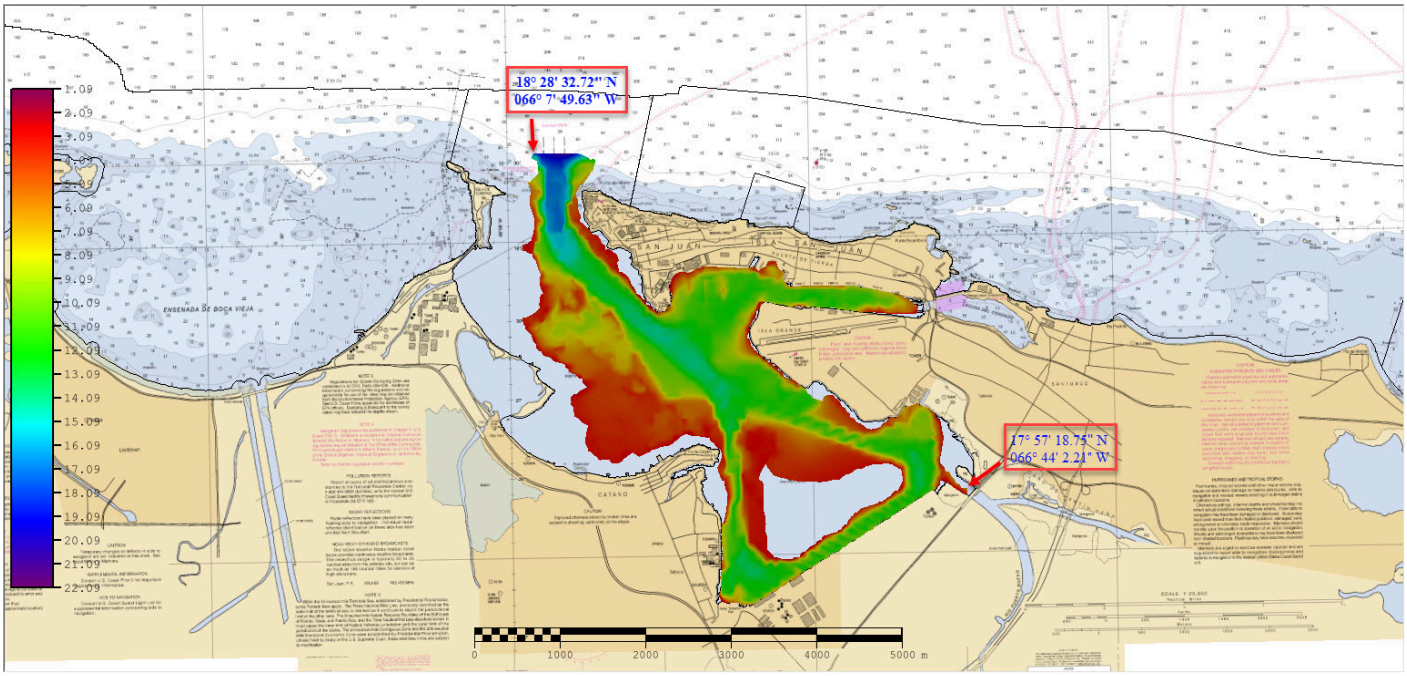


Figure 1: Survey layout for OPR-I369-TJ-18 (black lines), H13140 plotted over RNC 25669.

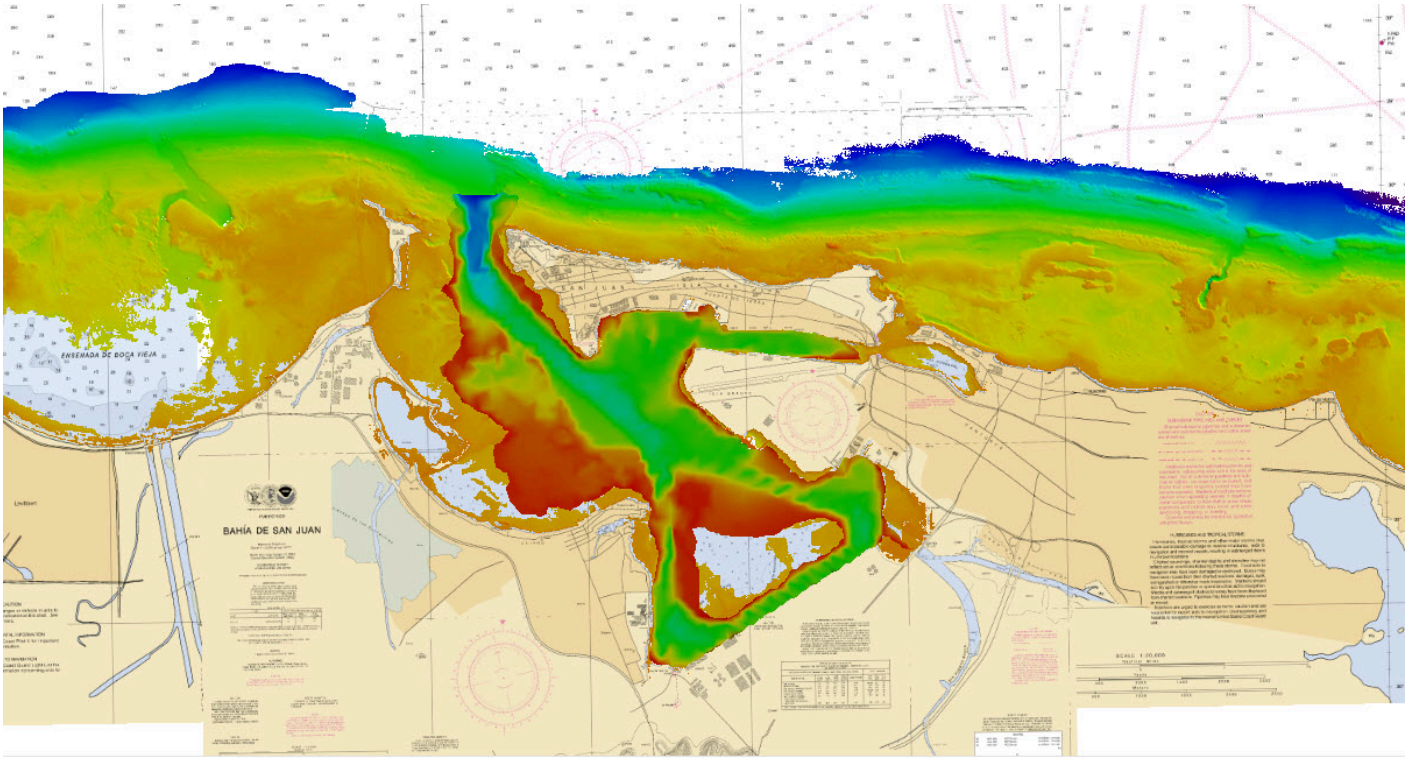


Figure 2: Survey H13140 data overlayed on USACE LiDAR data.

Survey coverage for H13140 was adjusted to account for available high quality U.S. Army Corps of Engineers (USACE) LiDAR data and field unit operational constraints. Only the portions of the assigned

sheet limits within San Juan Harbor were surveyed. The near shore extent of survey was adjusted to be either 3.5 meters of depth or the extent of LiDAR coverage. Survey coverage adjustments were made with approval from the Project Manager (see Appendix II). Assigned features outside of the updated survey limit were investigated where feasible, except where otherwise noted in the Final Feature File.

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% off 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 bathymetric technology. 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 subsequent dangers to navigation. 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. The purpose of this survey was to a) revist an affected port to verify if dangerous obstruction had been removed and b) to provide critical updates to nautical charts in this region.

A.3 Survey Quality

The entire survey is adequate to supersede previous data.

A.4 Survey Coverage

The following table lists the coverage requirements for this survey as assigned in the project instructions:

Water Depth	Coverage Required
Varying waters in the survey area	Complete Coverage (Refer to HSSD Section 5.2.2.3)
Varying waters in the survey area	Object Detection Coverage (Refer to HSSD Section 5.2.2.2)
Varying waters in the survey area	Set Line Spacing (Refer to HSSD Section 5.2.2.4)

Table 2: Survey Coverage

Per the OPR-I396-TJ-18 Project Instructions (PI), there were multiple coverage requirements assigned for survey H13140 (Figure 3); however, the survey limits for Survey H13140 were adjusted based on pre-existing LIDAR coverage and the entirety of the adjusted survey limits are within assigned Object Detection Coverage areas. H13140 multibeam echo sounding (MBES) data meets the density requirements set forth

in the HSSD 2018 for Object Detection Coverage. Survey H13140 products were produced at the object detection coverage specifications.

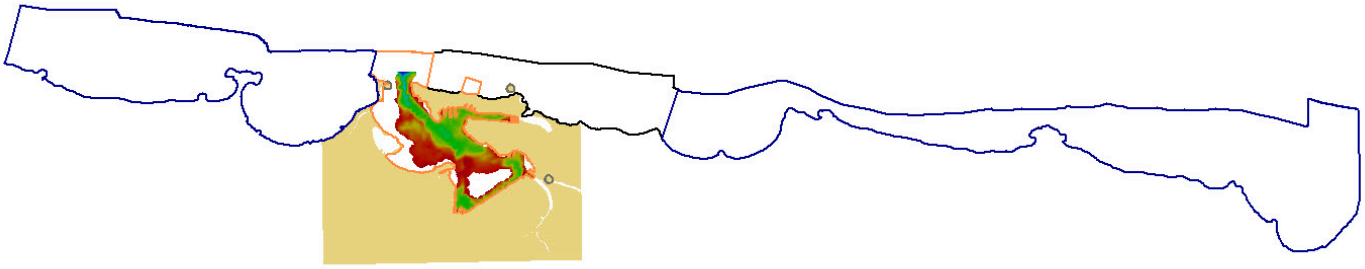


Figure 3: Survey H13140 sheet limits as set forth in the PI, plotted over ENC US5PR32M. The areas outlined in orange indicate assigned Object Detection Coverage areas; the areas outlined in purple indicate set Space Line Coverage areas; and the area outlined in black indicates Complete Coverage areas.

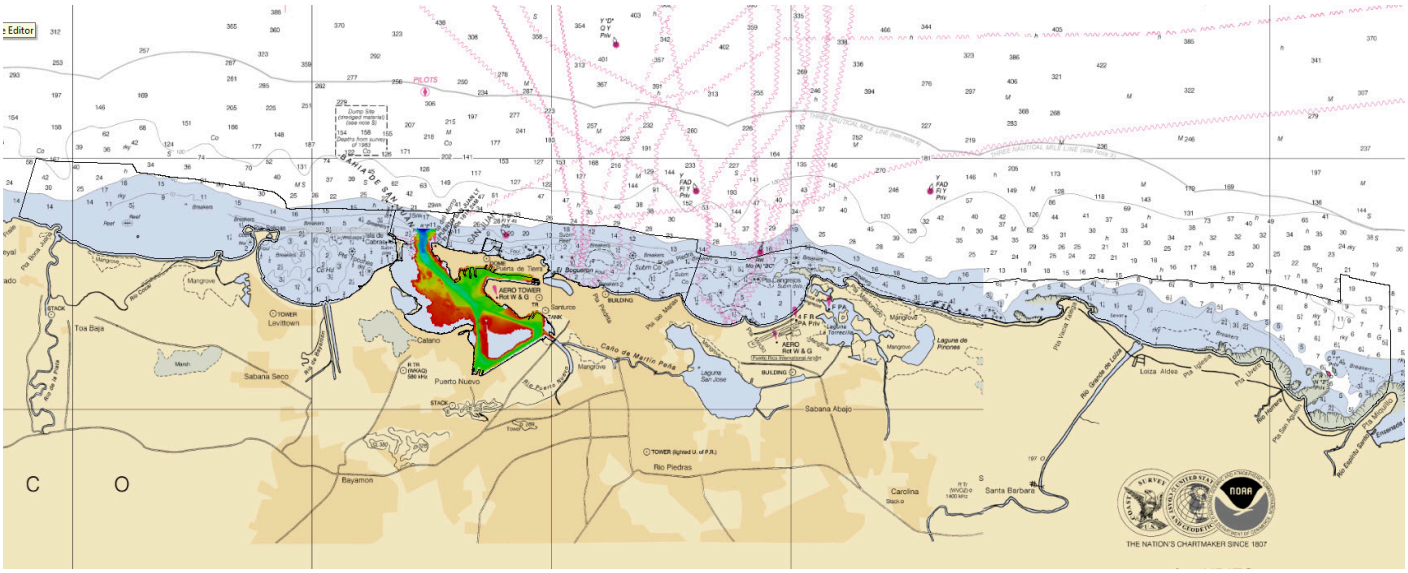


Figure 4: General Locality of H13140 MBES data plotted over RNC 25669 and RNC 25650.

A.6 Survey Statistics

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

	HULL ID	*2904*	*2903*	*Total*
LNM	**SBES Mainscheme**	0	0	0
	MBES Mainscheme	325.773	23.118	348.891
	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	14.963	0	14.963
	Lidar Crosslines	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				3.04

Table 3: Hydrographic Survey Statistics

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

Survey Dates	Day of the Year
09/13/2018	256
10/01/2018	274

Survey Dates	Day of the Year
10/02/2018	275
10/03/2018	276
10/04/2018	277
10/05/2018	278
10/06/2018	279
10/07/2018	280
10/08/2018	281
10/09/2018	282
10/10/2018	283
10/11/2018	284
10/12/2018	285

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:

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

Table 5: Vessels Used

Hydrographic Survey Launch (HSL) 2903 experienced mechanical issues causing it to stay alongside for the majority of data acquisition of survey H13140.

B.1.2 Equipment

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

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

Table 6: Major Systems Used

Vessel configurations, equiptment operations, and data aquisition 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 4.29% of mainscheme acquisition.

A variable resolution (VR) Combined Uncertainty and Bathymetry Estimator (CUBE) surface of mainscheme data and a VR CUBE surface of crossline data were differenced (Figure 5) - the resulting mean was 0.03m with a standard deviation of 0.05m (Figure 6). Visual inspection of the difference surface indicated no systematic issues.

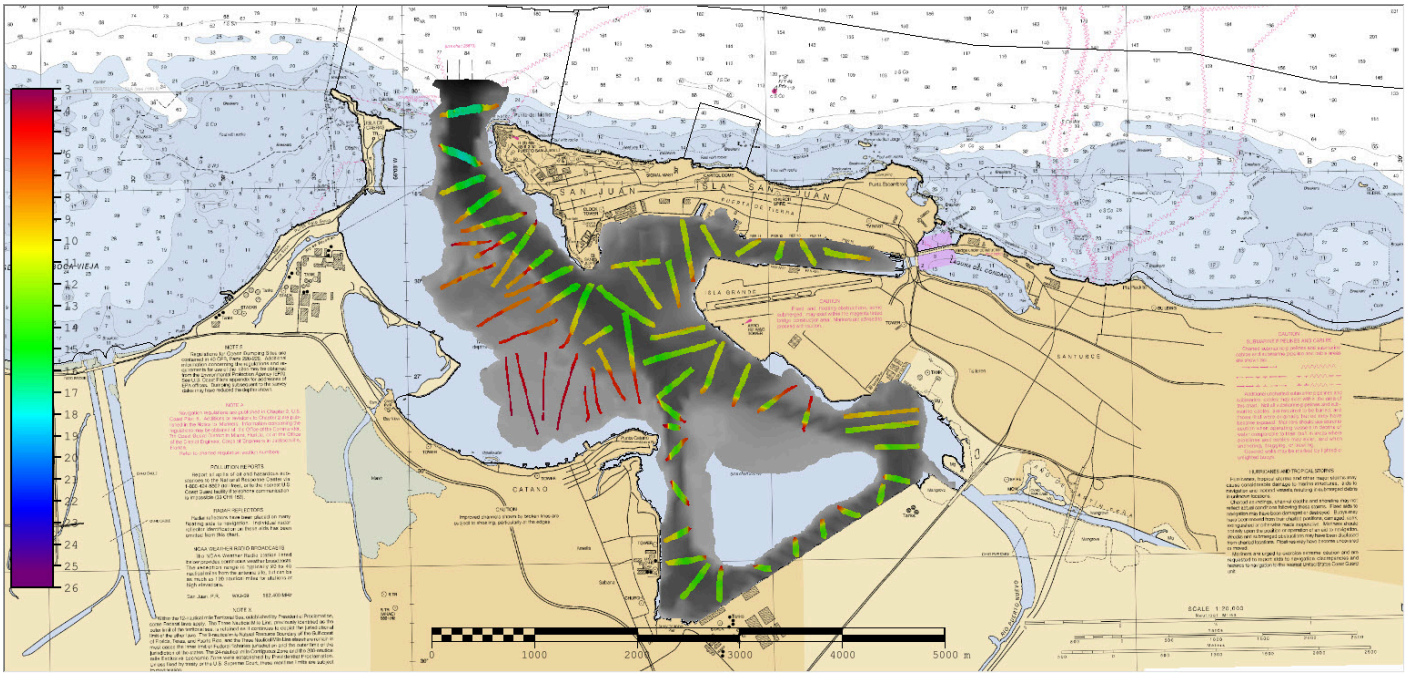
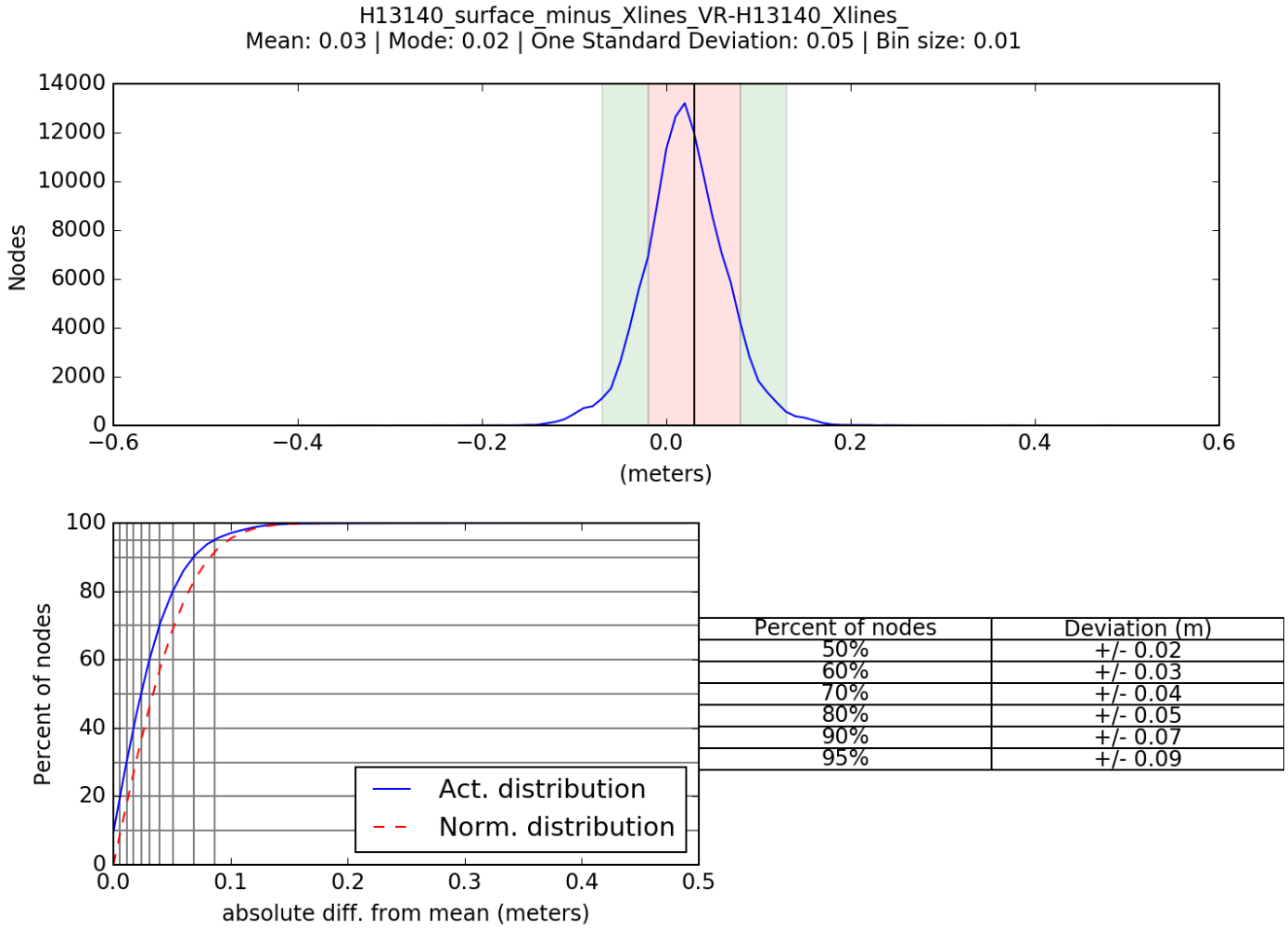


Figure 5: H13140 MBES crossline data, shown in color, overlaid on mainscheme data, shown in greyscale.



Percent of nodes	Deviation (m)
50%	+/- 0.02
60%	+/- 0.03
70%	+/- 0.04
80%	+/- 0.05
90%	+/- 0.07
95%	+/- 0.09

Figure 6: H13140 crossline/mainscheme comparison

B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

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
2904	4 meters/second	N/A	0.2 meters/second
2903	4 meters/second	N/A	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 7).

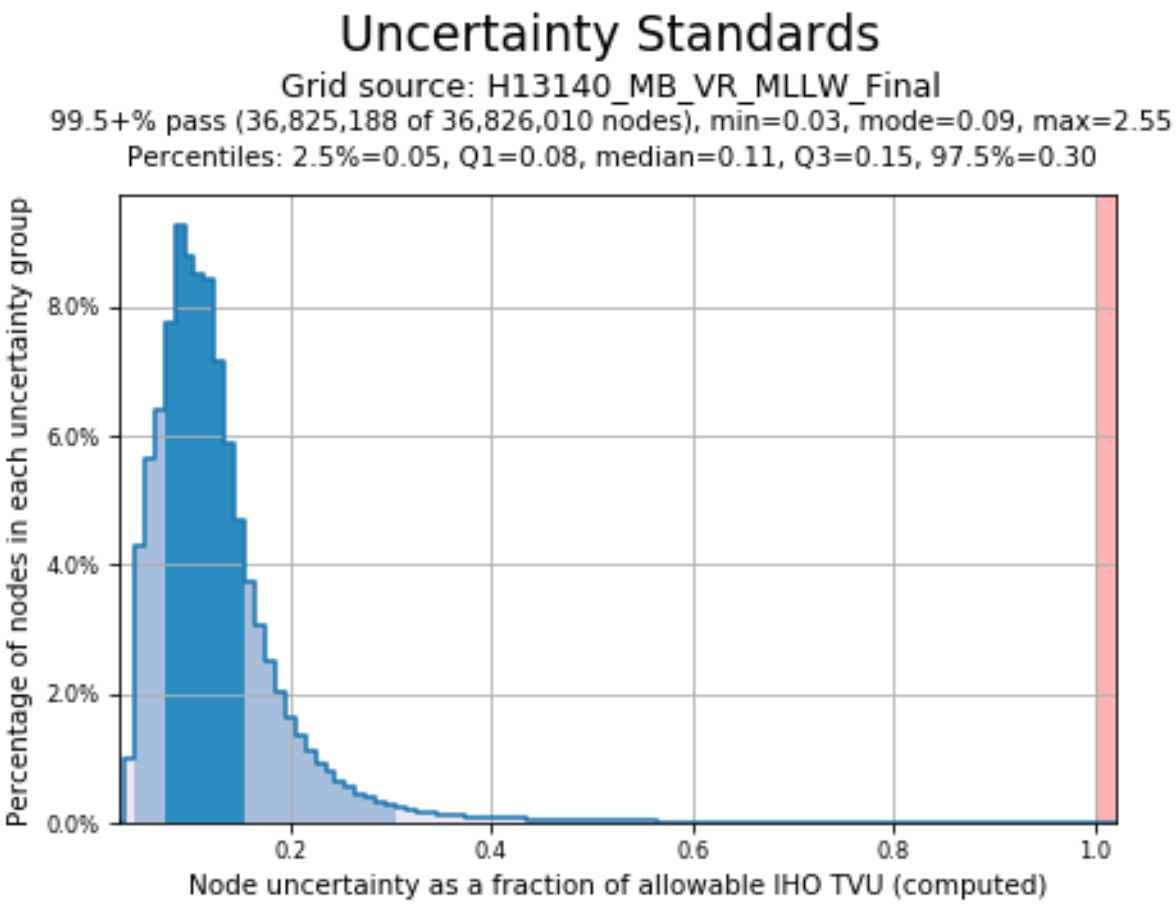


Figure 7: H13140 uncertanty standards

B.2.3 Junctions

There are no contemporary surveys that junction with this survey.

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

Factors Affecting Soundings

Sea state and weather conditions negatively impacted survey data in some areas near the entrance to the harbor. Data were rejected in areas where erroneous data could be distinguished from the sea floor (Figure 8); data were not rejected where erroneous data could not be distinguished from the sea floor.

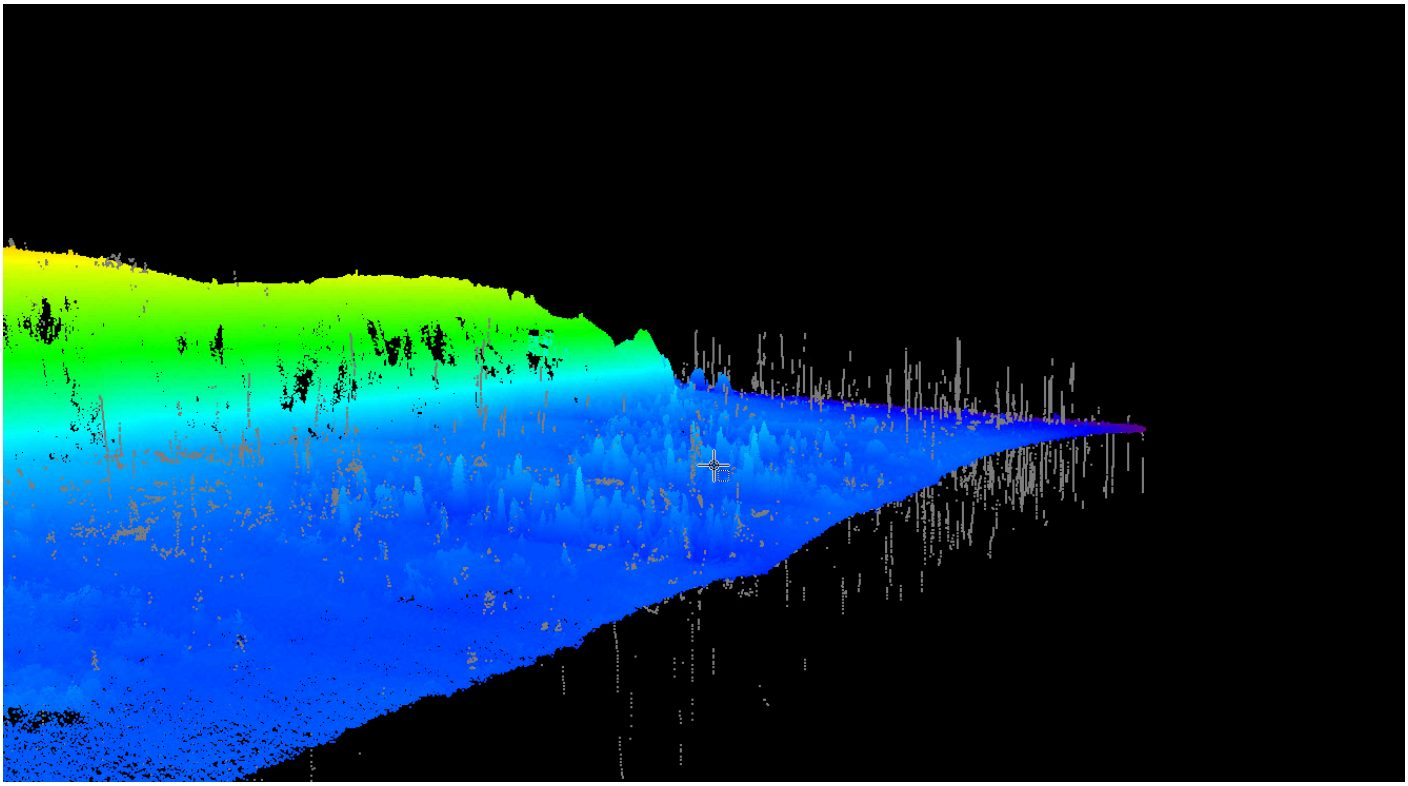


Figure 8: H13140 "Blowouts" with data rejected by filtering displayed in grey.

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 (Figure 9).

Sound speed corrections were applied in CARIS using Nearest in Distanec Within Time (NIDWT) of four hours for the entire survey.

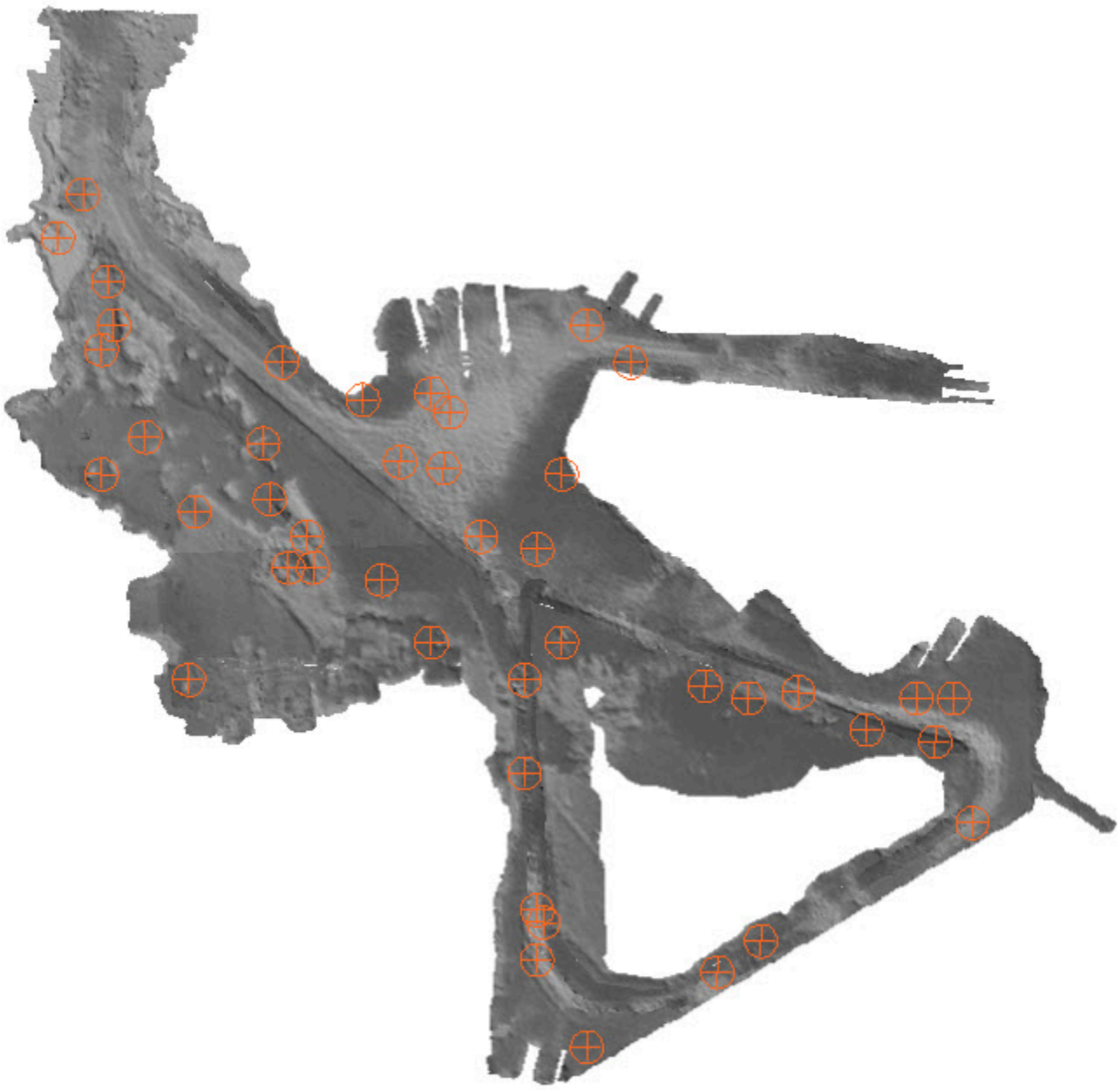


Figure 9: SVP cast distribution.

B.2.8 Coverage Equipment and Methods

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

B.3 Echo Sounding Corrections

B.3.1 Corrections to Echo Soundings

All data reduction procedures conform to those detailed in the DAPR.

B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

B.4 Backscatter

All equipment and survey methods were used as detailed in the DAPR. 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 10-12).

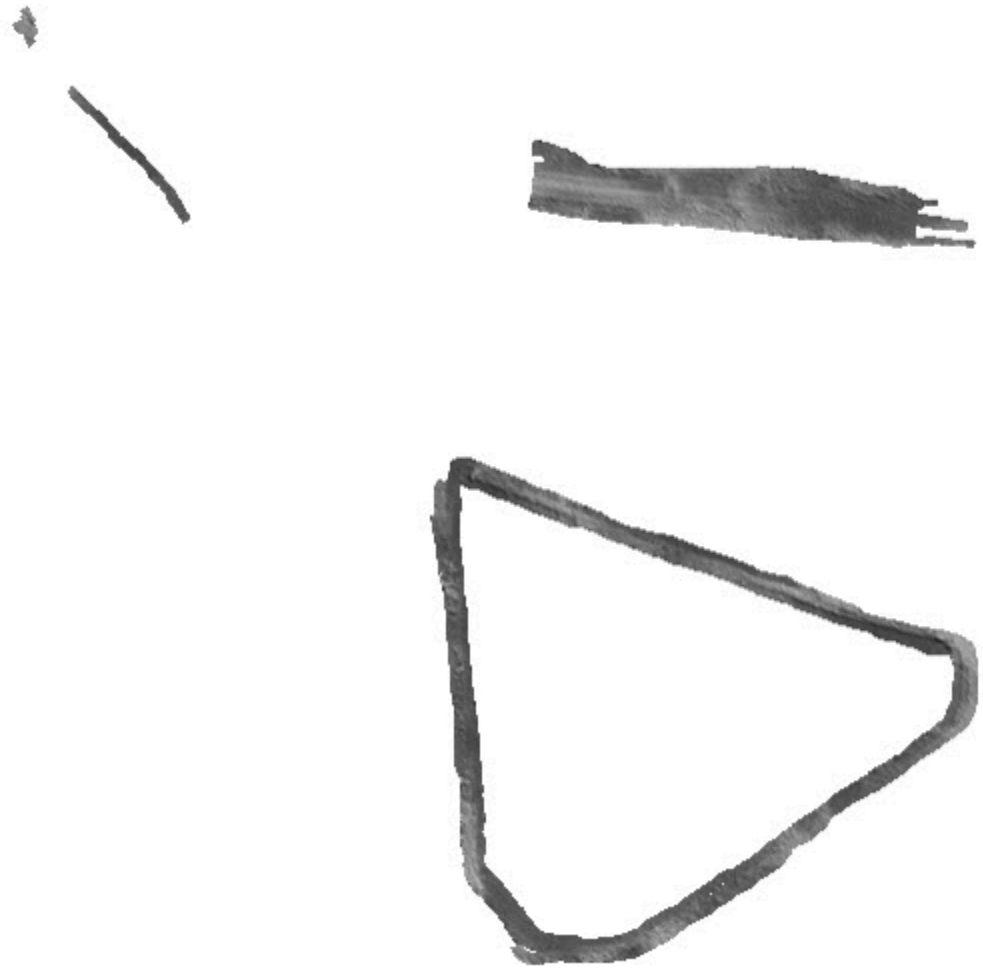


Figure 10: HSL 2903's 300kHz multibeam acoustic backscatter at 1m resolution.

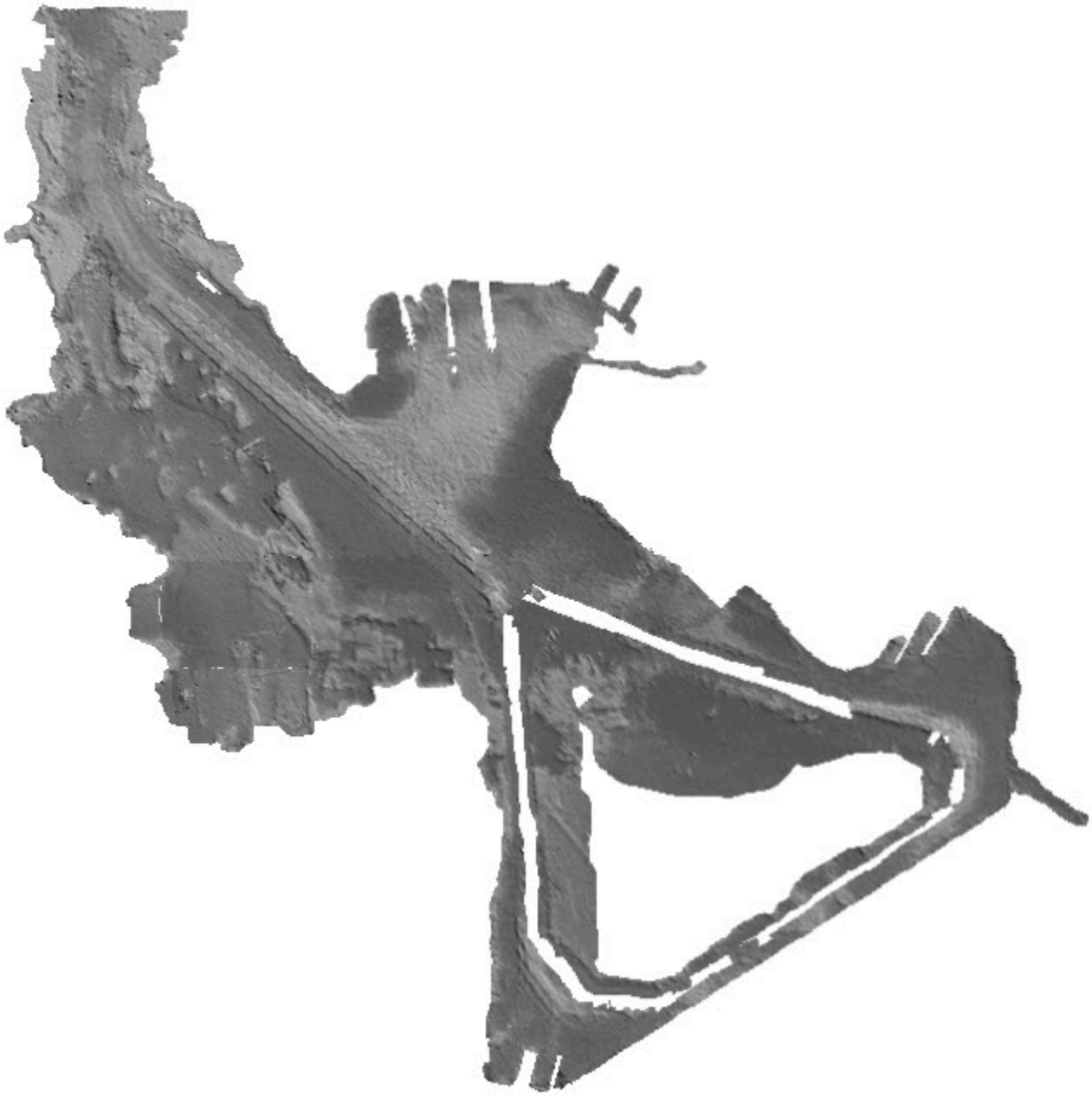


Figure 11: HSL 2904's 300kHz multibeam acoustic backscatter at 1m resolution.

Figure 12: HSL 2903 &2904 combined 300kHz multibeam acoustic backscatter at 1m resolution.

B.5 Data Processing

B.5.1 Primary Data Processing Software

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

Manufacturer	Name	Version
Caris	HIPS/SIPS	10.4

Table 9: Primary bathymetric data processing software

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

Manufacturer	Name	Version
QPS	Fledermaus Geocoder Toolbox	7.8.6

Table 10: Primary imagery data processing software

The following Feature Object Catalog was used: NOAA Profile V_5_8.

B.5.2 Surfaces

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

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H13140_MB_VR_MLLW_Final	CARIS VR Surface (CUBE)	Variable Resolution	1.3 meters - 21.8 meters	NOAA_VR	Object Detection
H13140_MBAB_1m_TJ2903_300kHz_1of4	MB Backscatter Mosaic	1 meters	-	N/A	Object Detection
H13140_MBAB_1m_TJ2904_200kHz_2of4	MB Backscatter Mosaic	1 meters	-	N/A	Object Detection
H13140_MBAB_1m_TJ2904_300kHz_3of4	MB Backscatter Mosaic	1 meters	-	N/A	Object Detection
H13140_MBAB_1m_TJ2904_400kHz_4of4	MB Backscatter Mosaic	1 meters	-	N/A	Object Detection

Table 11: Submitted Surfaces

Object Detection Coverage requirements were met by Object Detection multibeam coverage as specified under section 5.2.2.2 of the HSSD 2018. All bathymetric grids for H13140 meet density requirements per the HSSD 2018 (Figure 13).

Two holidays in waters deeper than the NALL (3.5m) and in areas that do not overlap with pre-existing LIDAR coverage exist within the main body of the final bathymetric grid.

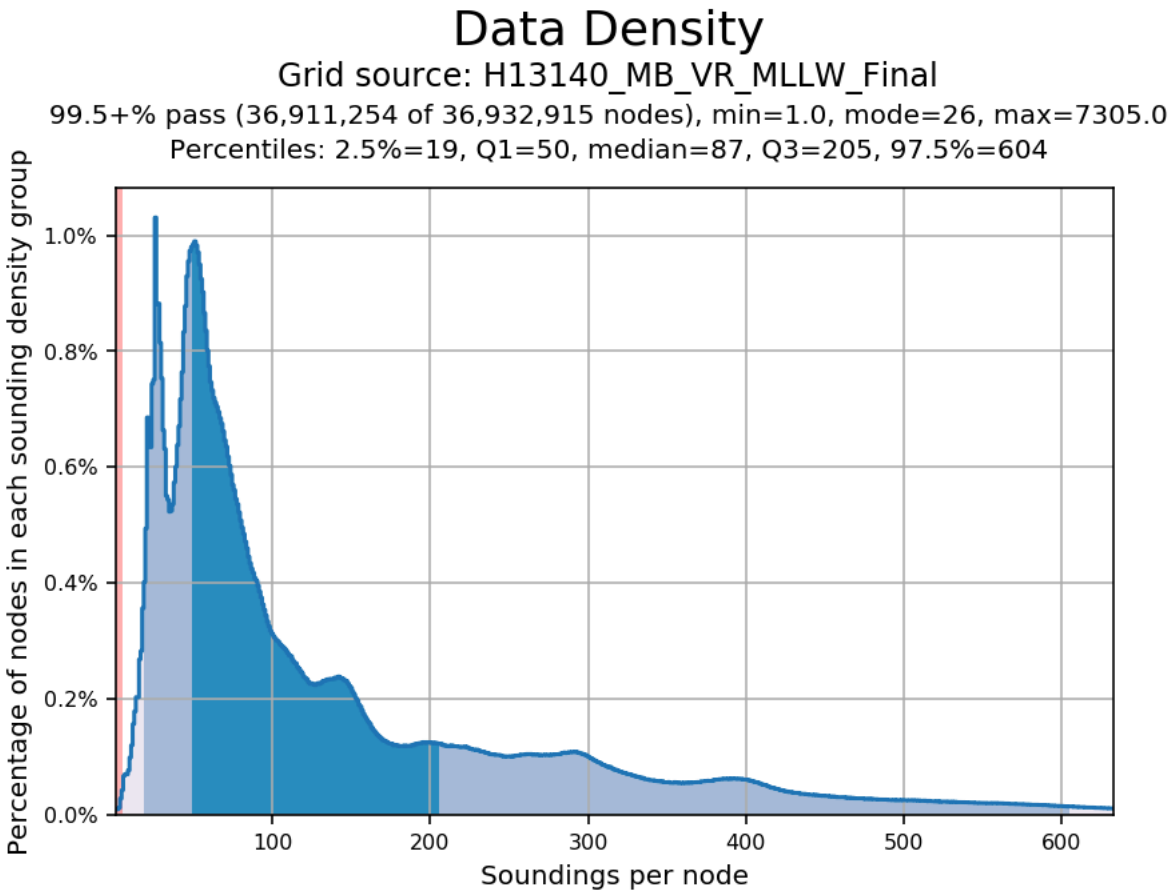


Figure 13: H13140 data density standards

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 Datum Transformation

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

Method	Ellipsoid to Chart Datum Separation File
ERS via VDATUM	VDatum-WGS84_ACHARE_Polygon_ACHARE_Polygon_xyWGS84-MLLW_geoid12b.csar

Table 12: ERS method and SEP file

All soundings submitted for H13140 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).

The projection used for this project is Universal Transverse Mercator (UTM) Zone 19.

RTK

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 H13140 MBES data.

C.3 Additional Horizontal or Vertical Control Issues

C.3.1 DN278 Verical Offset

A vertical offset of unknown origin was observed between MBES data collected by HSL 2904 on DN 278 (2018-10-05) and MBES data collected on DN 279 (2018-10-16). Comparisons of the impacted data from DN 278 against overlapping mainscheme and crossline data show the offset ranges from 17cm to 7 cm shoaler than the likely sea floor. The offset is apparent in data collected between 1634 UTC (line 0566_20181005_163451) and 1647 UTC (line 0568_20181005_164351) on DN 278.

The magnitude of the offset is well within the maximum allowable Total Vertical Uncertainty as specified in section 5.1.3 of the HSSD (2018). See Figures 14-16 below. All impacted MBES data are suitable for charting use.

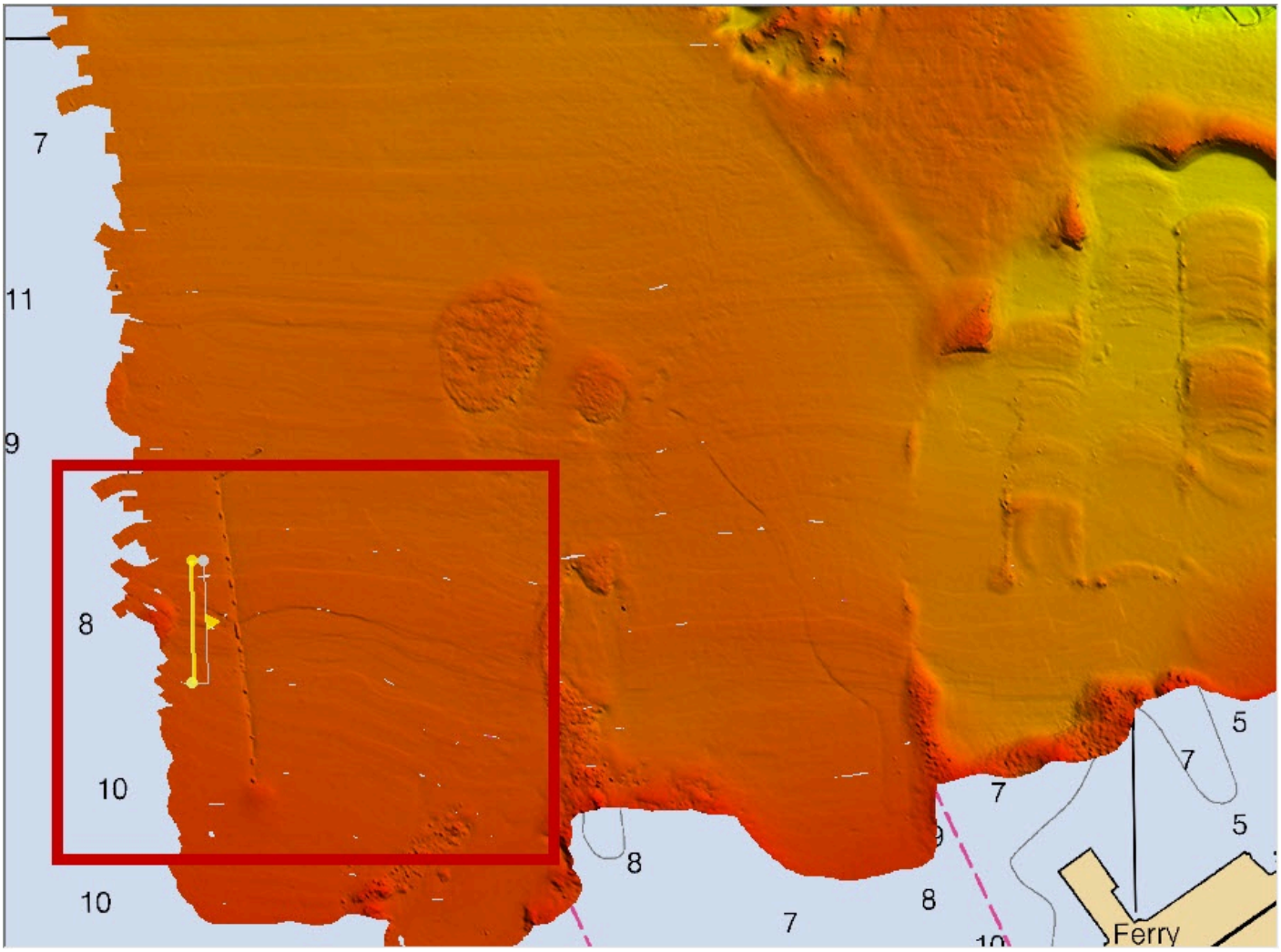


Figure 14: DN278 Vertical Offset Area Overview.

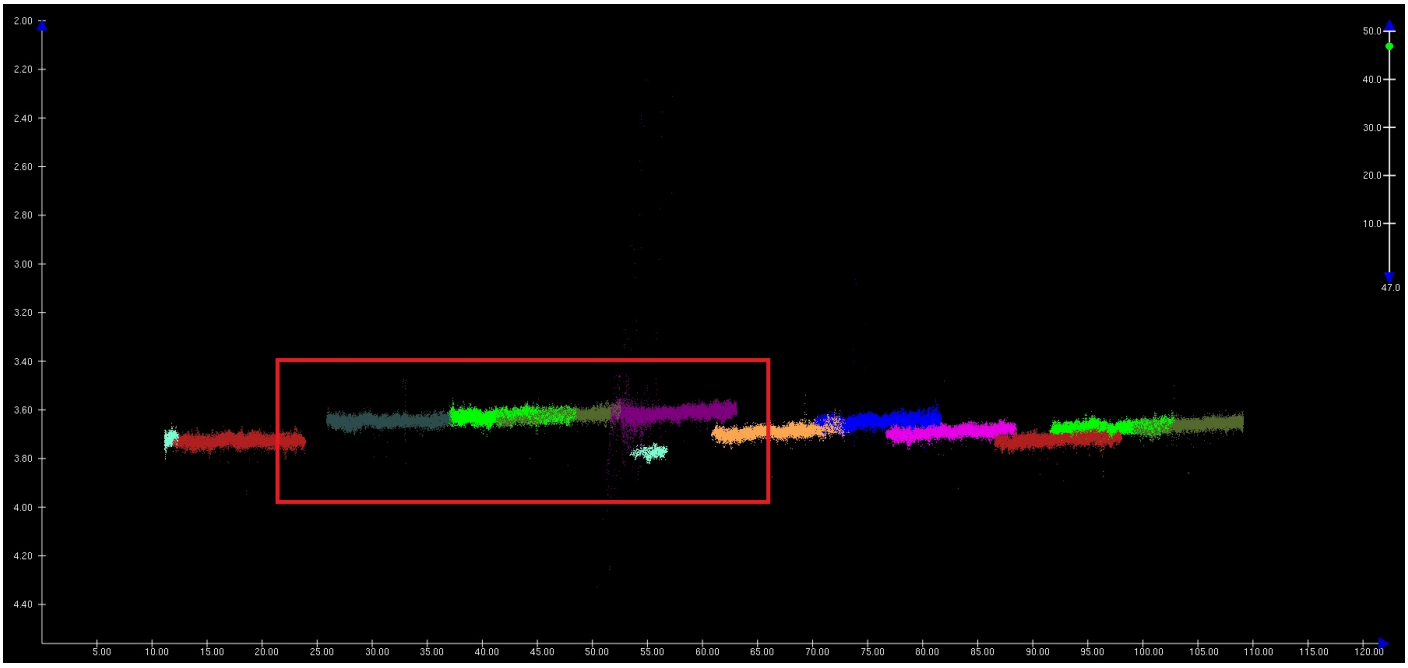


Figure 15: DN278 Vertical Offset Line Comparison.

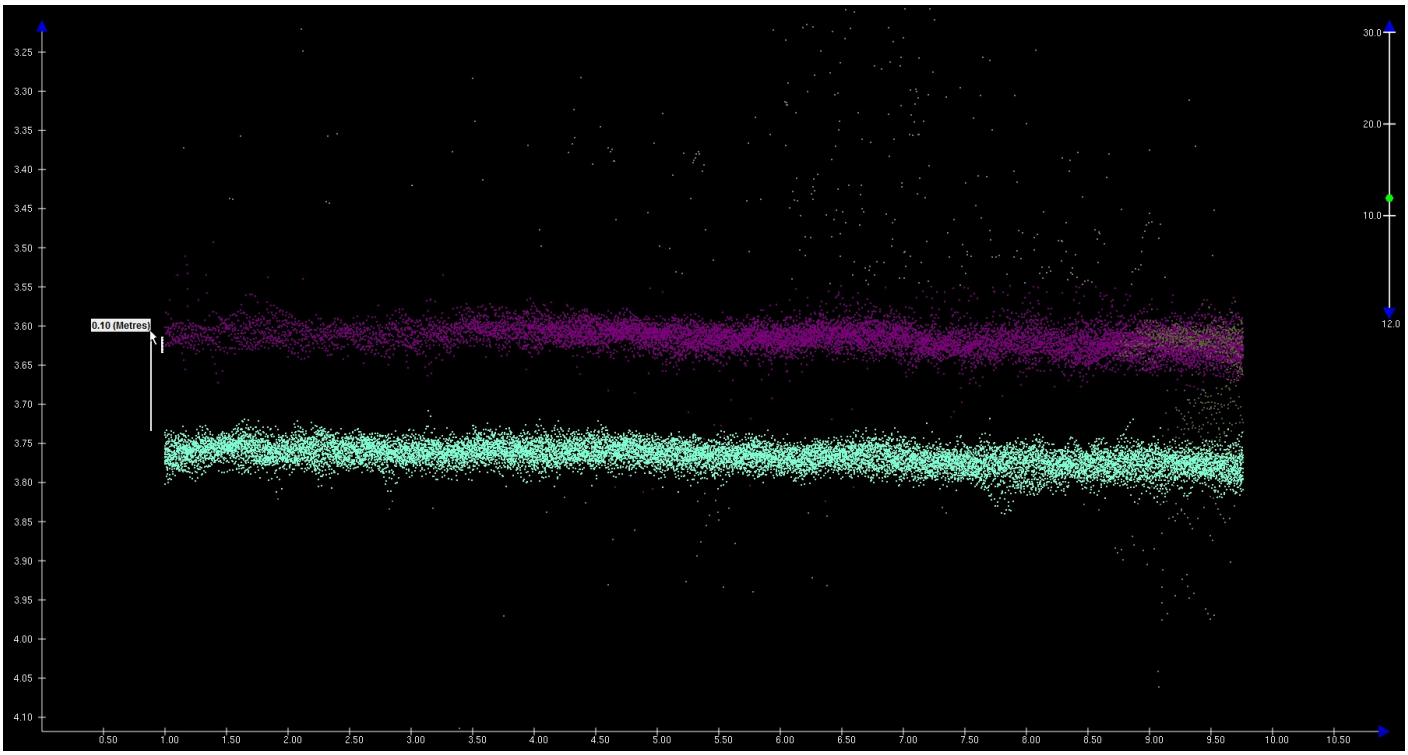


Figure 16: DN278 Vertical Offset Line Comparison.

D. Results and Recommendations

D.1 Chart Comparison

A chart comparison was conducted between survey H13140 soundings and previously charted ENC soundings using procedures outlined in the DAPR.

D.1.1 Electronic Navigational Charts

The following are the largest scale ENCs, which cover the survey area:

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US5PR32M	1:10000	28	02/21/2017	02/21/2017	NO

Table 13: Largest Scale ENCs

US5PR32M

Depth contours were compared between H13140 and ENC US5PR32M at depths specified within the ENC. The hydrographer recommends contours for ENC US5PR32M be reviewed and updated. Recommended navigationally significant contour updates are shown in Figures 17-20.

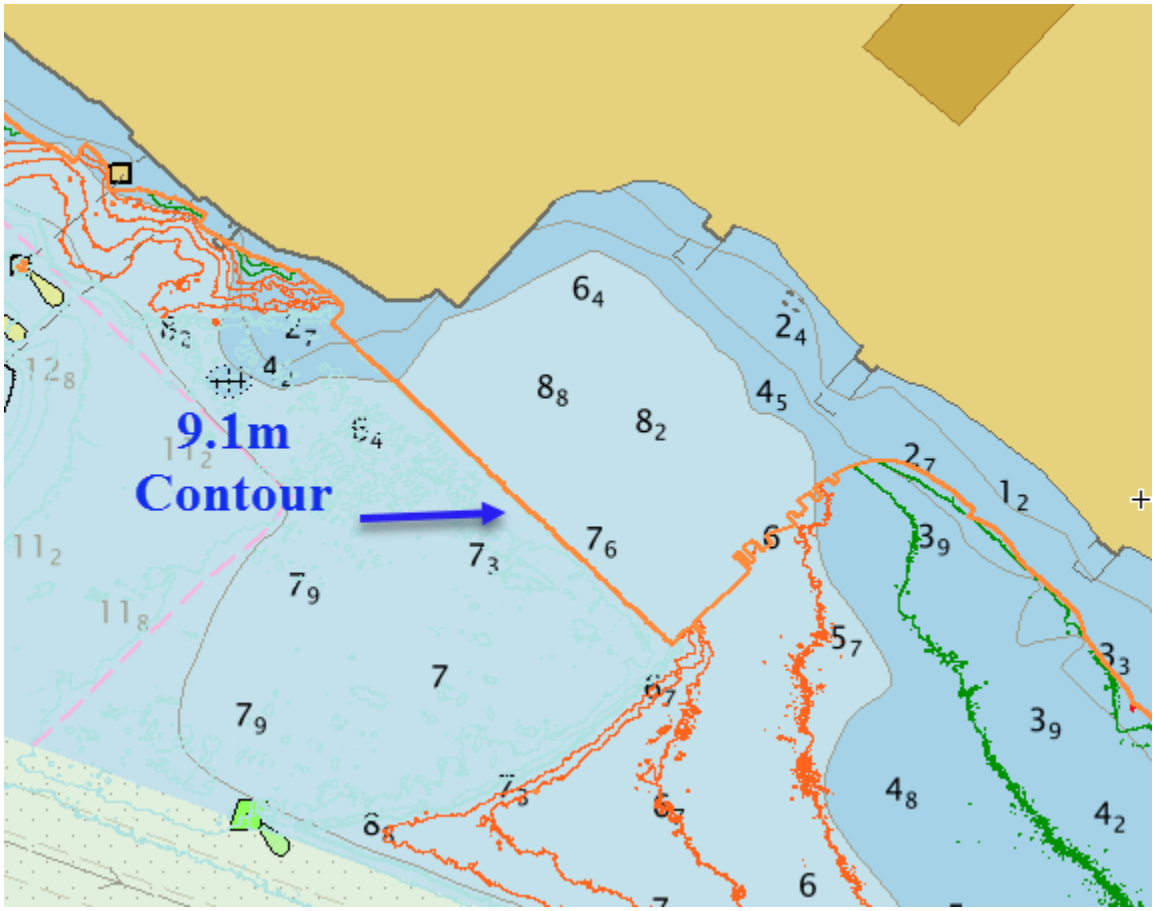


Figure 17: Field created contours within the Bahia de San Juan shown in orange, plotted over ENC US5PR32M.

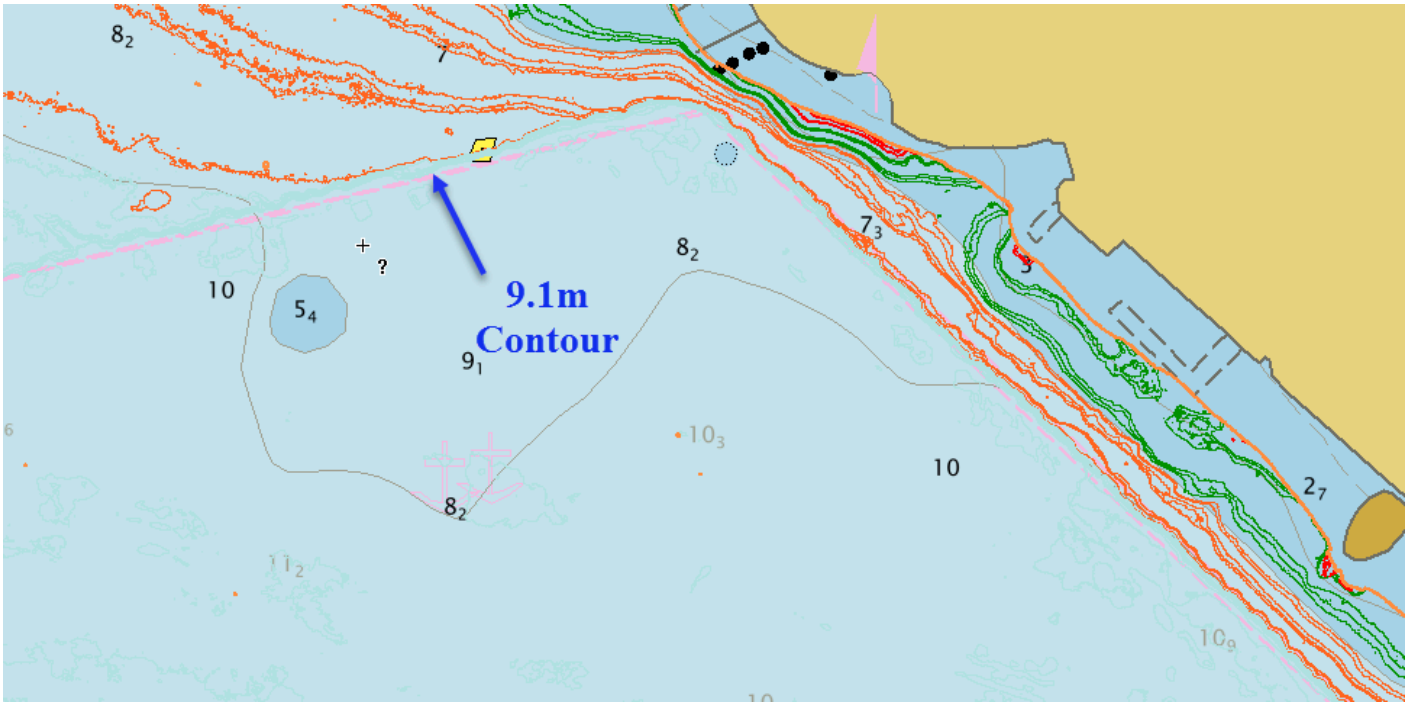


Figure 18: Field created contours within the Bahia de San Juan shown in orange, plotted over ENC US5PR32M.

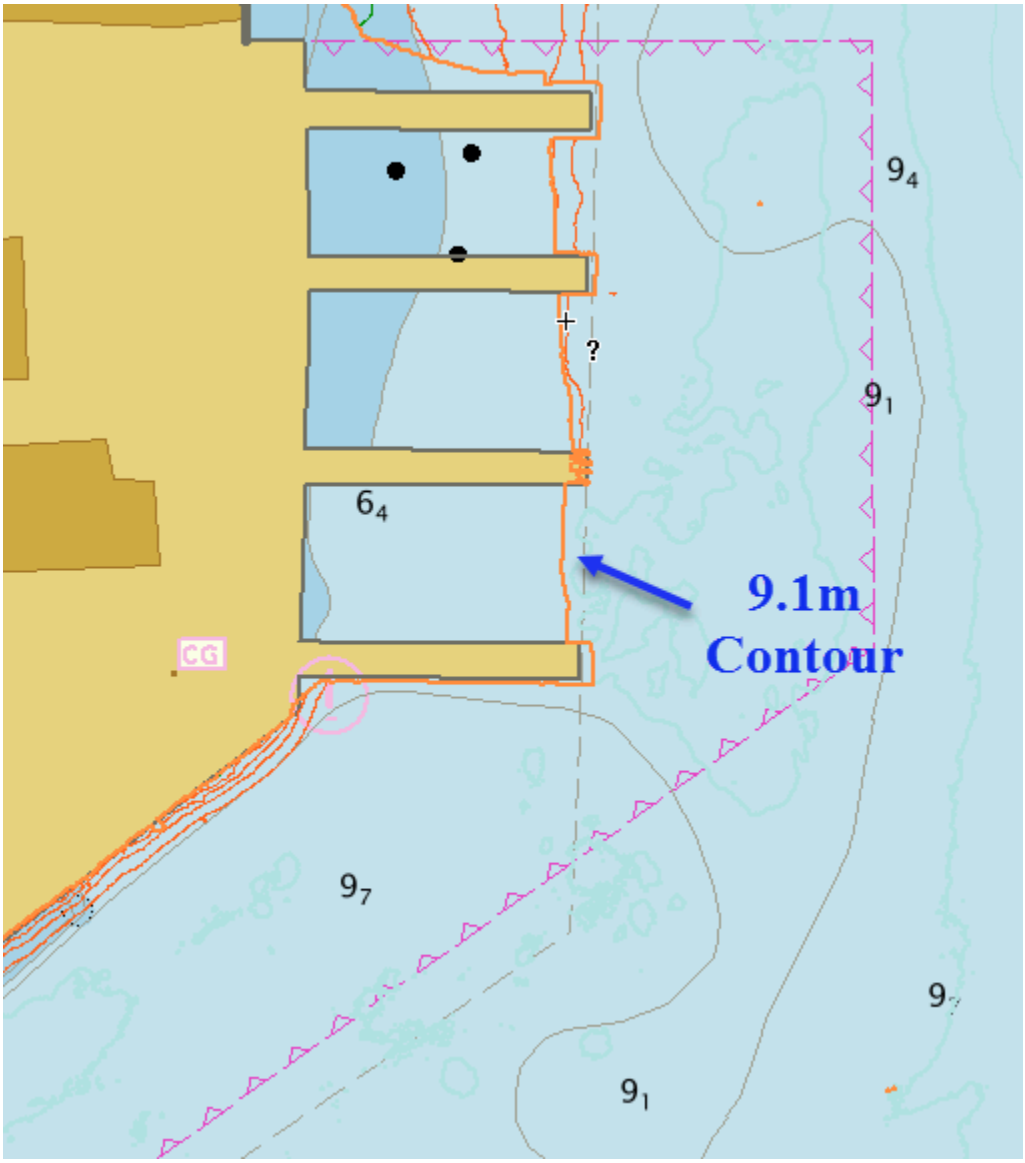


Figure 19: Field created contours within the Bahia de San Juan shown in orange, plotted over ENC US5PR32M.

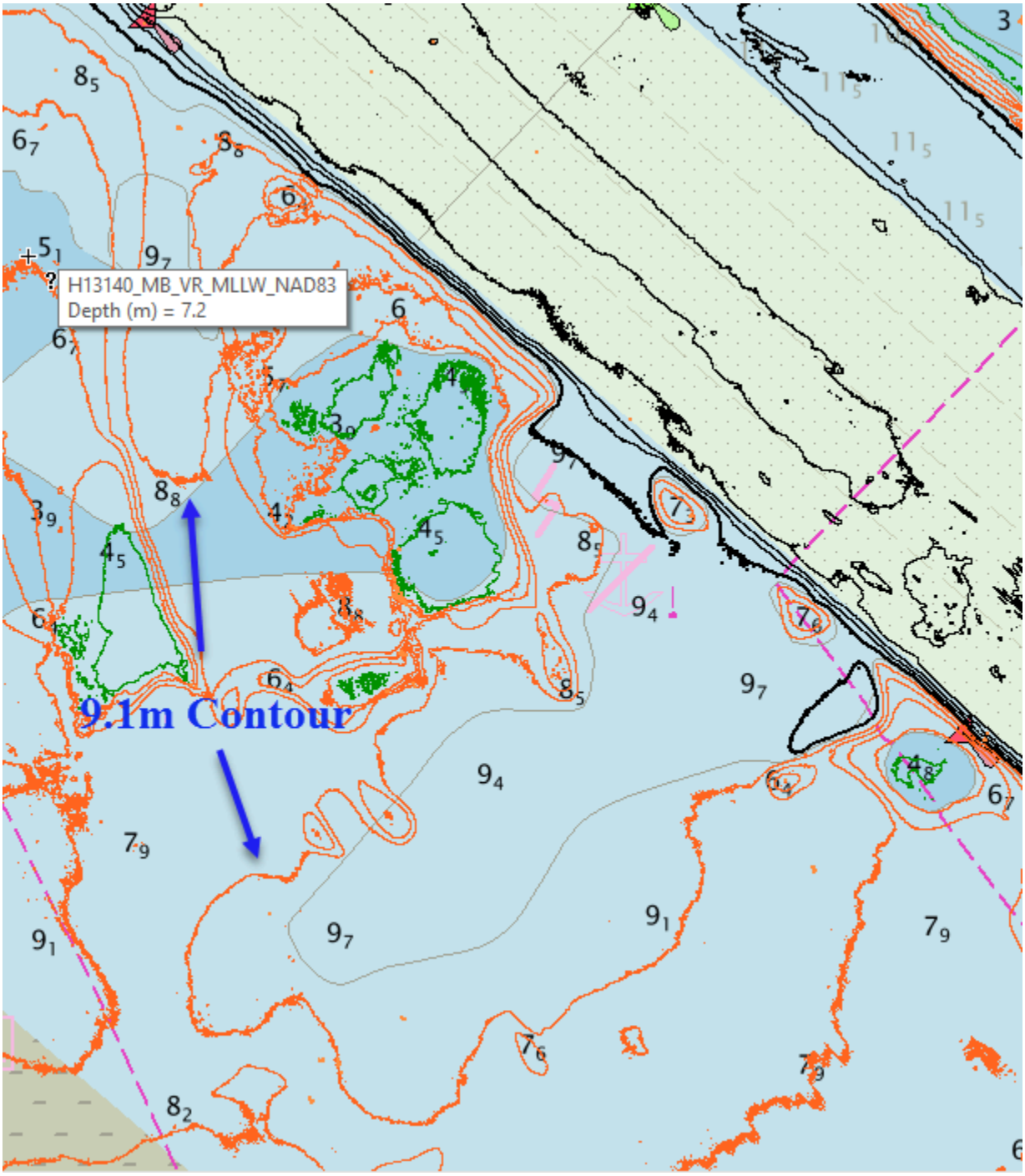


Figure 20: Field created contours within the Bahia de San Juan shown in orange, plotted over ENC US5PR32M.

D.1.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

D.1.3 Charted Features

A total of 185 features were investigated. Four features were deemed appropriate for updating, 80 features were deemed appropriate for deletion, 101 features were deemed appropriate to be retained as charted. Reference the Final Feature File for further information.

D.1.4 Uncharted Features

Thirty four uncharted features were investigated that were not considered dangerous to navigation. Reference the Final Feature File for further information.

The following orthometric imagery was used:

File Name	Source	Source Image Date
18JUL01150533-S3DS_R2C1-058259621010_01_P001.TIF	DigiGlobe	07/01/2018

Table 14: Orthometric Imagery

D.1.5 Shoal and Hazardous Features

There were a total of ten obstructions investigated that were deemed Dangers to Navigation (DtoNs). Reference the Final Feature File and relevant DtoN Report documents for further information.

D.1.6 Channels

Three channel discrepancies were observed in Survey H13140 (Figure 21). The discrepancies are characterized as follows: (A) an observed depth of 10.3m in a channel with controlling depth of 11.3m; (B) an observed depth of 10.3m in a channel with controlling depth of 10.8m; and an observed depth of 12.2m in a channel with controlling depth of 13.1m. Channel discrepancies were reported in accordance with HSSD 2018. The hydrographer recommends the soundings for ENC US5PR32M be reviewed and updated.

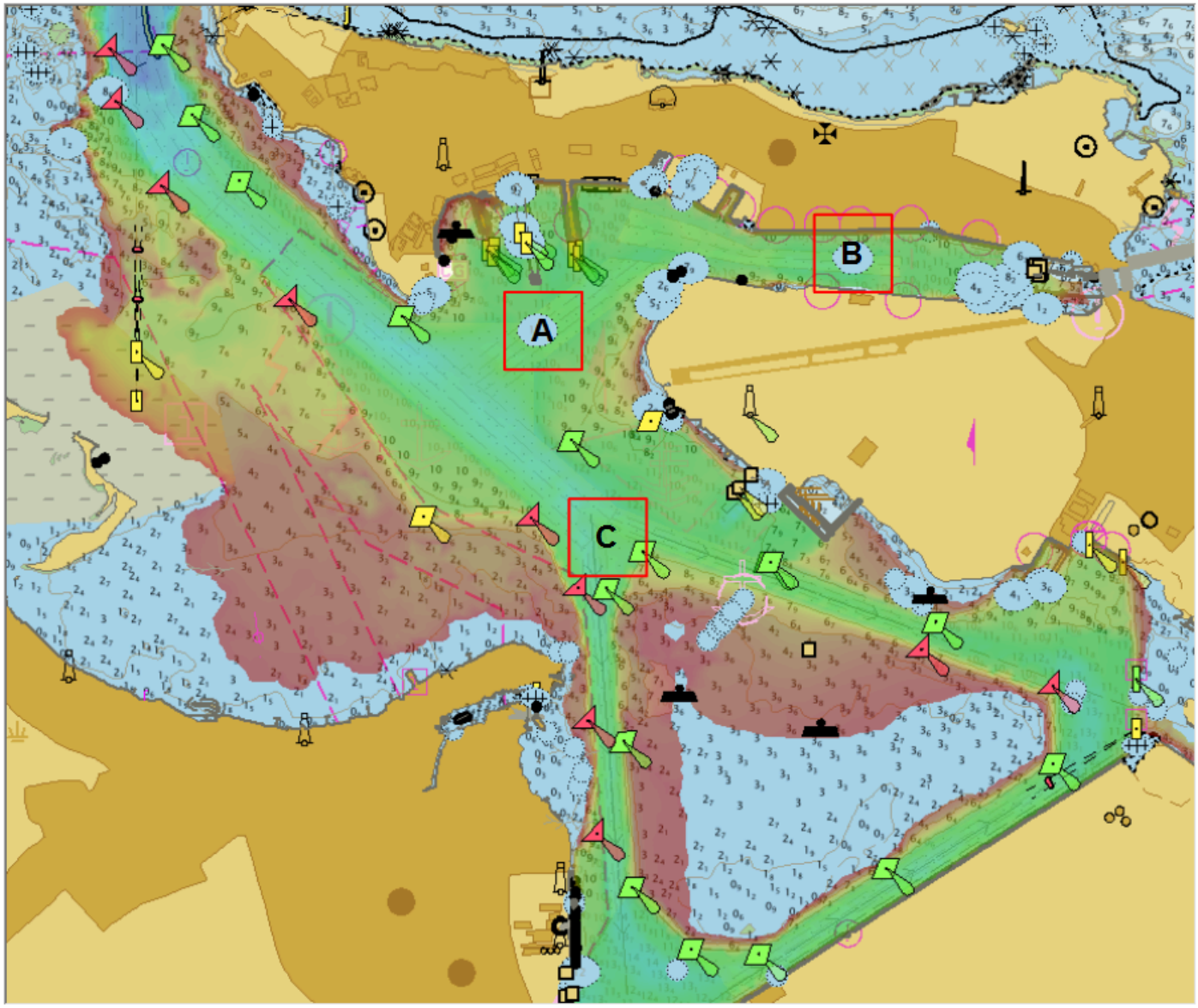


Figure 21: H13140 depth discrepancies within controlled depth area.

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 Aids to Navigation

Sixty four AtoNs were charted correctly and serving their intended purpose. Four charted AtoN features were not found. AtoN discrepancy reports were submitted for all missing and/or mis-charted features.

D.2.3 Overhead Features

One uncharted pedestrian bridge was investigated. Reference the Final Feature File for further information.

D.2.4 Submarine Features

One uncharted submarine pipeline is present within the survey area. This pipeline is exposed and was reported to BSEE in accordance with the HSSD 2018 (Figure 22). Reference the Final Feature File and DR Appendix II for further information.

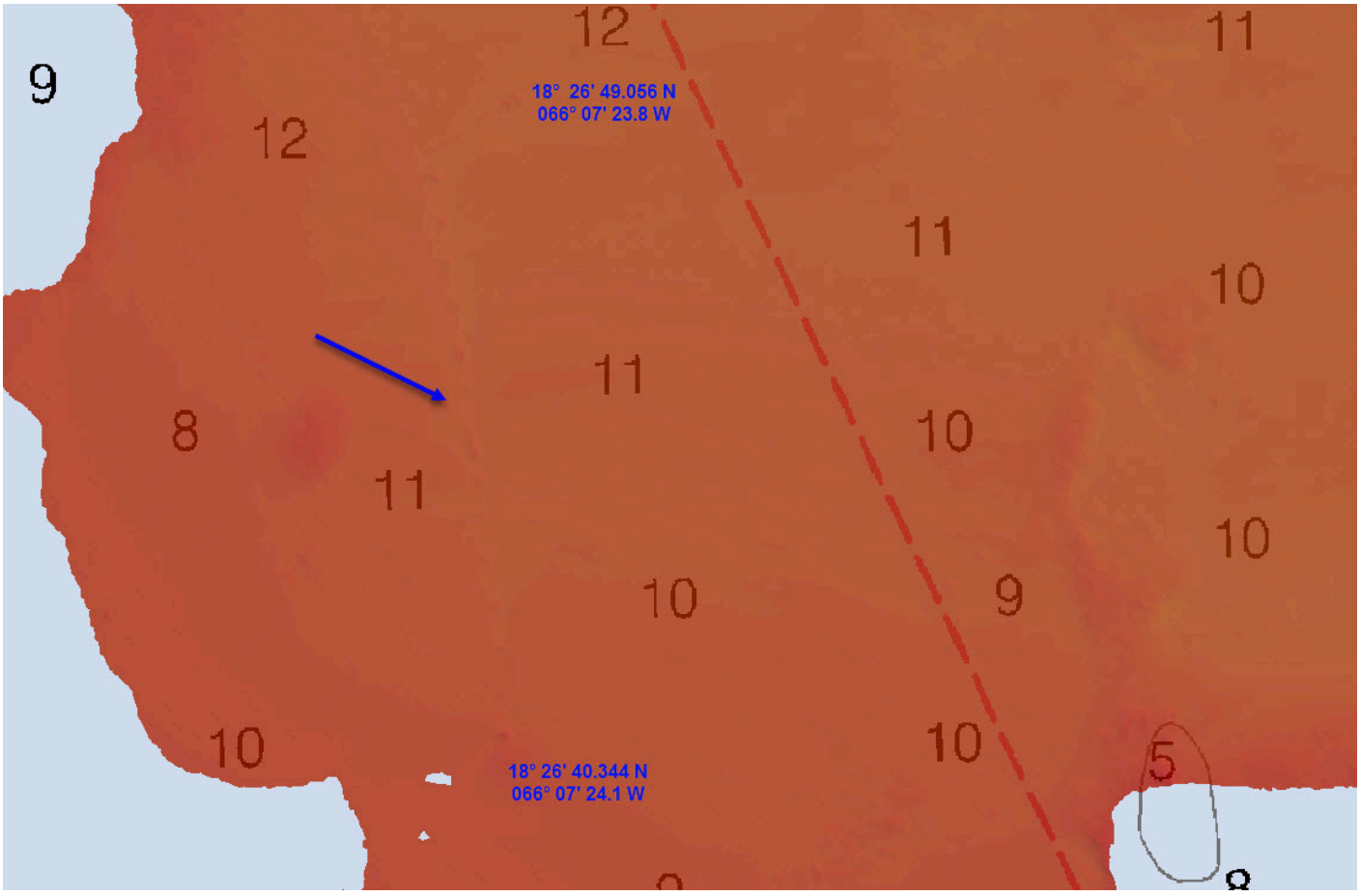


Figure 22: H13140 Exposed pipeline.

D.2.5 Platforms

No platforms exist for this survey.

D.2.6 Ferry Routes and Terminals

A ferry route exists between Cantano and Old San Juan ferry terminals and is noted correctly on the chart.

D.2.7 Abnormal Seafloor and/or Environmental Conditions

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

D.2.8 Construction and Dredging

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

D.2.9 New Survey Recommendation

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

D.2.10 Inset Recommendation

No new insets are recommended for this area.

E. Approval Sheet

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

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

The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys Specifications and Deliverables, Field Procedures Manual, Letter Instructions, and all HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Descriptive Report.

Approver Name	Approver Title	Approval Date	Signature
CDR Biana W. Hillstrom, NOAA	Commanding Officer	06/17/2019	Digitally signed by HILLSTROM.BRIANA.WELTON.1267667531 Date: 2019.06.18 10:45:51 -04'00'
LT Charles J. Wisotzkey, NOAA	Field Operations Officer	06/17/2019	Digitally signed by WISOTZKEY.CHARLES.JUSTIN.1300819660 Date: 2019.06.21 07:34:45 -04'00'
Joshua Hiteshew	Chief Hydrographic Survey Technician	06/17/2019	Digitally signed by HITESHEW.JOSHUA.TAYLOR.1537939652 Date: 2019.06.21 11:56:27 Z

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

H13140 ATON discrepancies

1 message

Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov> Thu, May 2, 2019 at 10:35 AM
To: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, Louis Licate - NOAA Affiliate <louis.licate@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <chiefst.thomas.jefferson@noaa.gov>

Christina, Louis,

Please see attached. Submitted in accordance with Section 1.6.2.2 of HSSD 2018.

The ENC US5PR32M and the Light List disagree. The lights have probably been moved with the pier, but we do not have solid data on them.

Let me know if you have any questions.

--

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

2 attachments

h13140_aton_discrepancies_1.pdf
248K

h13140_aton_discrepancy_report_1.pdf
97K

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

Discrepancies between controlling depths and survey soundings

2 messages

michael hewlett - NOAA Federal <michael.hewlett@noaa.gov> Thu, Oct 11, 2018 at 1:38 PM
To: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>

Good afternoon,

Attached is a copy of the report for areas with differing depths between survey launch 2904 and 2903 and the controlling depths in the main channels for Bahia de San Juan. Please review and let me know if there is anything else I can do. Thank you.

--
Regards,

Michael Hewlett
Hydrographic Survey Technician
NOAA Ship *Thomas Jefferson*
439 West York Street,
Norfolk, VA. 23510
c. (772) 324-1943
michael.hewlett@noaa.gov

Soundings_Shallower_than_Controlling_Depths.docx
7266K

OPS.Thomas Jefferson - NOAA Service Account <ops.thomas.jefferson@noaa.gov> Fri, Apr 12, 2019 at 3:18 PM
To: "ChiefST.Thomas Jefferson - NOAA Service Account" <chiefst.thomas.jefferson@noaa.gov>

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/
[Quoted text hidden]

Soundings_Shallower_than_Controlling_Depths.docx
7266K

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

H13140 significant channel discrepancies

1 message

OPS.Thomas Jefferson - NOAA Service Account <ops.thomas.jefferson@noaa.gov> Tue, Apr 30, 2019 at 6:34 PM

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

Christina, Louis,

Please see attached. Submitted in accordance with Section 1.6.2.1 of HSSD 2018.

I can't find these in any of my records, but I apologize if these have already been reported.

Let me know if you have any questions.

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/

h13140_channel_discrepancies_1.pdf
307K

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

Discrepancies between controlling depths and survey soundings

1 message

michael hewlett - NOAA Federal <michael.hewlett@noaa.gov> Thu, Oct 11, 2018 at 1:38 PM
To: Christina Belton - NOAA Federal <christina.belton@noaa.gov>, "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>

Good afternoon,

Attached is a copy of the report for areas with differing depths between survey launch 2904 and 2903 and the controlling depths in the main channels for Bahia de San Juan. Please review and let me know if there is anything else I can do. Thank you.

--
Regards,

Michael Hewlett
Hydrographic Survey Technician
NOAA Ship *Thomas Jefferson*
439 West York Street,
Norfolk, VA. 23510
c. (772) 324-1943
michael.hewlett@noaa.gov

Soundings_Shallower_than_Controlling_Depths.docx
7266K

Adam Argento - NOAA Federal <adam.argento@noaa.gov>

NOAA survey discrepencies in San Juan Harbor

1 message

Lou Licate - NOAA Navigation Manager <louis.licate@noaa.gov> Tue, Oct 29, 2019 at 8:13 AM
To: jose.d.bilbao@usace.army.mil
Bcc: adam.argento@noaa.gov

Good Morning Jose-

I am the NOAA navigation manager for PR. Lisa Holland gave me your contact info.

Last year the NOAA Ship Thomas Jefferson did a survey within San Juan Harbor and the bathymetry found a section of the survey to be significantly more shallow than the project depth as well as shoaling at the edges of the channel. See the attached information.

We are processing the data for addition onto the Nautical Charts and just wanted to make sure that USACE was aware of this feature. Please feel free to contact me with any questions or comments.

Thank you!

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

909 SE 1st AVE
Room 432
Miami, FL 33131
202-253-9536

2 attachments

h13140 significant channel discrepancies 2.pdf
469K

Soundings_Shallower_than_Controlling_Depths.pdf
2275K

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

DTON H13140 OPR-I369-TJ-18

9 messages

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Sat, Sep 15, 2018 at 5:01 PM
To: _NOS OCS HSD AHB Danger to Navigation <ahb.dton@noaa.gov>, 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>, michael hewlett - NOAA Federal <michael.hewlett@noaa.gov>, Garrison Grant - NOAA Federal <garrison.grant@noaa.gov>

Good afternoon,

Attached is the DTON Report for H13140. It consists of six uncharted wrecks located inside a charted anchorage area in San Juan Harbor, Puerto Rico.

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

H13140_DTON_Report.zip
3745K

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]

H13140_DTON_Report.zip
3745K

OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> Mon, Sep 17, 2018 at 3:21 PM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Hi Anthony,

Looking over this DtoN's report, I noticed that the timestamp for all six features is 01/01/1981. Would you please correct that and resubmit the report?

Many 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> Mon, Sep 17, 2018 at 3:45 PM
To: michael hewlett - NOAA Federal <michael.hewlett@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Hi Mike,

Can you fix this and create a new report?

Thanks,
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]

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Mon, Sep 17, 2018 at 4:09 PM
To: NDB E-Mailbox <ocs.ndb@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Hi Diane,

I can surely make the change. In the future, is this something I can just manually edit in the PDF? Is the date of the survey sufficient, or do you really need down to the second when it was observed?

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> Mon, Sep 17, 2018 at 4:43 PM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Thanks!

It's fine by NDB if you manually edit in the PDF but I don't know anything about the system that you all use (Pydro?) to generate DtoNs. My only concern would be if, for example, the info you all input into Pydro to generate the DtoN deliverables is saved in some database somewhere and we notice an error, then if you or we edit/redline the report then said imaginary database would remain incorrect. SO...it's up to you to do what's best and easiest! We in NDB can also redline small stuff too.

As to what date you use, that's also up to you. NDB won't question dates as long as they seem reasonable but we like to think that the timestamp reflects the ping date for each feature because surveys can sometimes take a while to complete. We're only looking at the timestamp for the date, not down to the hour and second.

Hope this helps,
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 2:14 PM
To: NDB E-Mailbox <ocs.ndb@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Hi Diane,

Attached is the corrected report. Thanks again for your guidance! You guys are great.

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

[Quoted text hidden]

H13140_DTON_Report.zip
3764K

OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> Tue, Sep 18, 2018 at 2:38 PM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Looks great! Thanks a million; always good working with you too.

-Diane

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 3:00 PM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <OPS.Thomas.Jefferson@noaa.gov>, _NOS OCS HSD AHB Danger to Navigation <ahb.dton@noaa.gov>, Briana Hillstrom - NOAA Federal <Briana.Hillstrom@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>, michael hewlett - NOAA Federal <michael.hewlett@noaa.gov>, Garrison Grant - NOAA Federal <garrison.grant@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-29884 has been registered by the Nautical Data Branch and directed to Products Branch G for processing.

The DtoNs reported are several obstructions (wrecks) in San Juan Harbor, Puerto Rico.

The following chart is affected:
25670 kapp 399

The following ENC is affected:
US5PR32M

References:
H13140
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]

H13140_DTON_Report.zip

3764K

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

H13140 (San Juan Harbor) coverage requirements

3 messages

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Tue, Sep 18, 2018 at 2:48 PM
To: Kyle Ward - NOAA Federal <kyle.ward@noaa.gov>, Christina Belton - NOAA Affiliate <christina.belton@noaa.gov>, Douglas Wood <douglas.wood@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Hi Christina,

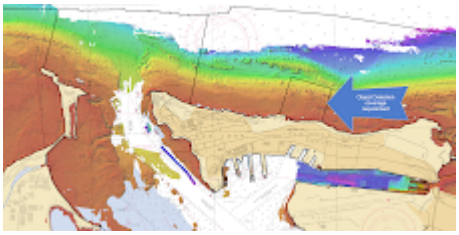
While making the ops plan for San Juan Harbor, I was able to review the coverage requirements again. Could you explain why there is a small portion outside the harbor near the charted "capitol dome" with object detection requirements, while everything else around it is complete coverage? I'm not sure we will be able to get our small boats out there unless it's a very nice day with no ocean swell, it has nice lidar coverage over it, and it doesn't seem to have any commercial infrastructure or piers/docks, etc...

On an unrelated note, we were able to collect some data on H13140 one day last week while we tied up in San Juan ahead of TS Isaac. We found six uncharted wrecks in Anchorage Area D near the San Antonio Channel, and have submitted a DTON report to MCD.

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

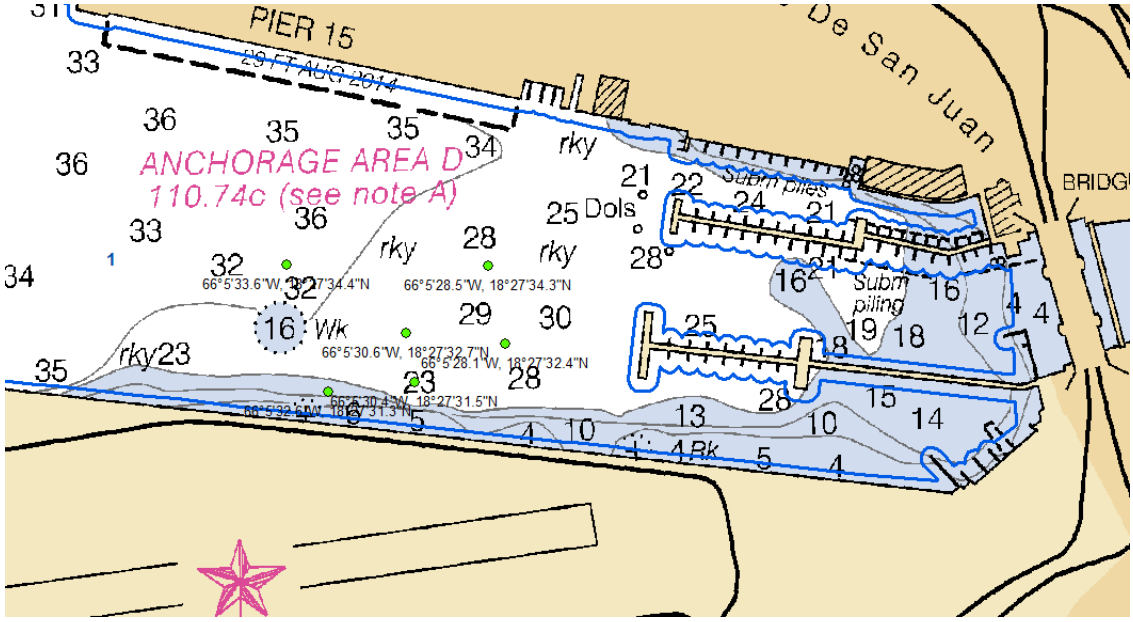


H13140_coverage_requirements.png
4336K

Christina Belton - NOAA Federal <christina.belton@noaa.gov> Tue, Sep 18, 2018 at 3:59 PM
To: Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov>
Cc: Kyle Ward - NOAA Federal <kyle.ward@noaa.gov>, Douglas Wood <douglas.wood@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

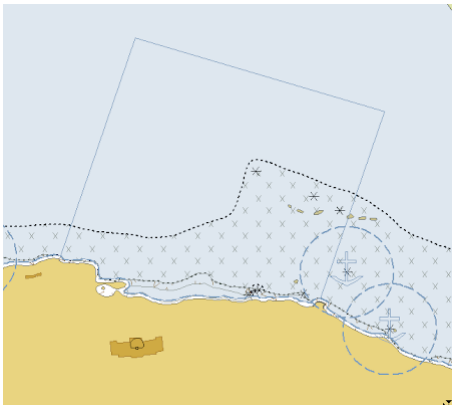
Hello Anthony,

I saw the TJ wreck DTON report come in and seeing that the wrecks are so close together near the piers, thought maybe these were moored vessels that did not survive Maria. It's quite a remarkable cluster.



As for the small OD area near "capitol dome": the requirement came directly from the HH model. I see the three assigned rocks are in a charted foul area. If that is truly the case and deemed unsafe, than maybe you can at least verify the foul area boundary? From the chart, only half the area is not foul. The AIS traffic is avoiding that one OD area entirely, and so I think HH model interprets that as "I have no idea why that area is avoided or what is there". It was last surveyed in 1985.

I do not know of an uncharted wreck in the area, at least the State Historic Preservation Office did not identify any.



That is what I can tell you. Does it help?

Regards,
Christina

Christina Belton
Physical Scientist
Operations Branch
Hydrographic Surveys Division
Office of Coast Survey, NOAA
240-533-0057
christina.belton@noaa.gov
[Quoted text hidden]

Christina Belton - NOAA Federal <christina.belton@noaa.gov> Tue, Sep 18, 2018 at 4:46 PM

To: Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov>
Cc: Kyle Ward - NOAA Federal <kyle.ward@noaa.gov>, Douglas Wood <douglas.wood@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>

Excuse me, there are five additional assigned rocks very close to shore. But based on what you said, I don't imagine you will get anywhere near those.

Christina Belton
Physical Scientist
Operations Branch
Hydrographic Surveys Division
Office of Coast Survey, NOAA
240-533-0057
christina.belton@noaa.gov

[Quoted text hidden]

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

H13140 DTON 2

2 messages

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Tue, Oct 2, 2018 at 12:19 PM
To: NDB E-Mailbox <OCS.NDB@noaa.gov>
Cc: michael hewlett - NOAA Federal <michael.hewlett@noaa.gov>, Garrison Grant - NOAA Federal <garrison.grant@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>, Corey personal cell Allen <corey.allen@noaa.gov>, AHB Chief <ahb.chief@noaa.gov>, Douglas Wood <douglas.wood@noaa.gov>

Good afternoon,

Attached is a DTON report for two wrecks found in San Juan Harbor, Puerto Rico. 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

H13140_DTON_Report_2.zip
5310K

OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> Wed, Oct 3, 2018 at 7:21 AM
To: Anthony Klemm <anthony.r.klemm@noaa.gov>
Cc: michael hewlett - NOAA Federal <michael.hewlett@noaa.gov>, Garrison Grant - NOAA Federal <garrison.grant@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>, Corey Allen <corey.allen@noaa.gov>, AHB Chief <ahb.chief@noaa.gov>, Douglas Wood - NOAA Federal <douglas.wood@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-29932 has been registered by the Nautical Data Branch and directed to Products Branch G for processing.

The DtoNs reported are two submerged obstructions in San Juan Harbor, Puerto Rico.

The following chart is affected:
25670 kapp 399

The following ENC is affected:
US5PR32M

References:
H13140

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]

H13140_DTON_Report_2.zip
5310K

San Juan Harbor - Surveyed depths shallower than dredge area controlling depths

1 message

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Tue, Oct 16, 2018 at 1:10 PM
To: Kyle Ward - NOAA Federal <kyle.ward@noaa.gov>
Cc: Christina Belton - NOAA Affiliate <christina.belton@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, Garrison Grant - NOAA Federal <garrison.grant@noaa.gov>, michael hewlett - NOAA Federal <michael.hewlett@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>

Good morning Kyle,

We have completed our survey inside of San Juan Harbor. From a comparison of surveyed soundings with the controlling depths of charted dredge areas, we have found 88 soundings that area shallower than the charted controlling depth.

Attached is a filegeodatabase with the point feature class of our observations. Most differences are less than our allowable total vertical uncertainty of ~0.5m. Twelve soundings are more than 0.5m shallower than the controlling depth.

The XY Coordinate system is WGS 1984 UTM Zone 19N.

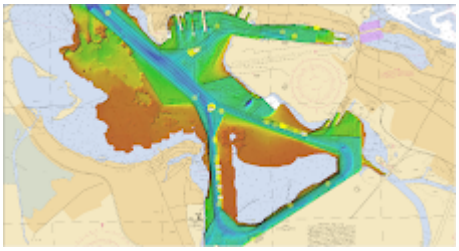
Please let me know if you need more information, or would like the data in a different format.

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



depths shallower than controlling depth.png
937K

SanJuan_Dredge_Area_depth_Comparison.zip
28K

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

OPR-I369-TJ_18 Puerto Rico CHANGE 1_Project Instructions

1 message

Christina Belton - NOAA Federal <christina.belton@noaa.gov> Tue, Nov 6, 2018 at 8:13 PM
To: ChiefOps MOA - NOAA Service Account <chiefops.moa@noaa.gov>, DeputyOps MOA - NOAA Service Account <DeputyOps.MOA@noaa.gov>
Cc: OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, "XO.Thomas Jefferson - NOAA Service Account" <xo.thomas.jefferson@noaa.gov>, "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>, "ChiefST.Thomas Jefferson - NOAA Service Account" <chiefst.thomas.jefferson@noaa.gov>, Kyle Ward - NOAA Federal <kyle.ward@noaa.gov>, Jay Nunenkamp - NOAA Federal <jay.nunenkamp@noaa.gov>, James Crocker - NOAA Federal <james.m.crocker@noaa.gov>, Rachel Medley - NOAA Federal <rachel.medley@noaa.gov>, Richard Brennan <richard.t.brennan@noaa.gov>, Lorraine Robidoux - NOAA Federal <lorraine.robidoux@noaa.gov>, Corey Allen - NOAA Federal <corey.allen@noaa.gov>, Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>, Briana Welton <Briana.Hillstrom@noaa.gov>, John Nyberg - NOAA Federal <john.nyberg@noaa.gov>, Tara Wallace - NOAA Federal <tara.wallace@noaa.gov>, David Lane - NOAA Federal <david.lane@noaa.gov>, Jerry Hovis <gerald.hovis@noaa.gov>, "_NOS.CO-OPS.HPT" <NOS.COOPS.HPT@noaa.gov>, Christopher Hare - NOAA Federal <Christopher.Hare@noaa.gov>, Kristen Crossett - NOAA Federal <kristen.crossett@noaa.gov>, Douglas Wood - NOAA Affiliate <douglas.wood@noaa.gov>

Good Afternoon Chief Ops MOA, Deputy Ops MOA,

I am following up with some recently changed project instructions. Please find attached the Change 1 Project Instructions for OPR-I369-TJ_18 Puerto Rico.

The change is that we added two last minute urgent surveys for FEMA/MAERSK: F00758 and F00759. *Thomas Jefferson* conducted these surveys last week.

Otherwise there are only a couple of minor edits in the document title and PS Support.

Please be in touch with any questions.

Best Regards,
Christina Belton

Christina Belton
Physical Scientist
Operations Branch
Hydrographic Surveys Division
Office of Coast Survey, NOAA
240-533-0057
christina.belton@noaa.gov

OPR-I369-TJ-18_PuertoRico_ProjectInstructions_Change1_signed.pdf
2054K

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

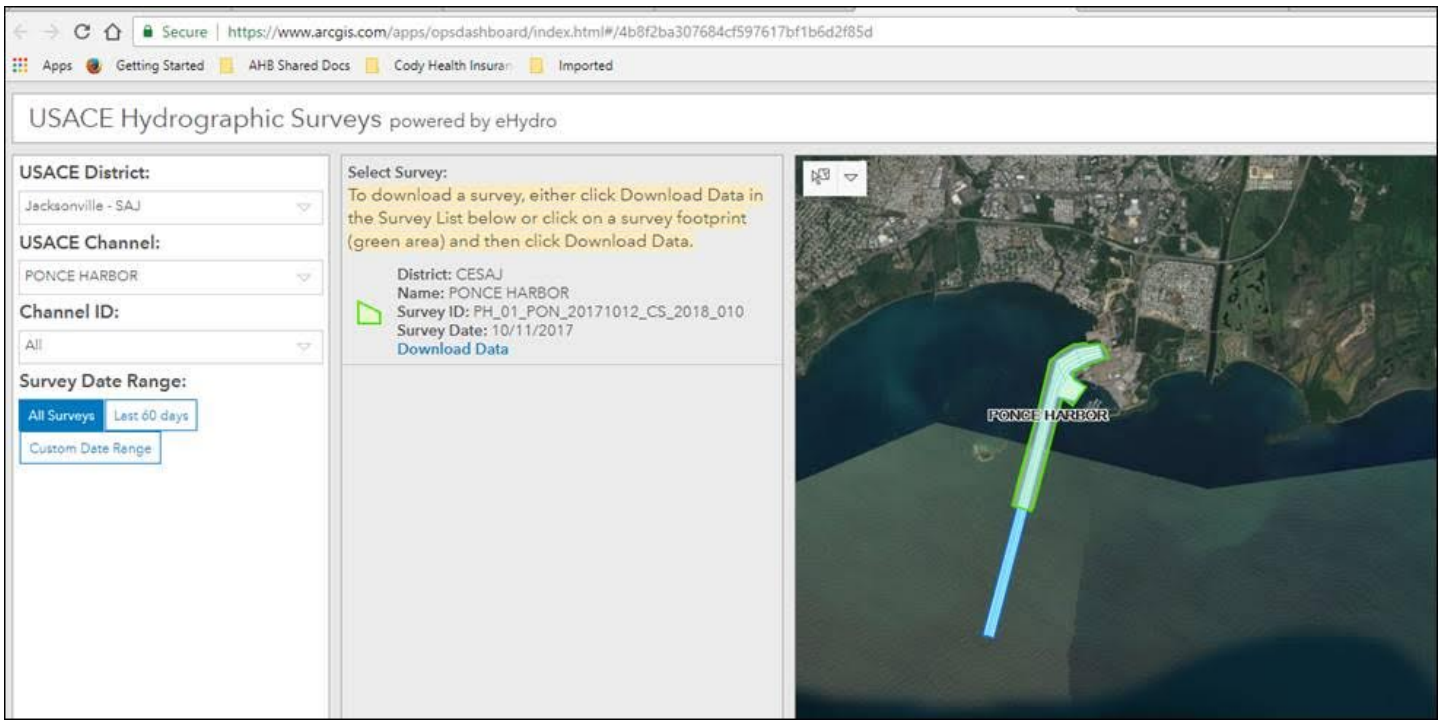
Atlantic Hydrographic Branch

Hydrographic Team Lead / Physical Scientist

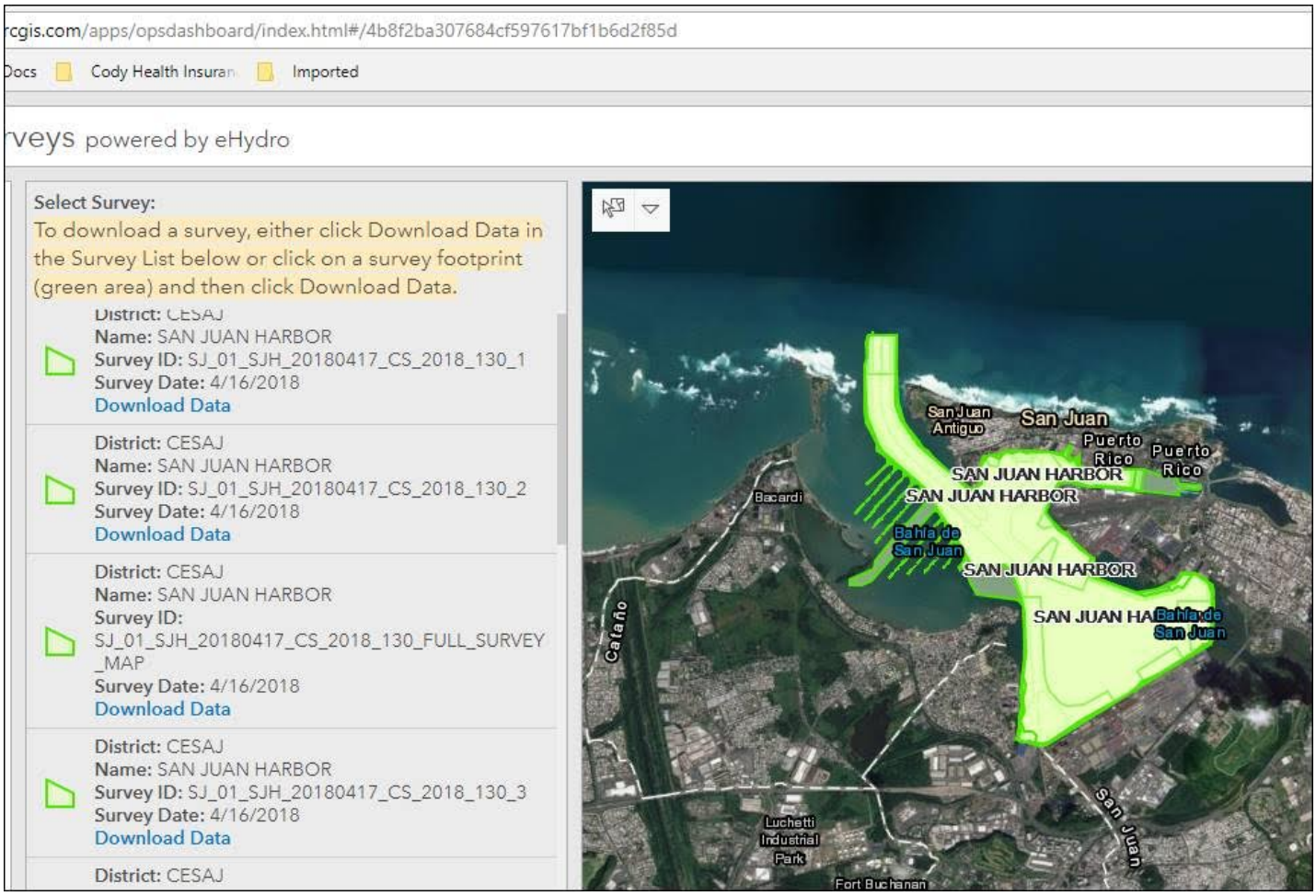
castle.e.parker@noaa.gov

office (757) 364-7472

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



San Juan survey end date 4/16/2018:



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

Pier 3: Puerto Rico Survey

4 messages

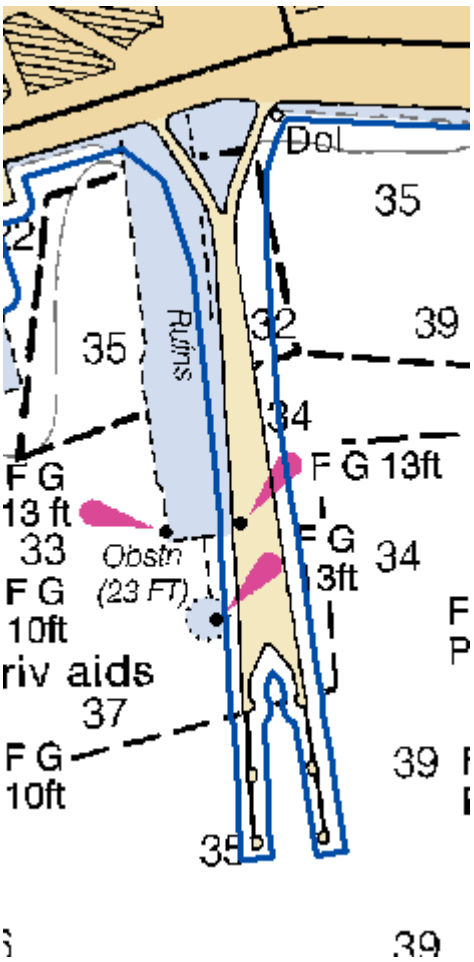
Christina Belton - NOAA Federal <christina.belton@noaa.gov> Wed, Sep 26, 2018 at 5:46 PM
To: "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>
Cc: _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, "XO.Thomas Jefferson - NOAA Service Account" <xo.thomas.jefferson@noaa.gov>, Kyle Ward - NOAA Federal <kyle.ward@noaa.gov>, Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>, Corey Allen - NOAA Federal <corey.allen@noaa.gov>

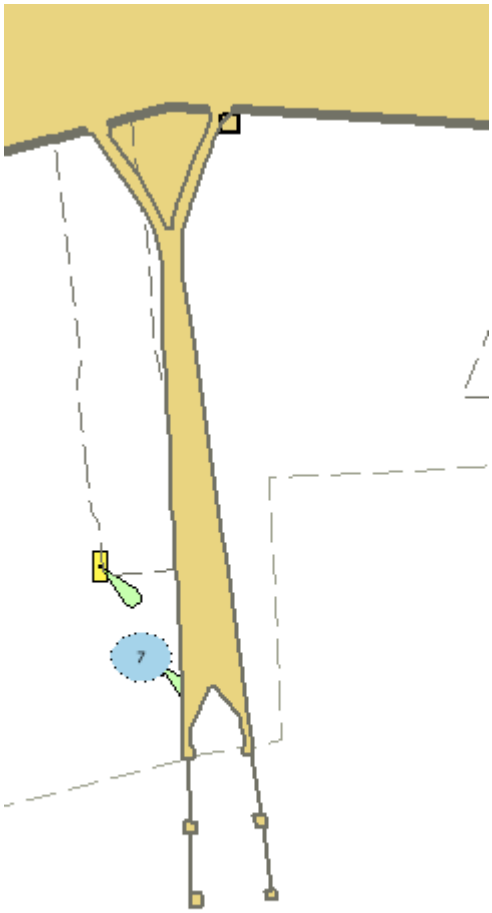
Good Evening *TJ*,

We have a special priority request from Tara Wallace, Branch Chief at NDB MCD. This is likely already in your plans, but without knowing how your boat sheets for San Juan Harbor are prioritized, and to make sure this one area is done before *TJ's* departure, I thought I would bring this to your attention.

Pier 3, the cruise ship pier, has some assigned features. May we please make this pier a priority area to survey in the San Juan Harbor survey?
These are the assigned features:
A ruined pier, submerged
2 lights
An obstruction shoaler than range of the surrounding depth

Here are some snipets of the area 66°6'42.729"W 18°27'40.977"N





Please see emails below.

Thank You,
Christina

Christina Belton
Physical Scientist
Operations Branch
Hydrographic Surveys Division
Office of Coast Survey, NOAA
240-533-0057
christina.belton@noaa.gov

---------- Forwarded message ---------
From: **Tara Wallace - NOAA Federal** <tara.wallace@noaa.gov>
Date: Wed, Sep 26, 2018 at 1:20 PM
Subject: Re: Puerto Rico Survey
To: Christina Belton - NOAA Federal <christina.belton@noaa.gov>
Cc: Corey Allen <corey.allen@noaa.gov>, Lorraine Robidoux <lorraine.robidoux@noaa.gov>

Thanks Christina -

Please put this as a priority. I have been trying to get official data since January 2014, first working with Michael Henderson, Nav Manager for the area. We have not been able to receive any official survey showing the ruins down to the mudline at Pier 3. There are obstructions and a light charted in the vicinity. Recently, UKHO has sent a survey from a cruise ship at the pier asking for an update to the chart, but it is dated from 2013.

I appreciate the response -
Tara

On Wed, Sep 26, 2018 at 1:08 PM Christina Belton - NOAA Federal <christina.belton@noaa.gov> wrote:

> Tara,
> Your timing is perfect because the next leg will be the survey of San Juan Harbor. In the sheet assignment, Pier 3, which I believe is the old Cruise Ship pier, is included. I however have not seen the boat sheets yet and what order it falls in. But if this is high priority now is the time to say so.
> Let's discuss, I'm headed up to 7 now.
> Christina
>
> Christina Belton
> Physical Scientist
> Operations Branch
> Hydrographic Surveys Division
> Office of Coast Survey, NOAA
> **240-533-0057**
> christina.belton@noaa.gov
>
> On Wed, Sep 26, 2018 at 1:00 PM Corey Allen - NOAA Federal <corey.allen@noaa.gov> wrote:
>
> > Tara,
> > TJ is down in Puerto Rico as we speak and I believe this area will be covered, but Christina (PM) can confirm for me.
> >
> > Corey
> >
> > On Wed, Sep 26, 2018 at 11:48 AM Tara Wallace - NOAA Federal <tara.wallace@noaa.gov> wrote:
> >
> > > Hey Corey -
> > >
> > > Is there a survey or a possible deliverable in the pipeline for a survey of Puerto Rico around San Juan that covers Pier 3? Back in June I made note of OPR-I369-TJ-18 but have no idea where I got this from. We are looking to get the ruins off the chart around Pier 3.
> > >
> > > Thanks,
> > > Tara
> > >
> > > --
> > > Tara Wallace, Branch Chief
> > > Nautical Data Branch, Marine Chart Division
> > > Office of Coast Survey, National Ocean Service
> > > Telephone number: 240-847-8102
> > > NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
> >
> > --
> > J. Corey Allen
> > Chief (acting), Operations Branch
> > Office of Coast Survey, NOAA
> > Corey.Allen@noaa.gov
> > 240.533.0037 (Office)
> > 301.717.7271 (Cell)
> > Click here for information on our planned survey activities
> > Find us on Facebook, Twitter and the NOAA Coast Survey blog

--
Tara Wallace, Branch Chief
Nautical Data Branch, Marine Chart Division
Office of Coast Survey, National Ocean Service
Telephone number: 240-847-8102

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov> Wed, Sep 26, 2018 at 6:04 PM
To: Christina Belton - NOAA Affiliate <christina.belton@noaa.gov>
Cc: _OMAO MOA OPS Thomas Jefferson <ops.thomas.jefferson@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, _OMAO MOA XO Thomas Jefferson <xo.thomas.jefferson@noaa.gov>, Kyle Ward - NOAA Federal <kyle.ward@noaa.gov>, Charles Wisotzkey <charles.j.wisotzkey@noaa.gov>, Corey personal cell Allen <corey.allen@noaa.gov>, Tara Wallace - NOAA Federal <tara.wallace@noaa.gov>

Hi Christina,

We will make sure we survey around Pier 3. Also, last year for hurricane response, we surveyed around those piers, but submitted the surveys as archive-only. AHB has them now, and are working to package them up for archive. I bet you could work with AHB and MCD to remove the ruins in a week's time if it's such a priority.

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

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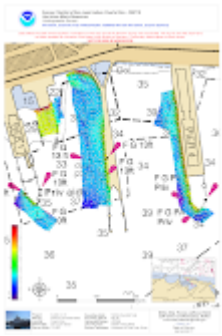
2 attachments



SanJuan_Chartlet.png
4809K

SanJuan_SpecialTasking_supplemental_contact_information.pdf
651K

Christina Belton - NOAA Federal <christina.belton@noaa.gov> Wed, Sep 26, 2018 at 6:07 PM
To: Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov>
Cc: "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>, _OMAO MOA CO Thomas Jefferson <co.thomas.jefferson@noaa.gov>, "XO.Thomas Jefferson - NOAA Service Account" <xo.thomas.jefferson@noaa.gov>, Kyle Ward - NOAA Federal <kyle.ward@noaa.gov>, Charles Wisotzkey - NOAA Federal <charles.j.wisotzkey@noaa.gov>, Corey Allen - NOAA Federal <corey.allen@noaa.gov>, Tara Wallace - NOAA Federal <tara.wallace@noaa.gov>

Ok, I'll follow up.
Many thanks,
Christina

Christina Belton
Physical Scientist
Operations Branch
Hydrographic Surveys Division
Office of Coast Survey, NOAA
240-533-0057
christina.belton@noaa.gov

[Quoted text hidden]

Tara Wallace - NOAA Federal <tara.wallace@noaa.gov> Thu, Sep 27, 2018 at 12:14 PM
To: Christina Belton - NOAA Federal <christina.belton@noaa.gov>
Cc: Anthony Klemm - NOAA Federal <anthony.r.klemm@noaa.gov>, "OPS.Thomas Jefferson - NOAA Service Account" <ops.thomas.jefferson@noaa.gov>, "CO.Thomas Jefferson - NOAA Service Account" <co.thomas.jefferson@noaa.gov>, xo.thomas.jefferson@noaa.gov, Kyle Ward <kyle.ward@noaa.gov>, charles.j.wisotzkey@noaa.gov, Corey Allen <corey.allen@noaa.gov>

Many thanks - we have been trying to get these ruins off the chart for over four years!
Tara
[Quoted text hidden]

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*

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).

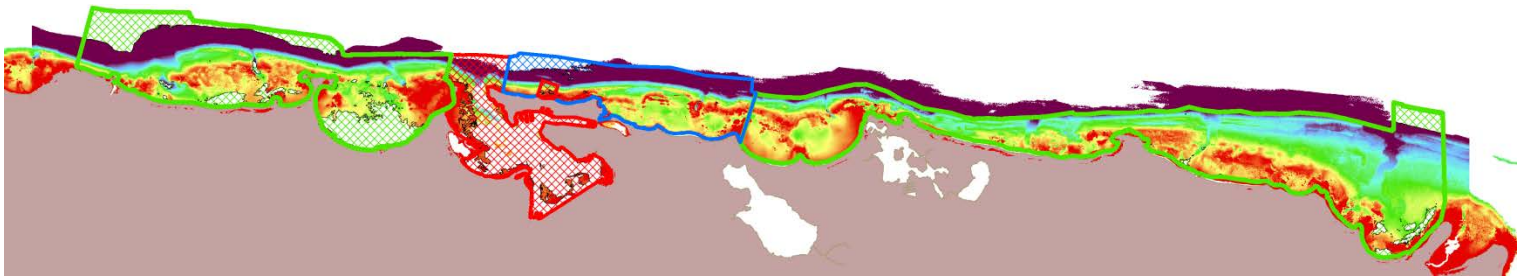


Figure 1: Extents of USACE and RSD lidar coverage overlapping H13041

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):

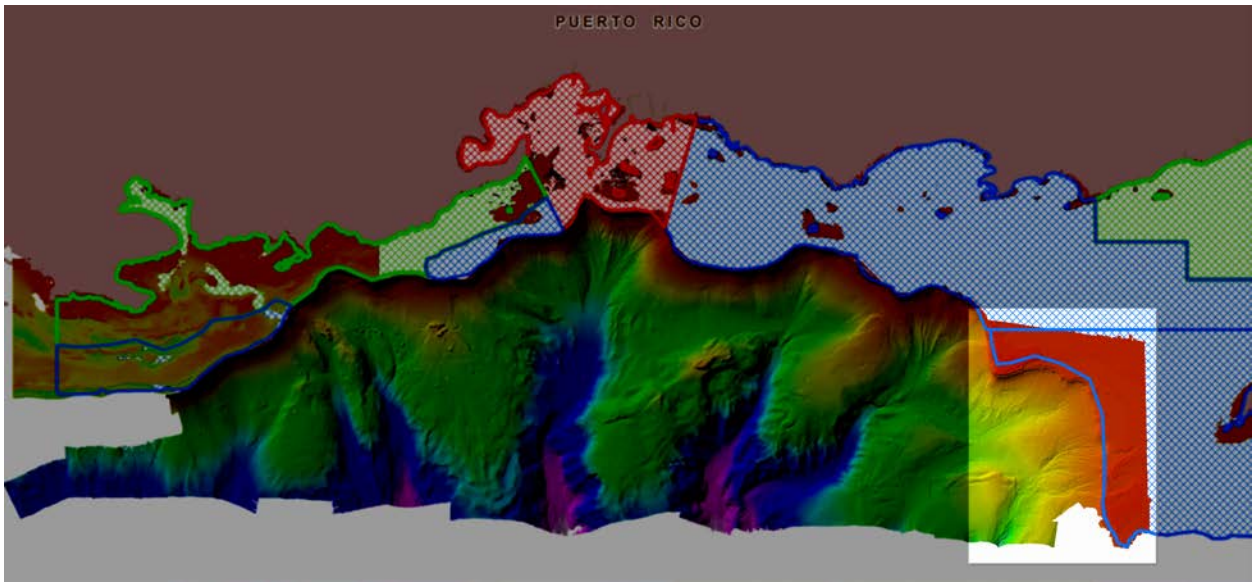


Figure 2: *Nancy Foster* survey extents overlapping H13144

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.

Decision

Waiver is:

_____ _____

Granted Denied

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

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

August 3, 2018

MEMORANDUM FOR: Doug Wood
Project Manager, OPR-K371-TJ-18
Hydrographic Surveys Division Operations Branch

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

SUBJECT: OPR-K371-TJ-18 waiver request re: HTD 2018-5

Thomas Jefferson requests a waiver of Hydrographic Technical Directive 2018-5: Feature Image File Naming Convention for all surveys in project OPR-K371-TJ-18.

Justification

Data acquisition and feature management, including all image naming, commenced on all project surveys at the time of issuance of the HTD.

Decision

Waiver is: Granted _____ Denied _____

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

To: Christina Belton, Project Manager OPR-I369-TJ-18

From: NOAA Ship Thomas Jefferson

I am sending you this document to notify you of shoaling in multiple parts of US Army Corps of Engineers (USACE) maintained channels in Bahia de San Juan. The soundings created were derived from H13140 survey data acquired with TJ survey launch 2904 and 2903, these soundings have been reduced to Mean Lower Low Water (MLLW).

Figure 1 shows shoaling on the edge on Graving Dock Channel Left Outer Quadrant (LOQ). The controlling Depth Range Value 1 (DRVAL1) equals 10.7 meters and the observed shoaling measures a depth of 10.3 meters. Position located at 18-26-47.9310 North by 066-05-51.4939 West.

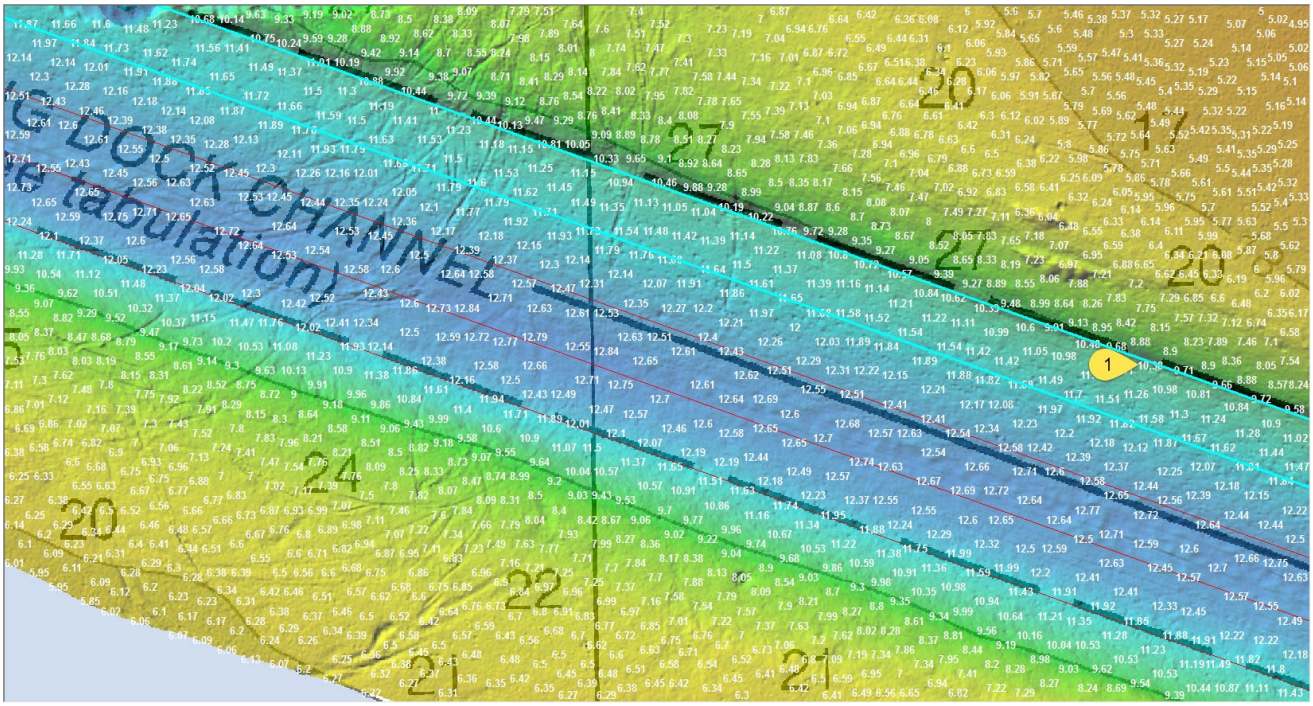


Figure 1: Shoaling in Graving Dock Channel LOQ.

Figure 2 represents shoaling in the San Antonio Channel's Left Inner Quadrant (LIQ). The controlling DRVAL1 equals 10.8 meters and the observed shoaling in the area measures a least depth of 10.4 meters. Position located at 18-27-37.4832 North by 066-05-52.5508 West.

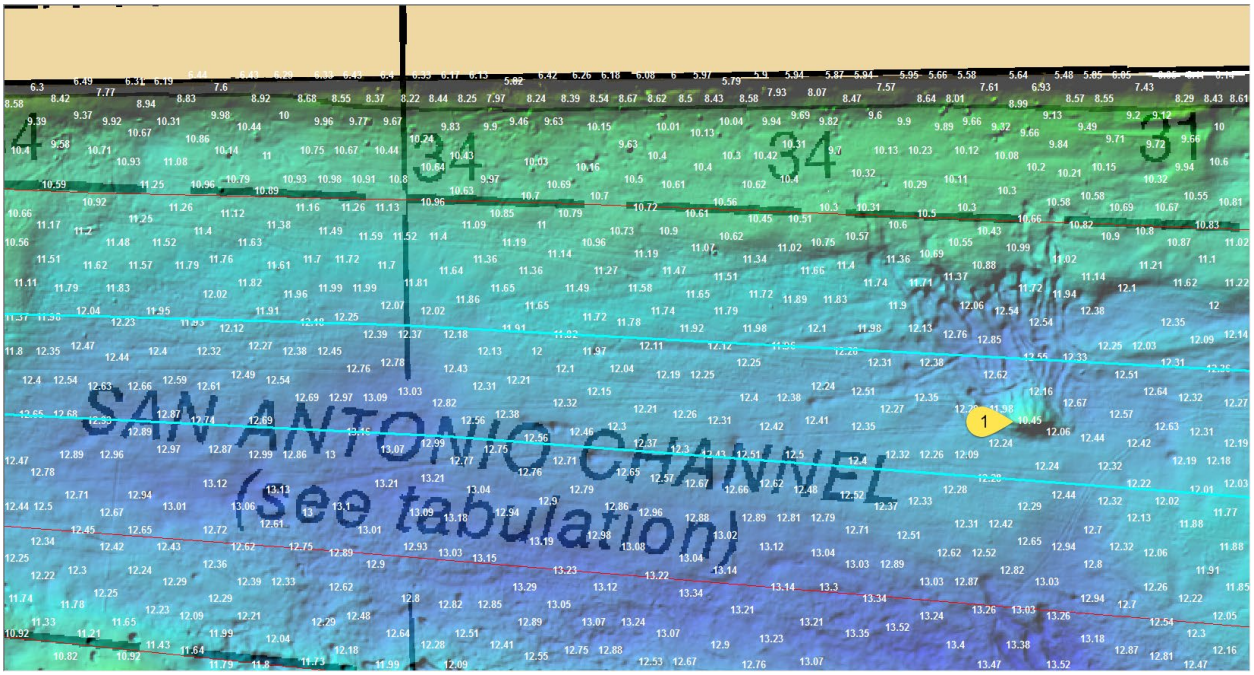


Figure 2: Shoaling in San Antonio Channel LIQ.

Figure 3 represents shoaling in the San Antonio Approach Channel's LIQ. The controlling DRVAL1 in the area is 11.3 meters and the observed shoaling measures a depth of 10.6 meters. Position located at 18-27-28.6542 North by 066-06-40.1454 West.

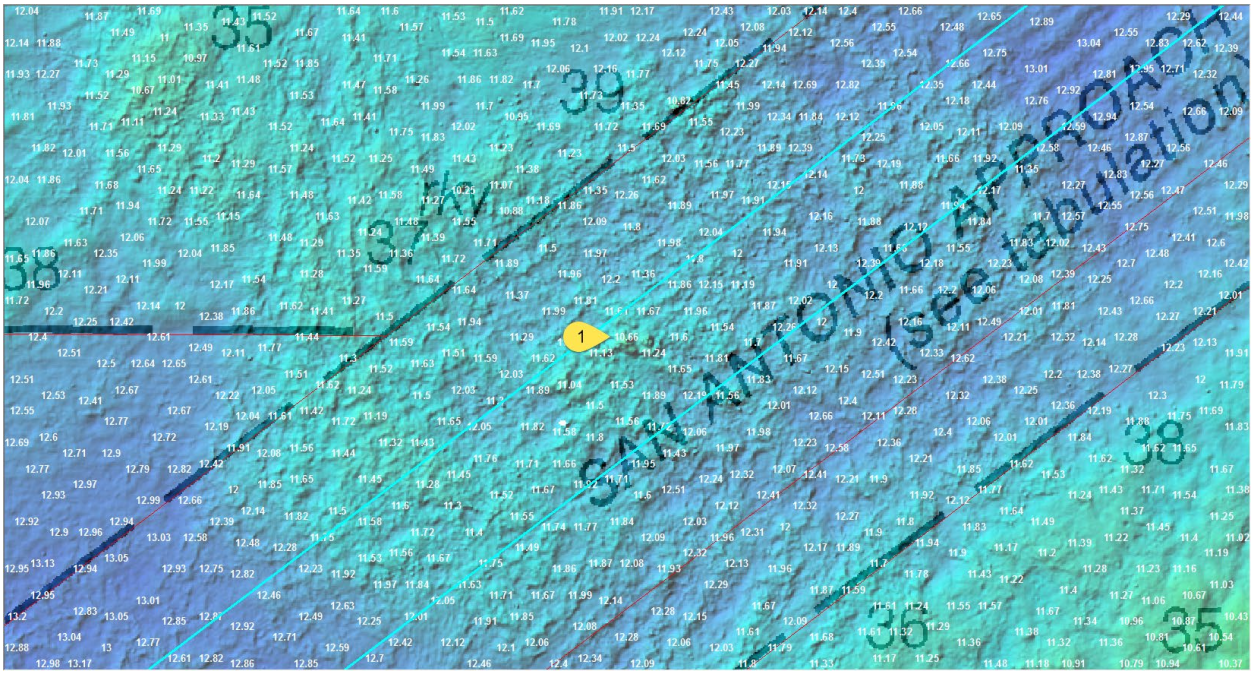


Figure 3: Shoaling in San Antonio Approach Channel LIQ.

Figure 4 represents shoaling in the Army Terminal Channel where the controlling DRVAL1 equals 11.4 meters. Shoaling is observed on the edge of the Left Outer Quadrant (LOQ) measuring 8.2 meters depth. Position located at 18-26-42.1515 North by 066-06-30.1953 West.

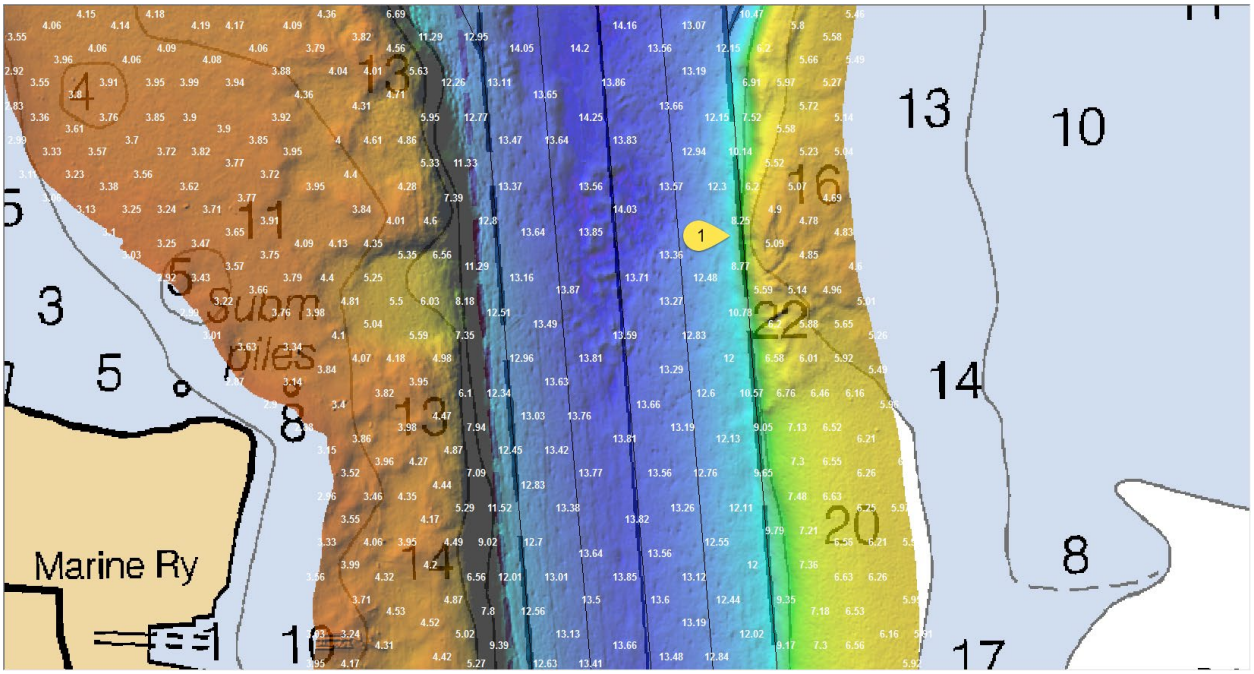


Figure 4: Shoaling in Army Terminal Channel LOQ.

Figure 5 represents shoaling at the southernmost end of the Anegado Channel's Left Inner Quadrant (LIQ). The controlling DRVAL1 equals 12.7 meters and the observed shoaling measures 12.3 meters depth. Position located at 18-26-58.7461 North by 066-06-31.3311 West.

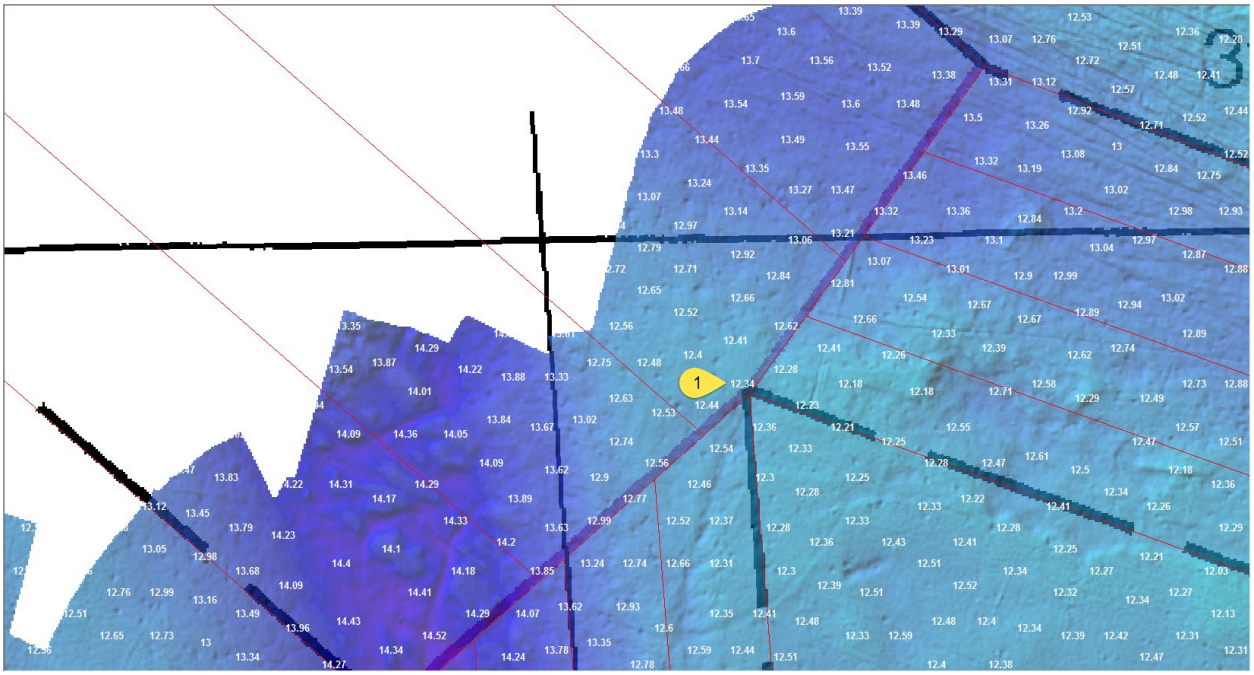


Figure 5: Shoaling in Anegado Channel LIQ.

Figure 6 represents shoaling at the southern end of the Anegado Channel Right Inner Quadrant (RIQ). The controlling DRVAL1 equals 13.1 meters and the observed shoaling measures 12.5 meters depth. Position located at 18-26-58.6218 North by 066-06-32.4154 West.

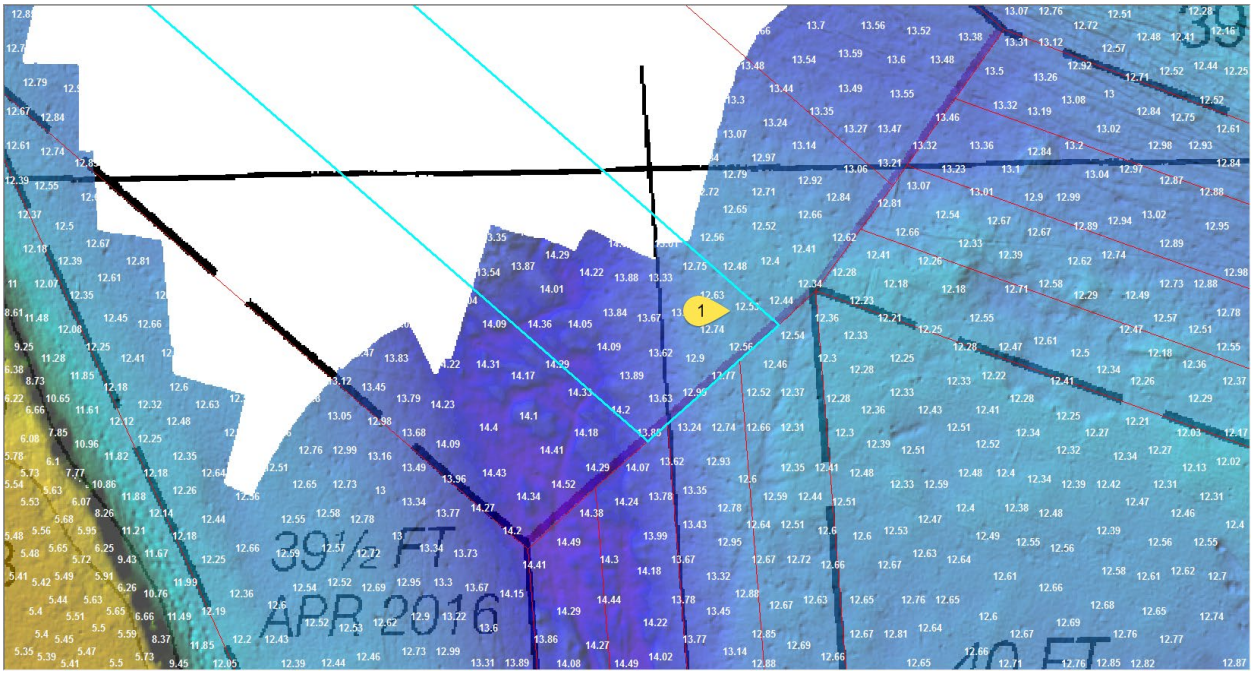


Figure 6: Shoaling in Anegado Channel RIQ.

Figure 7 represents the location of an obstruction located in the Anegado Channel RIQ. The DRVAL1 in this dredge area is 13.1 meters. The obstruction has a least depth of 12.5 meters and measures about 2.5 meters wide and about 6.7 meters long. There is no indication of shoaling around the obstruction. Obstruction located at 18-27-03.9359 North by 066-06-41.3174 West.

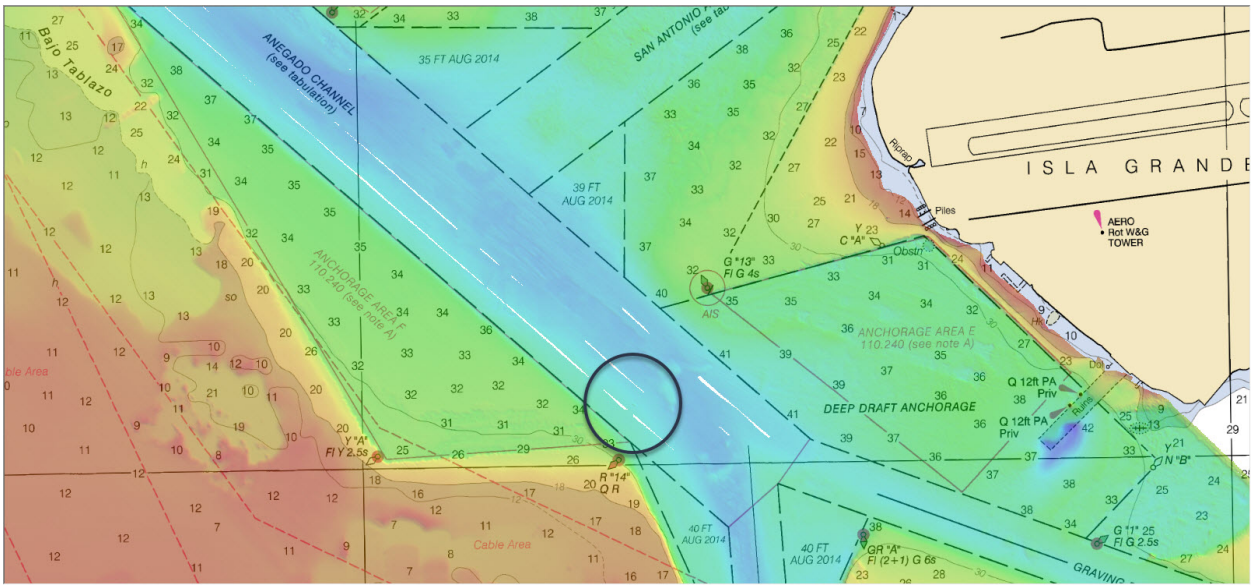


Figure 7: Anegado Channel RIQ obstruction location.

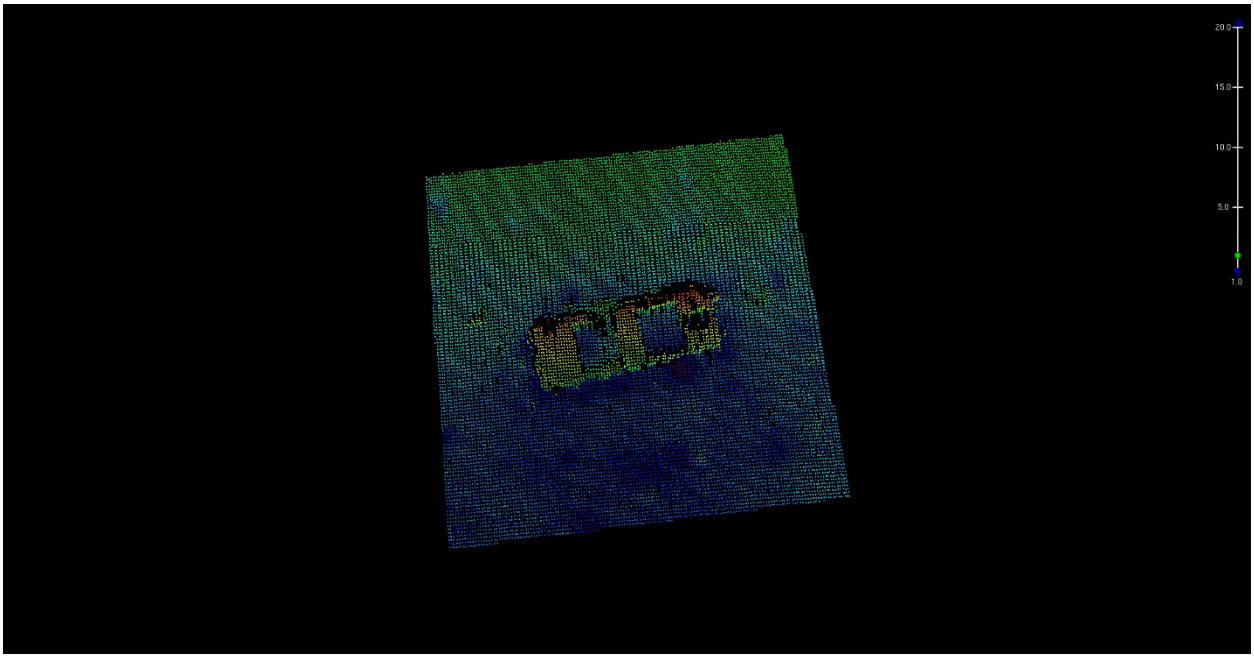
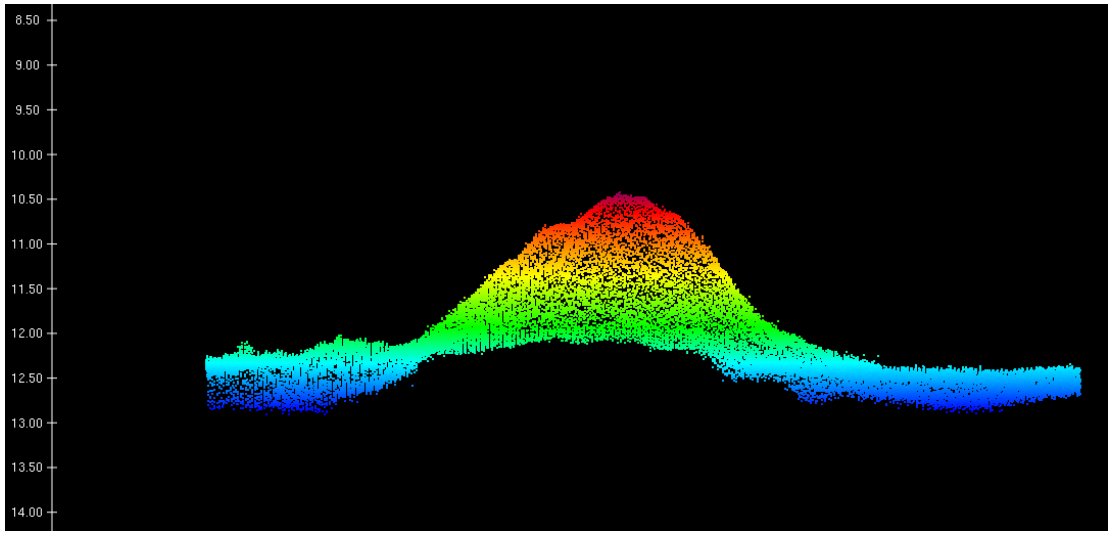
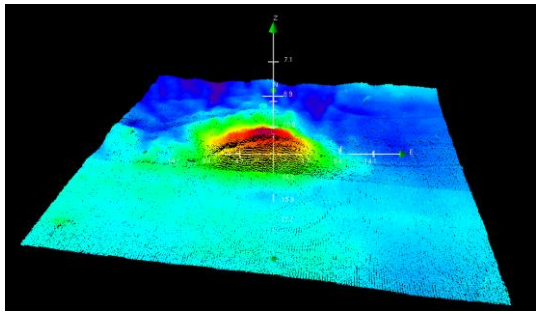


Figure 8: 3D subset view of obstruction in Anegado Channel RIQ

NOAA Ship THOMAS JEFFERSON (S-222) – Supplemental Feature Information

PROJECT	OPR-I369-TJ-18	**ENC**	US5PR32M	**REMARKS**
SHEET	H13140	**SOUNDINGS**	Meters	Feature present within San Antonio Channel LIQ with Depth Range Value 10.8m. Feature least depth was observed to be 10.398 m. Feature height is approximately 1.9 m. Horizontal dimensions approximately 8m x 13m.
LOCALITY	Puerto Rico	**DATUM**	MLLW	
SUBLOCALITY	San Juan Harbor	**DATE OF SURVEY**	12 OCT 2018	

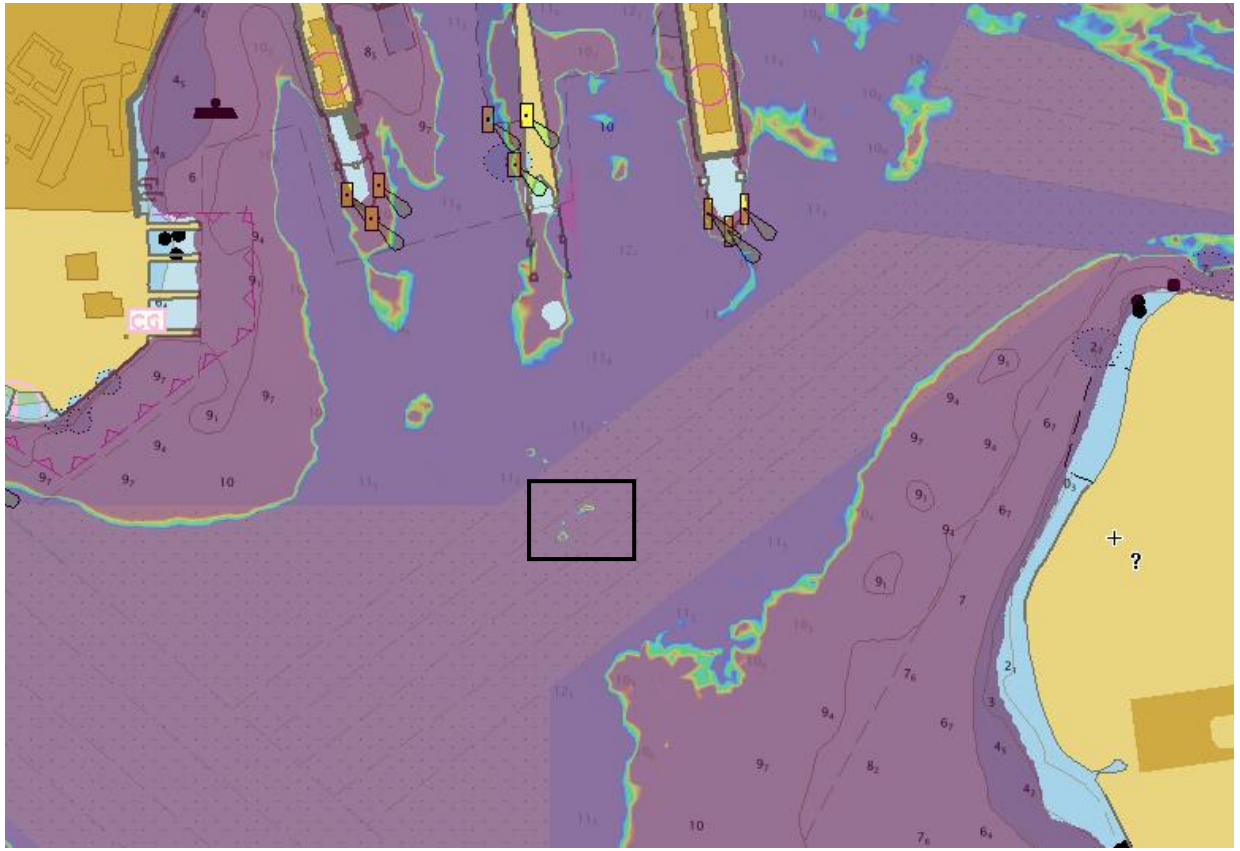


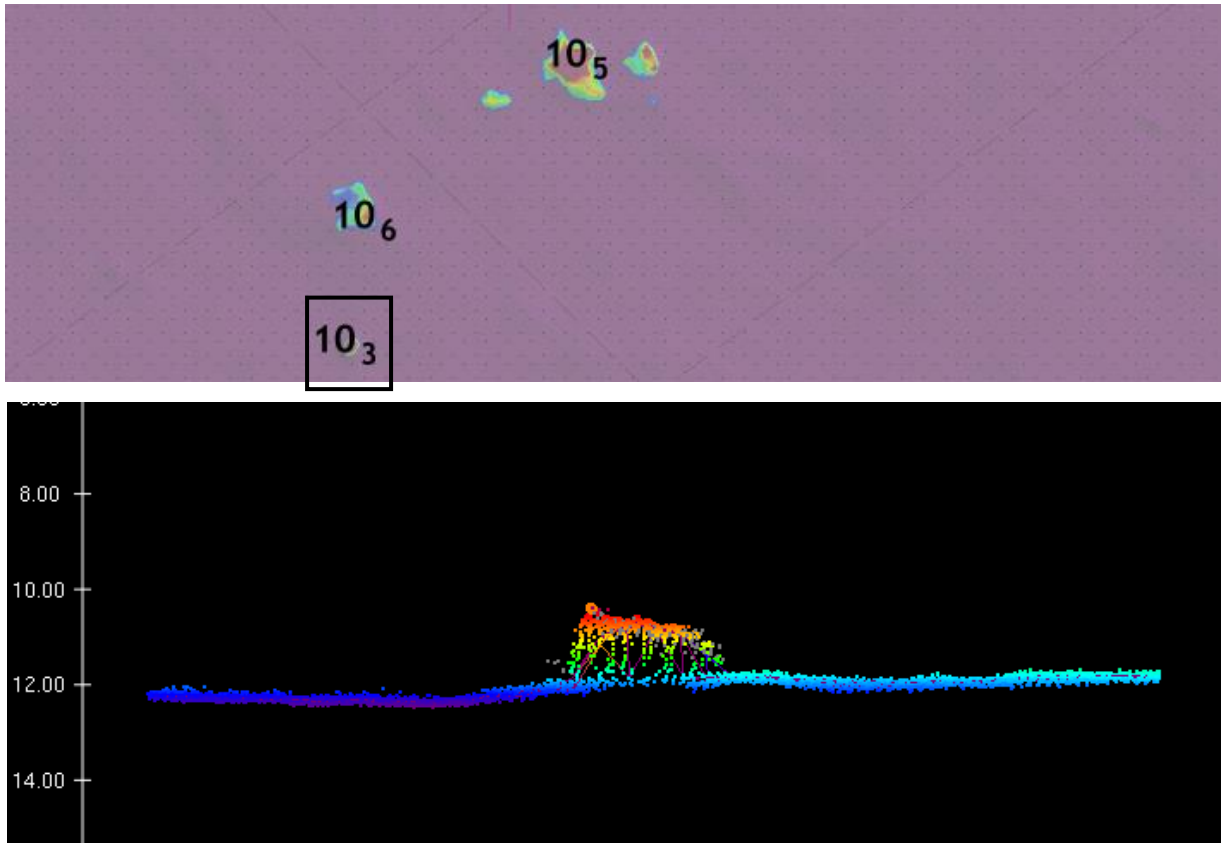


FEATURE ID	N/A	**LAT**	18.460428 N	**LON**	066.097929 W	**LEAST DEPTH**	10.398 m

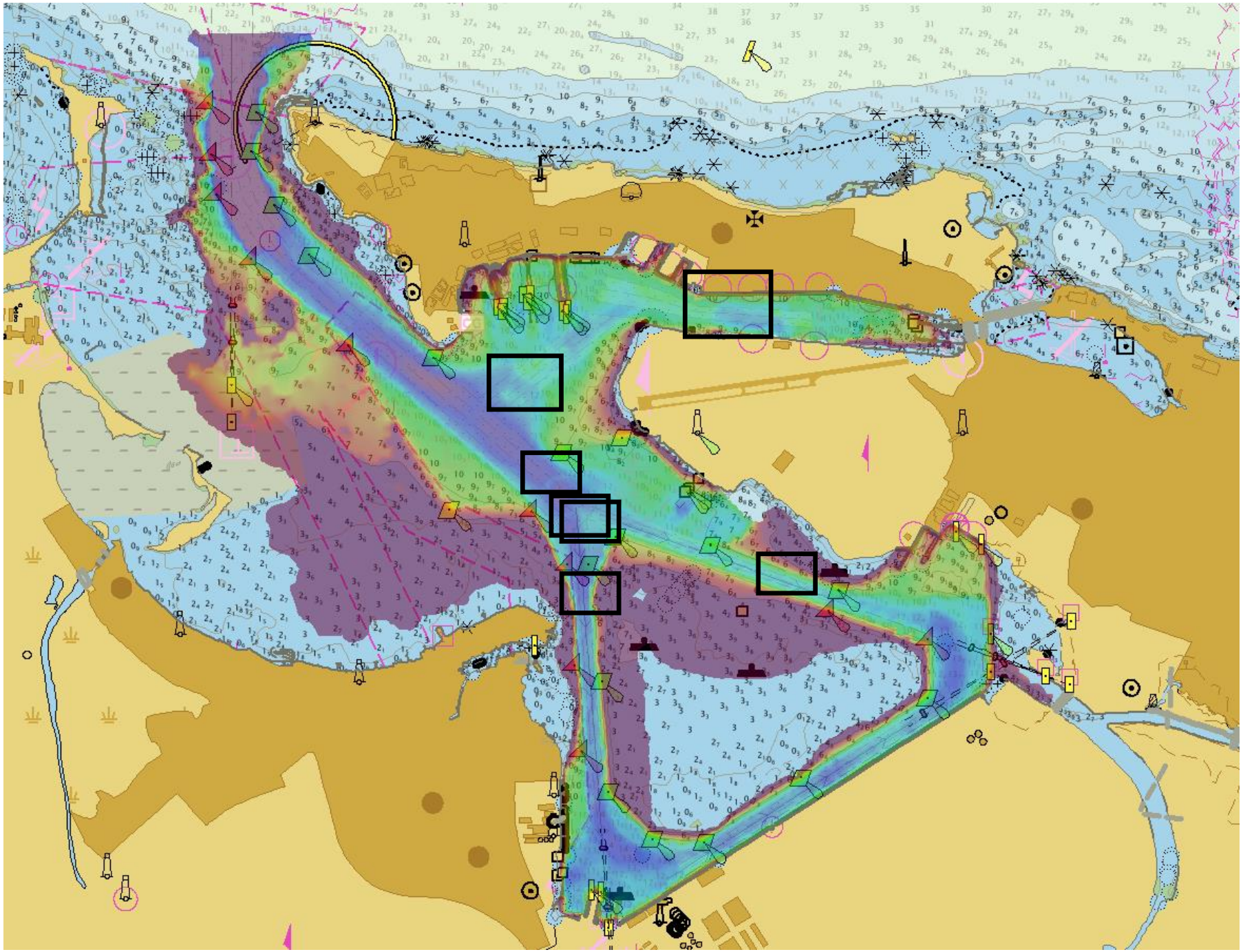
NOAA Ship THOMAS JEFFERSON (S-222) – Supplemental Feature Information

PROJECT	OPR-I369-TJ-18	**ENC**	US5PR32M	**REMARKS**
SHEET	H13140	**SOUNDINGS**	Meters	Feature present within USACE maintained San Antonio Approach Channel. Channel project depth is 11.3 m. Least depth of observed shoaling was 10.310m. Height of feature was 1.4m off the sea floor.
LOCALITY	Puerto Rico	**DATUM**	MLLW	
SUBLOCALITY	San Juan Harbor	**DATE OF SURVEY**	12 OCT 2018	





FEATURE ID	N/A	**LAT**	18.457677 N	**LON**	066.111391 W	**LEAST DEPTH**	10.310 m



F. Table of Acronyms

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

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

Acronym	Definition
PRF	Project Reference File
PS	Physical Scientist
RNC	Raster Navigational Chart
RTK	Real Time Kinematic
RTX	Real Time Extended
SBES	Singlebeam Echosounder
SBET	Smooth Best Estimate and Trajectory
SNM	Square Nautical Miles
SSS	Side Scan Sonar
SSSAB	Side Scan Sonar Acoustic Backscatter
ST	Survey Technician
SVP	Sound Velocity Profiler
TCARI	Tidal Constituent And Residual Interpolation
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
ZDF	Zone Definition File

APPROVAL PAGE

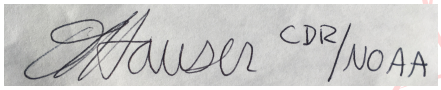
H13140

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)
- Collection of backscatter mosaics
- Processed survey data and records
- GeoPDF of survey products

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



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Approved:_____

Commander Olivia Hauser, NOAA
Chief, Pacific Hydrographic Branch