F00704

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

DESCRIPTIVE REPORT

Type of Survey:	Field Examination
Registry Number:	F00704

LOCALITY

State(s):	US Virgin Islands
General Locality:	US Virgin Islands
Sub-locality:	St. Thomas and St. John

2017

Chief of Party
Christiaan van Westendorp, CDR/NOAA

LIBRARY & ARCHIVES

Date:

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**F00704**

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):	**US Virgin Islands**
General Locality:	**US Virgin Islands**
Sub-Locality:	**St. Thomas and St. John**
Scale:	**1:5,000**
Dates of Survey:	**October 3, 2017 - October 4, 2017**
Project Number:	**S-I950-TJ-17**
Data Source:	**NOAA Ship *Thomas Jefferson***
Chief of Party:	**Christiaan van Westendorp, CDR/NOAA**
Soundings by:	**Multibeam**
Imagery by:	**Side Scan**
Verification by:	**Atlantic Hydrographic Branch (AHB)**
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 Envitronmental Information (NCEI) and can be retrieved via http://www.ncei.noaa.gov/.

Products created during office processing were generated in NAD83 UTM 20N, MLLW. All references to other horizontal or vertical datums in this report are applicable to the processed hydrographic data provided by the field unit.

DESCRIPTIVE REPORT MEMO

August 10, 2018

MEMORANDUM FOR: Atlantic Hydrographic Branch

FROM: CDR Christiaan van Westendorp, NOAA
Commanding Officer and Chief of Party, NOAA Ship THOMAS JEFFERSON

SUBJECT: Submission of Survey F00704

Survey F00704 was conducted by Thomas Jefferson as an emergency response to Hurricane Maria in 2017. The area surveyed included the St. Thomas - St. John ferry terminals and Enighed Pond south of Cruz Bay on St. John Island. The survey came at the request of United States Coast Guard (USCG) District 7 to identify dangers to navigation and provide seafloor imagery and bathymetry to assist in reopening ports in Puerto Rico and the US Virgin Islands.

Thomas Jefferson provided a contact report and initial chartlet to USCG District 7 that included Side Scan Sonar (SSS) mosaics and preliminary depths, which are included in the Descriptive Report Appendices.

Soundings were reduced to Mean Lower Low Water (MLLW) using a VDatum processing solution.

No NWLON water level station data was reference for water level corrections.

The area was surveyed using Thomas Jefferson's 28ft hydrographic survey launches (HSL) 2903 and 2904, equipped with Reson 7125 SV2 400kHz Multibeam Echosounder (MBES), Klein 5000 Side Scan Sonar (SSS), and Edgetech 4200 SSS. Data was acquired with 200% SSS and concurrent MBES. Some features identified by SSS were not developed with MBES, and therefore do not have measured least depths. Refer to the Data Acquisition and Processing Report (DAPR) S-I950-TJ-17 for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods.

Preliminary survey products are included in the appendices of this memo.

All data were acquired by a NOAA or NOAA Contractor field unit

Findings are summarized in the contact report and chartlet generated for the USCG. See Appendices for more information.

The survey is partially adequate to supersede previous data. This survey generally meets charting specifications and is adequate to supersede prior data, except in cases where features were detected by SSS, but not surveyed with MBES (as mentioned previously). Erroneous outliers and fliers may exist in the submitted depth surfaces. All urgent and time-sensitive chart update recommendations were submitted to the

USCG and NOAA Marine Chart Division as preliminary survey products. These reports are included in the appendices of this memo.

Survey data should be archived at NCEI and the DR memo forwarded to HSD.

Concur with clarification. AHB edited the bathymetry data rejecting soundings considered as erroneous, transformed the bathymetric grid to horizontal datum of NAD83, and finalized the source grid. The survey data is considered adequate to supersede previous data. F00704 is recommended for NCEI archive and addition to the National Bathymetric Source.

Metadata for Survey F00704	
Project	S-I950-TJ-17
Survey	F00704
State	US Virgin Islands
Locality	US Virgin Islands
Sub-Locality	St. Thomas and St. John
Scale of Survey	1:5000
Sonars Used	Edgetech 4200 (Side Scan Sonar) Reson 7125 SV2 400kHz (Multibeam Echosounder) Klein 5000 (Side Scan Sonar)
Horizontal Datum	World Geodetic System (WGS) 1984
Vertical Datum	Mean Lower Low Water
Vertical Datum Correction	VDatum
Projection	UTM Zone 20N
Field Unit	NOAA Ship THOMAS JEFFERSON
Survey Dates	10/03/2017 - 10/04/2017
Chief of Party	Christiaan van Westendorp, CDR/NOAA
Submission Date	08/10/2018

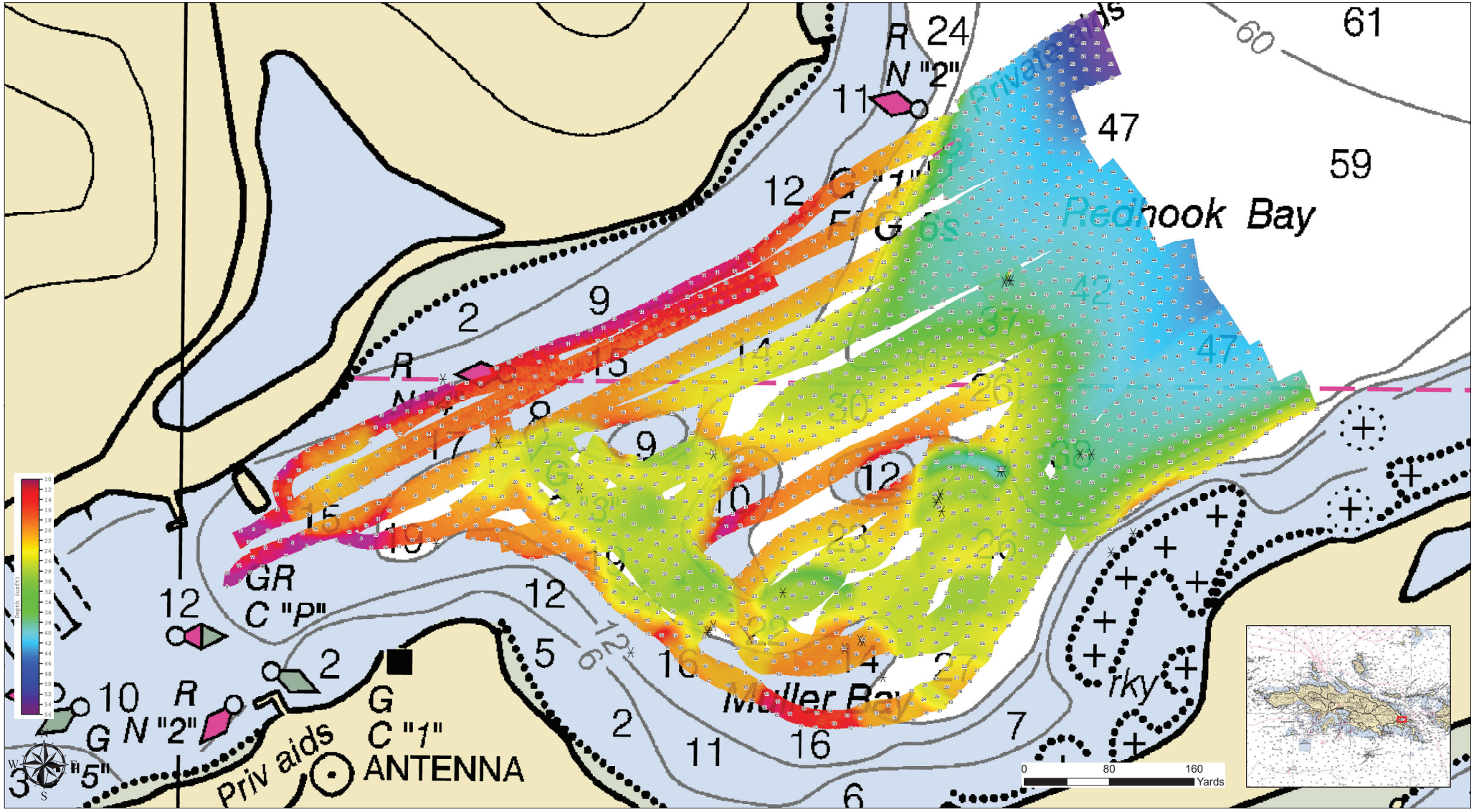
Survey Chartlet of Redhook Bay, St. Thomas, US Virgin Islands - F00704 Hurricane Maria Response

Hydrographic Survey

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE

Data reflect the state of the sea floor in existence on the day and at the time the survey was conducted. The survey and the chart have not been updated for inclusion of the latest Local Notice to Mariners. Preliminary data subject to office review.

NOT FOR USE IN NAVIGATION.



Project:	S-I950-TJ-17	**Sounding Units:**	NOAA Rounded Feet	**NOAA Ship Thomas Jefferson S222**	Date of Survey
Survey:	F00702 Hurricane Maria	**Sounding Datum:**	MLLW	**CDR Chris van Westendorp, NOAA**	04 Oct 2017
Locality:	US Virgin Islands, St. Thomas	**Horizontal Datum:**	WGS84	co.thomas.jefferson@noaa.gov	Chartlet 1 of 1
Sublocality:	Redhook Bay	**Chart Number:**	NOAA Chart 25647		
Survey Scale:	1:5,000	**Survey Technique:**	Multibeam & Side Scan Sonar		

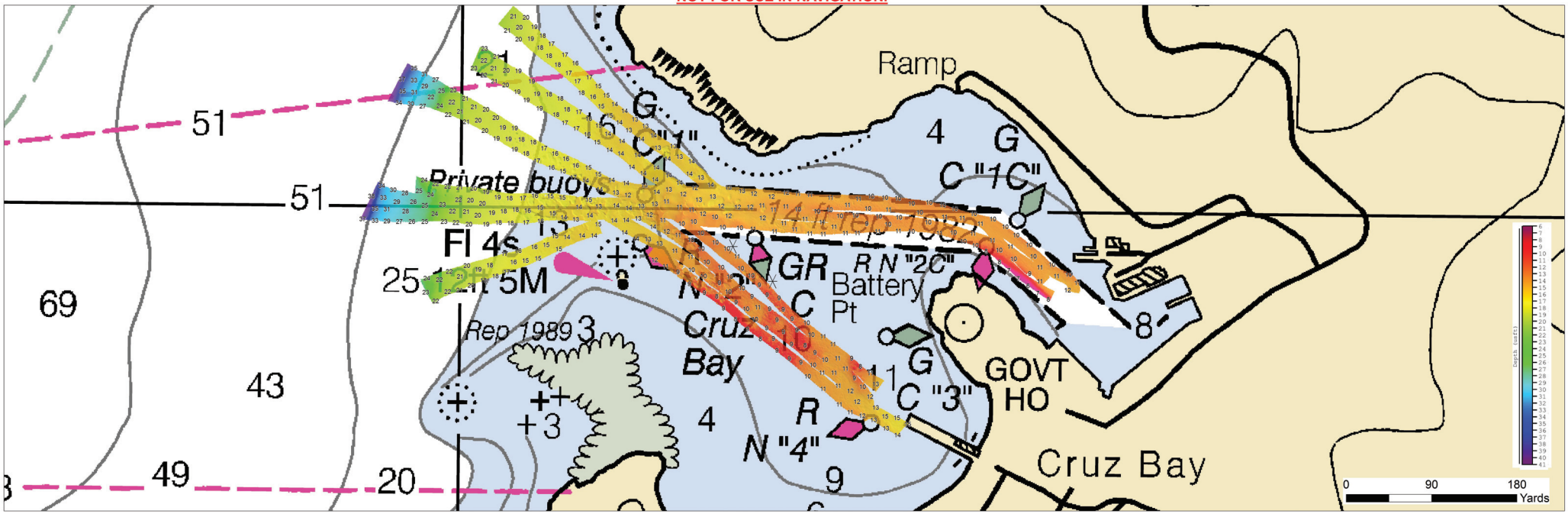
Survey Chartlet of Cruz Bay, Turner Bay, and Enighed Pond, St. John, US Virgin Islands - F00704 Hurricane Maria Response

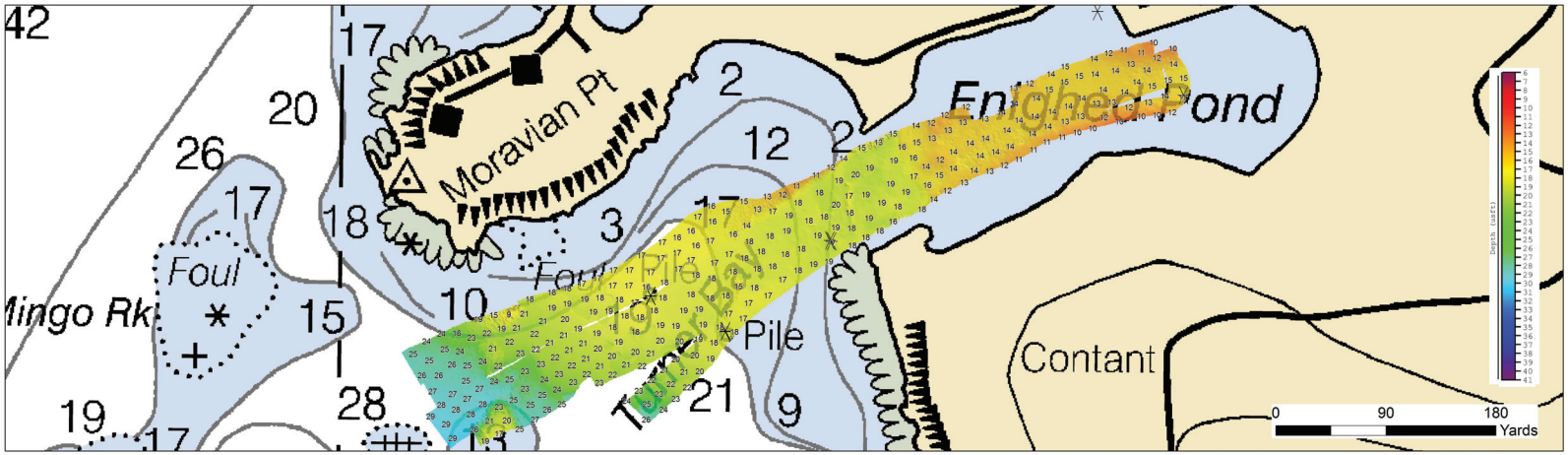
Hydrographic Survey

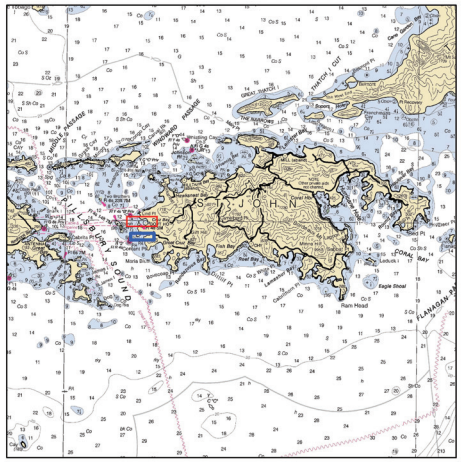
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE

Data reflect the state of the sea floor in existence on the day and at the time the survey was conducted. The survey and the chart have not been updated for inclusion of the latest Local Notice to Mariners. Preliminary data subject to office review.

NOT FOR USE IN NAVIGATION.







Project:	S-I950-TJ-17	**Sounding Units:**	NOAA Rounded Feet
Survey:	F00702 Hurricane Maria	**Sounding Datum:**	MLLW
Locality:	US Virgin Islands, St. John	**Horizontal Datum:**	WGS84
Sublocality:	Cruz Bay, Turner Bay, & Enighed Pond	**Chart Number:**	NOAA Chart 25647
Survey Scale:	1:5,000	**Survey Technique:**	Multibeam & Side Scan Sonar

NOAA Ship Thomas Jefferson S222
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date of Survey
04 Oct 2017

Chartlet 1 of 1

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

NOAA Ship *Thomas Jefferson*
(S-222)

Supplemental contact information for survey of Redhook, St. Thomas, and Cruz Bay, St. John
4 Oct 2017

PRELIMINARY PRODUCT - FOR USCG & NOAA DECISIONAL USE ONLY - NOT FOR USE IN NAVIGATION

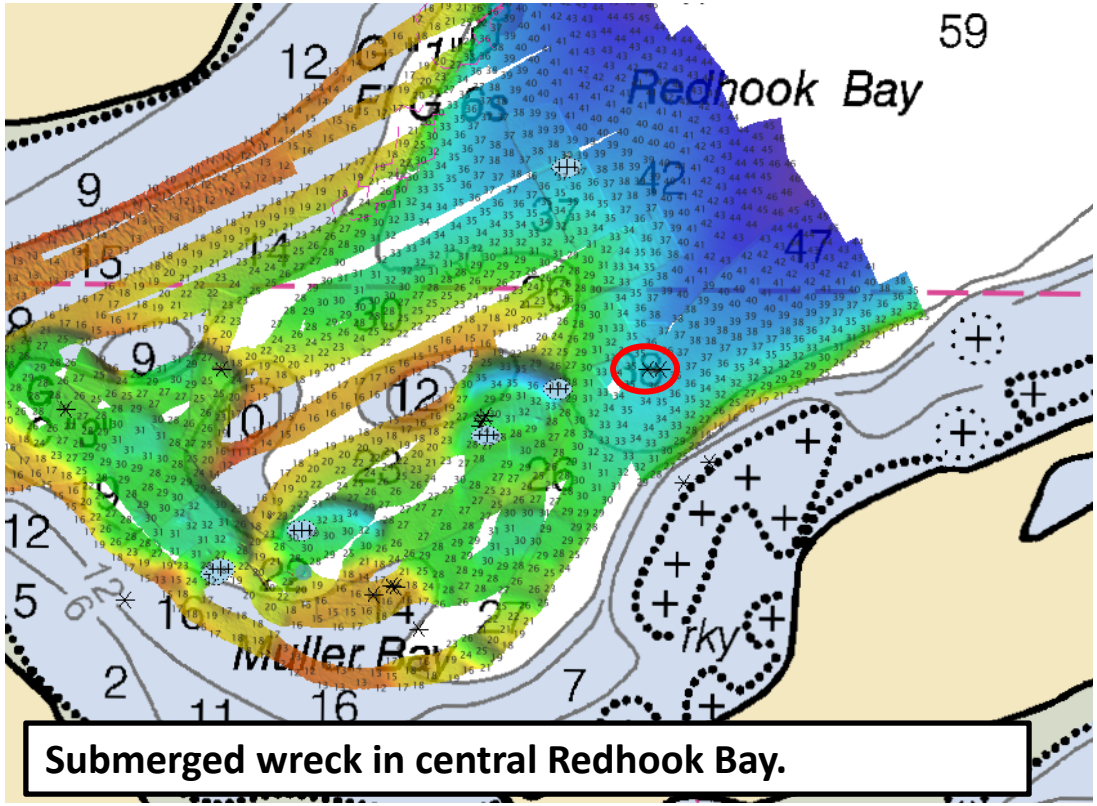
NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.326461 N
Longitude:	64.842682 W
MBES least depth:	28 ft
SSS contact height:	7.75 ft
Contact dimensions:	24 x 12 ft x 7.75 ft

Comments:

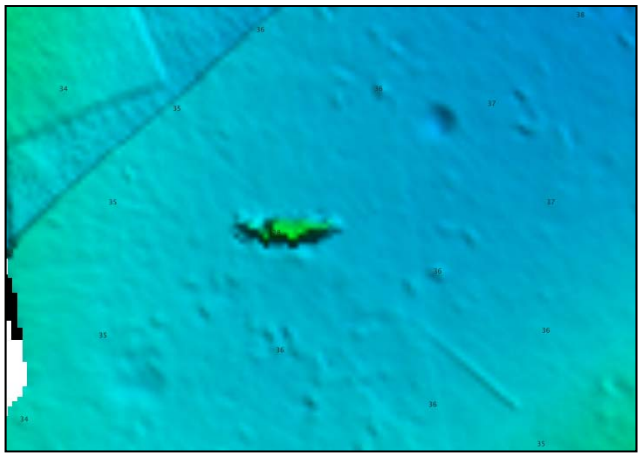
Submerged wreck is located in central section of Redhook Bay, eastern end of St Thomas, least depth of 28 ft.



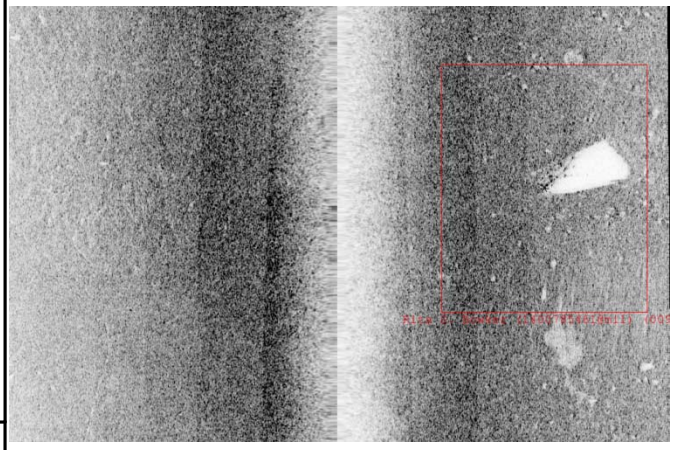
Submerged wreck in central Redhook Bay.

Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

Additional media / information:



MBES coverage of wreck with least depth of 28 ft.



SSS imagery showing sunken vessel, approx. 24 ft length, 12 ft width, and more than 7.75ft height.

PRELIMINARY PRODUCT - FOR USCG & NOAA DECISIONAL USE ONLY - NOT FOR USE IN NAVIGATION

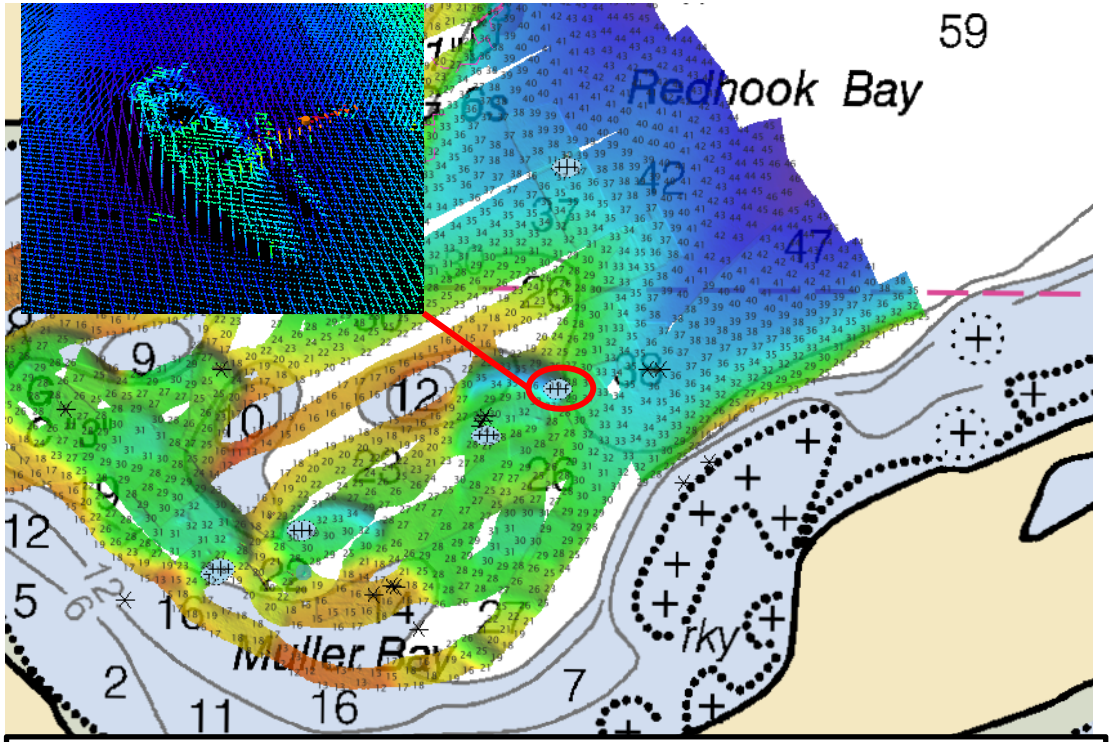
NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.326322 N
Longitude:	64.843308 W
MBES least depth:	19 ft
SSS contact height:	Approx. 16 ft
Contact dimensions:	33 x 15 x 16 ft

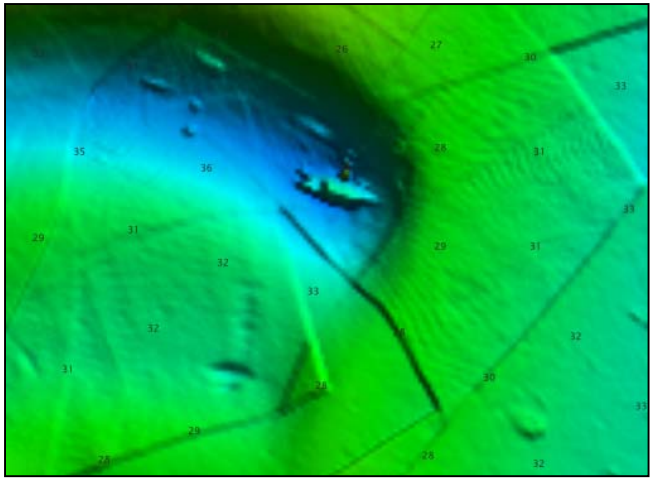
Comments:

Dangerous submerged wreck (probable sail boat) in central southern region of bay. Least depth of 19 ft.



Wreck in southern portion of Redhook Bay.

Additional media / information:



MBES coverage of wreck with least depth of 19 ft.

SSS imagery showing wreck, approx. 33 ft length, 15 ft width, and 16 ft height (including probable mast).

Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

PRELIMINARY PRODUCT - FOR USCG & NOAA DECISIONAL USE ONLY - NOT FOR USE IN NAVIGATION

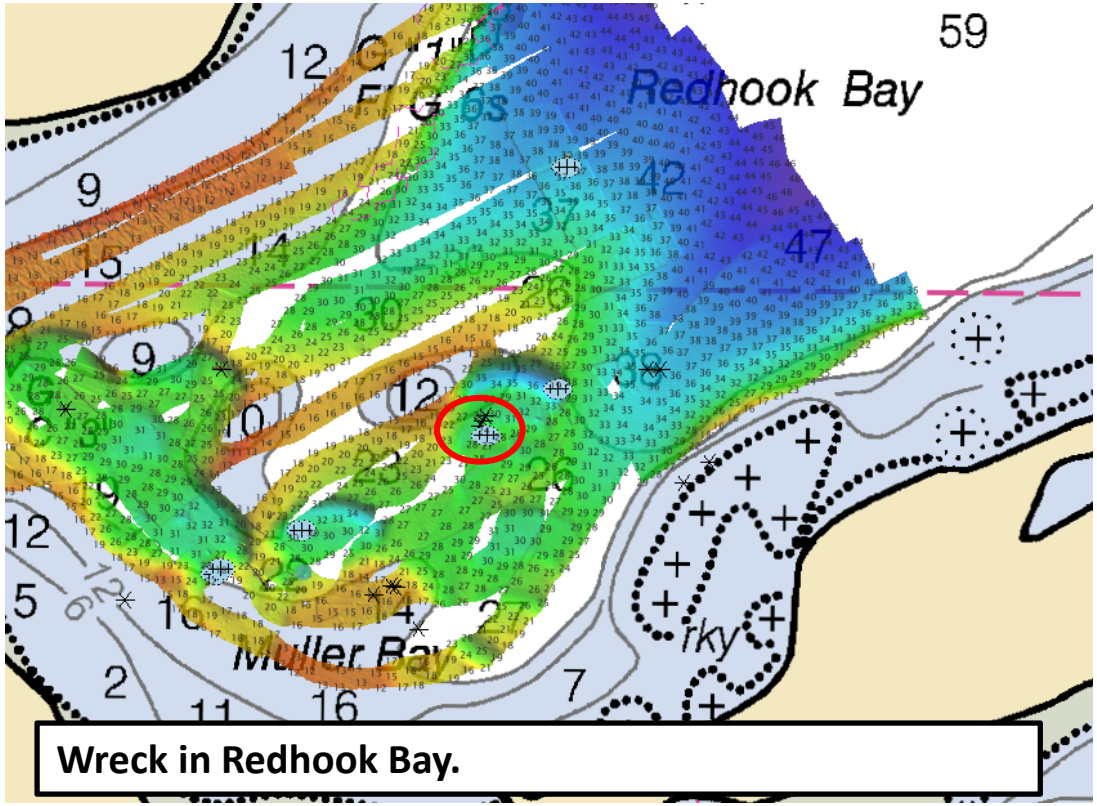
NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.326074 N
Longitude:	64.843850 W
MBES least depth:	24 ft
SSS contact height:	15.56 ft
Contact dimensions:	40 ft x 20 ft x 15.56 ft

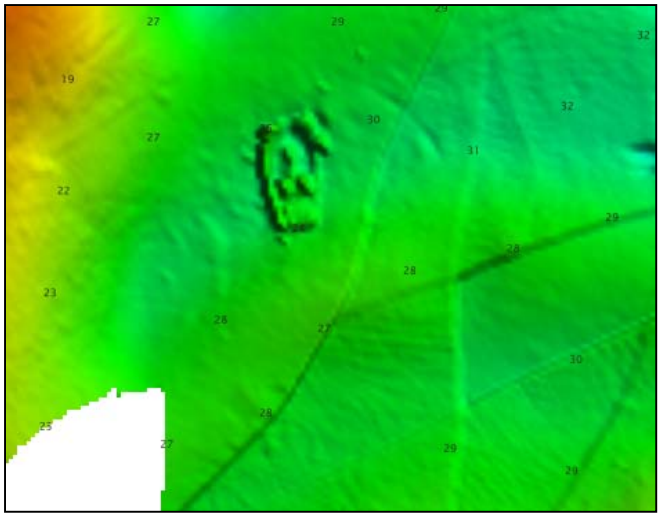
Comments:

Submerged wreck located in central section of Redhook Bay with least depth of 24 ft.

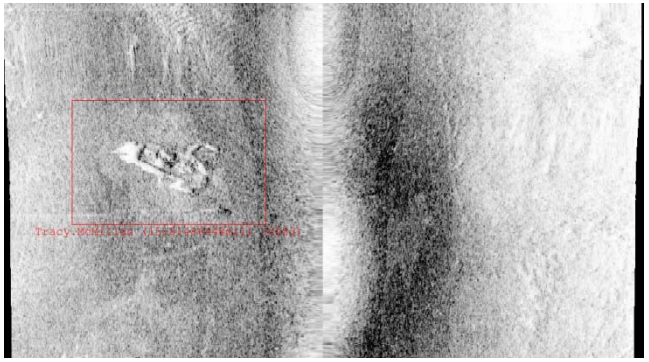


Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

Additional media / information:



MBES coverage of wreck with least depth of 24 ft.



SSS imagery showing a wreck in the central section of Redhook Bay 40 ft length, 20 ft width, and 15.56 ft height.

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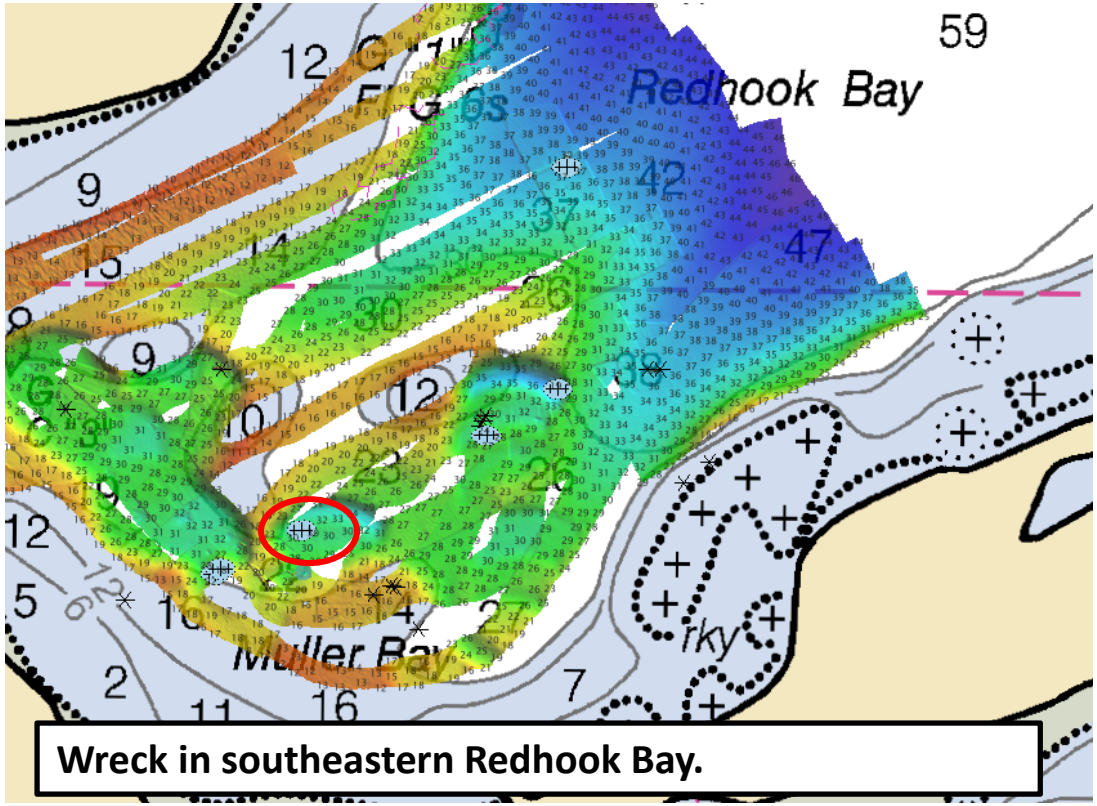
NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.325361 N
Longitude:	64.845091 W
MBES least depth:	Approx. 30ft
SSS contact height:	unknown
Contact dimensions:	40 ft x 7.87 ft

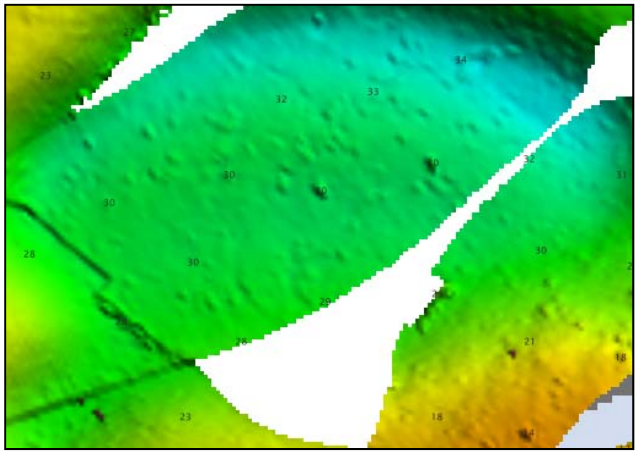
Comments:

Submerged wreck located in southwest section of Redhook Bay. This is a decayed wreck with minimal height above the seafloor.

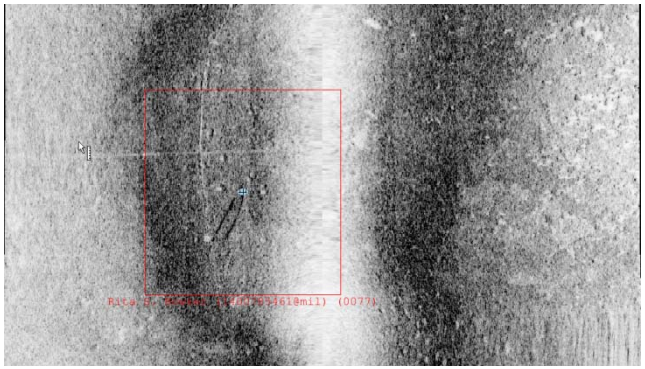


Wreck in southeastern Redhook Bay.

Additional media / information:



Wreck is decayed enough to have minimal height above the seafloor in multibeam coverage.



SSS imagery showing a vessel wreck in the southeastern section of Redhook Bay 40 ft length, 20 ft width, and minimal height.

Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

PRELIMINARY PRODUCT - FOR USCG & NOAA DECISIONAL USE ONLY - NOT FOR USE IN NAVIGATION

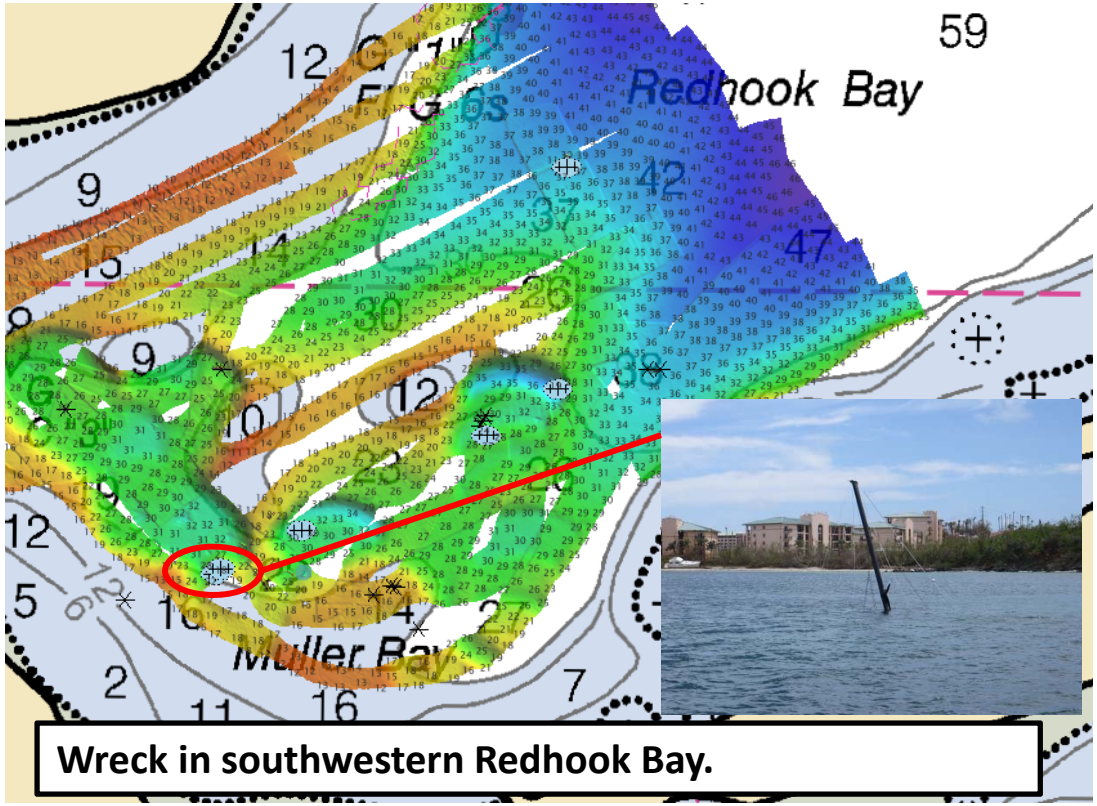
NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.325046 N
Longitude:	64.845702 W
MBES least depth:	N/A
SSS contact height:	22.8
Contact dimensions:	42 ft x 15 ft x 22.8 ft

Comments:

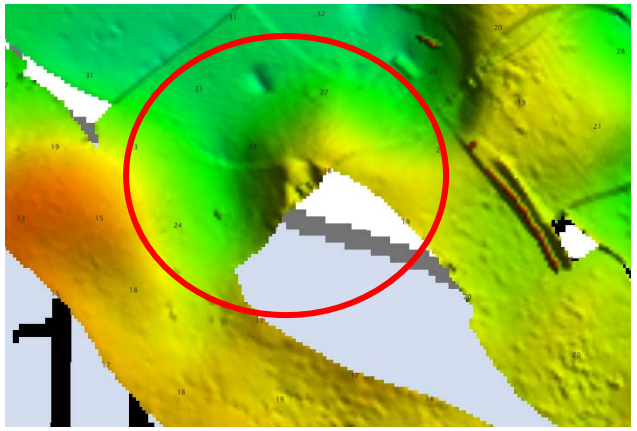
Dangerous visible wreck located in southwestern section of Redhook Bay. Mast protrudes out of the water. Recommend further investigation.



Wreck in southwestern Redhook Bay.

Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

Additional media / information:



MBES coverage does not adequately show wreck debris .

SSS imagery showing wreck in the southwestern section of Redhook Bay 42 ft length, 15 ft width, and 22.8 ft height.

PRELIMINARY PRODUCT - FOR USCG & NOAA DECISIONAL USE ONLY - NOT FOR USE IN NAVIGATION

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Supplemental Contact Information
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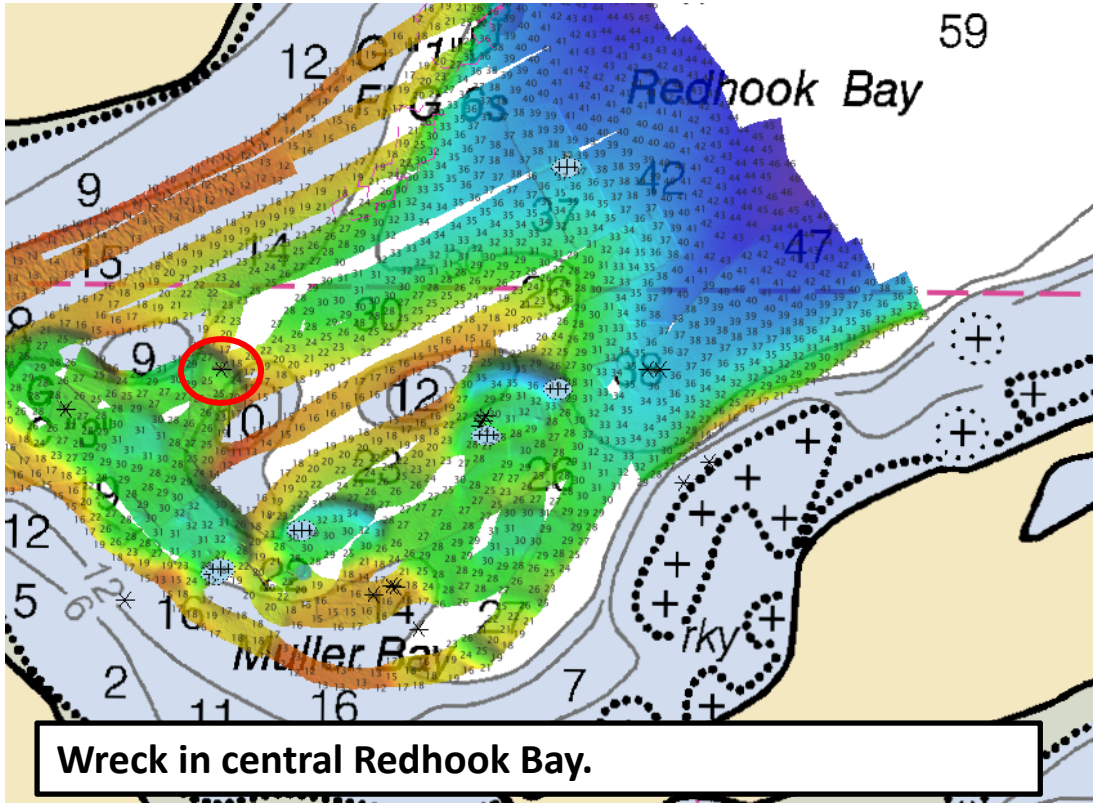
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.326434 N
Longitude:	64.845667 W
MBES least depth:	16 ft
SSS contact height:	2.9 ft
Contact dimensions:	22.43 ft x 2.83 ft x 2.9 ft

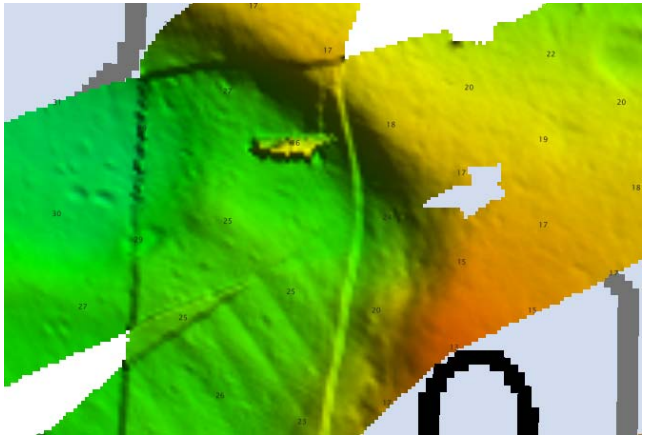
Comments:

Submerged wreck located in central section of Redhook Bay; least depth 16 ft.

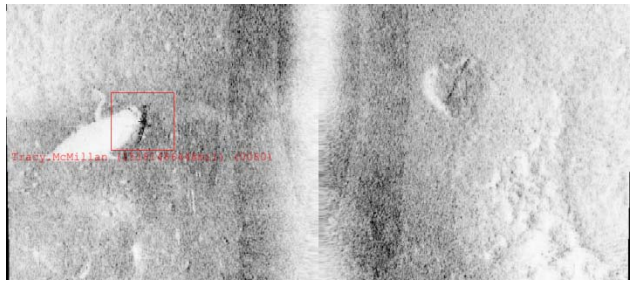


Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

Additional media / information:



MBES coverage of wreck with least depth of 16 ft.



SSS imagery showing wreck in the central section of Redhook Bay, 22.43 ft length, 2.83 ft width, and 2.9ft height.

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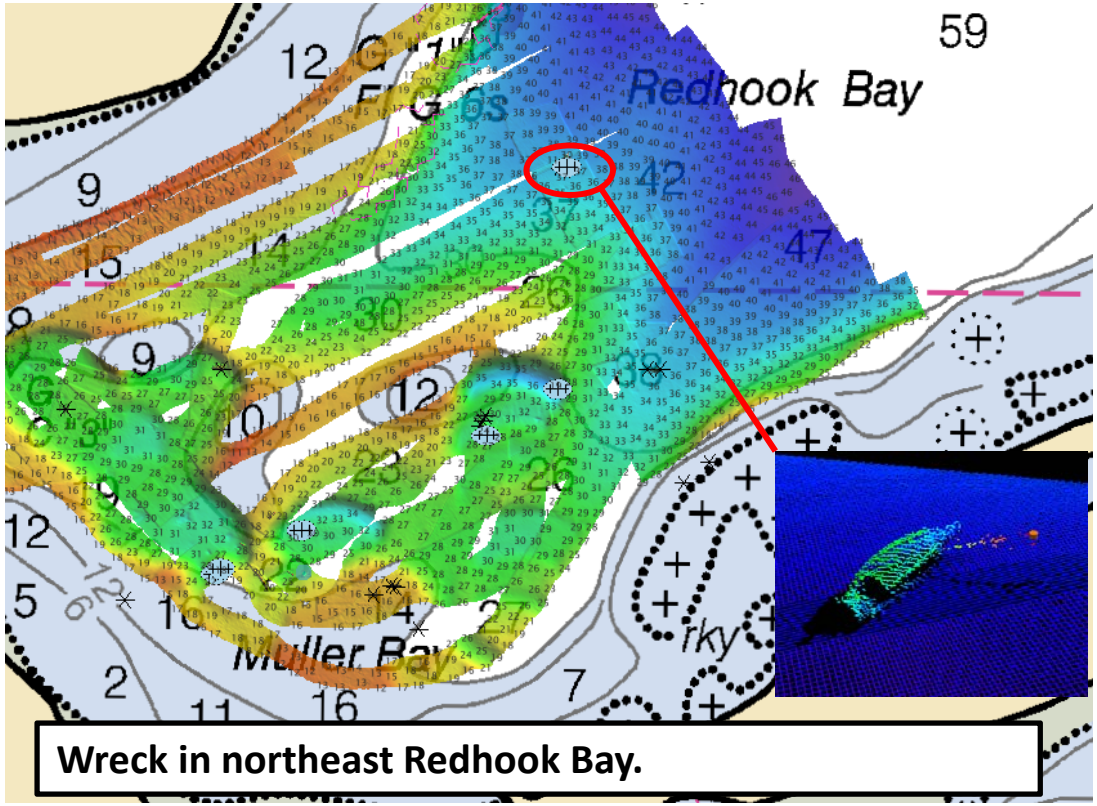
NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.327856 N
Longitude:	64.843278 W
MBES least depth:	11 ft
SSS contact height:	28.43 ft
Contact dimensions:	46 ft x 4.7 ft x 28.43 ft

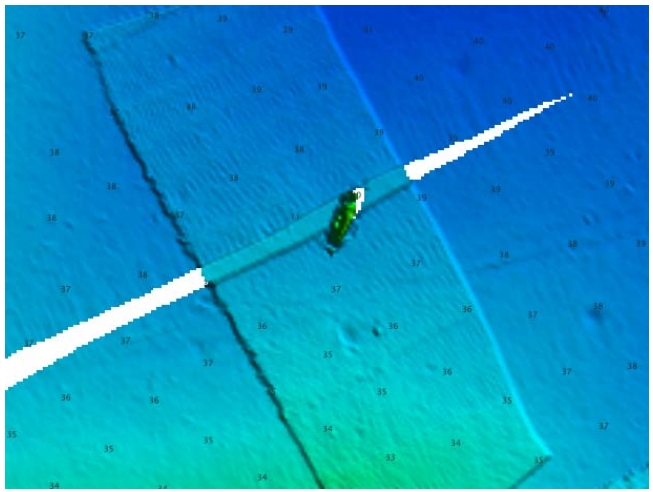
Comments:

Dangerous submerged wreck located in northeast section of Redhook Bay. Least depth is 11ft (from the mast).

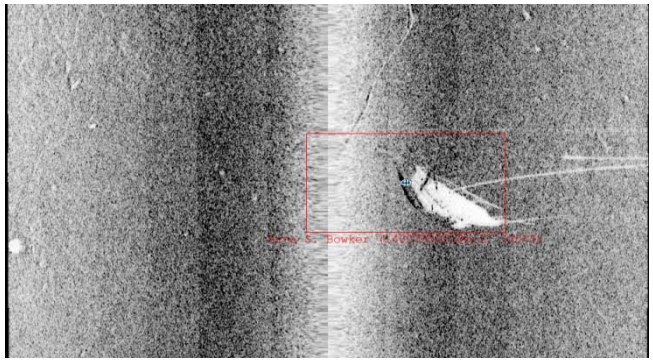


Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

Additional media / information:



MBES coverage of wreck with least depth of 11 ft.



SSS imagery showing a wreck in the northeast section of Redhook Bay , 46 ft length, 4.7 ft width, and 28.43 ft height.

PRELIMINARY PRODUCT - FOR USCG & NOAA DECISIONAL USE ONLY - NOT FOR USE IN NAVIGATION

NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

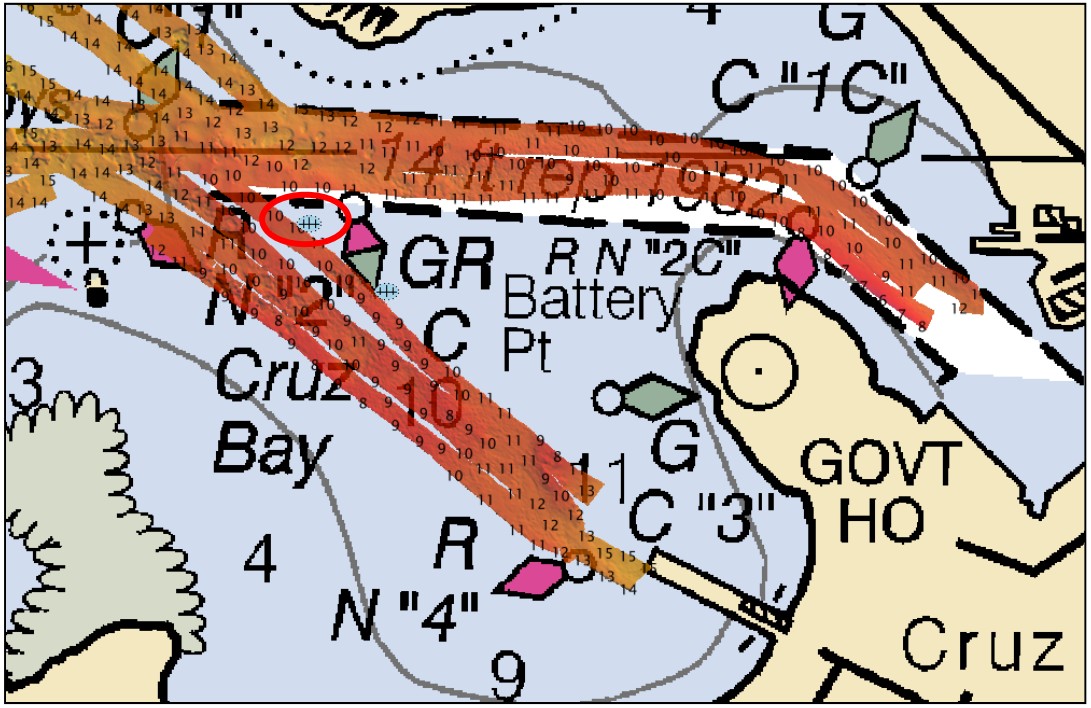
Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.333017N
Longitude:	64.797517 W
MBES least depth:	N/A
SSS contact height:	1.41 ft
Contact dimensions:	7.3 ft x 4.48 ft x 1.41 ft

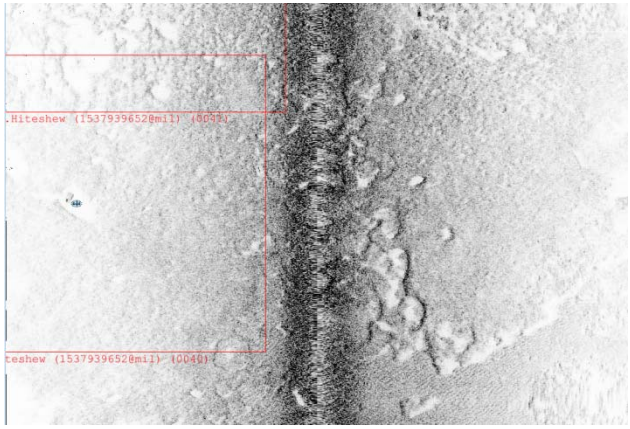
Comments:

Submerged wreck located in central Cruz Bay. No least depth is available, recommend further investigation.

Additional media / information:



Wreck in central Cruz Bay.



SSS imagery showing a wreck in Cruz Bay , 7.3 ft length, 4.48 ft width, and 1.41 ft height.

Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

PRELIMINARY PRODUCT - FOR USCG & NOAA DECISIONAL USE ONLY - NOT FOR USE IN NAVIGATION

NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

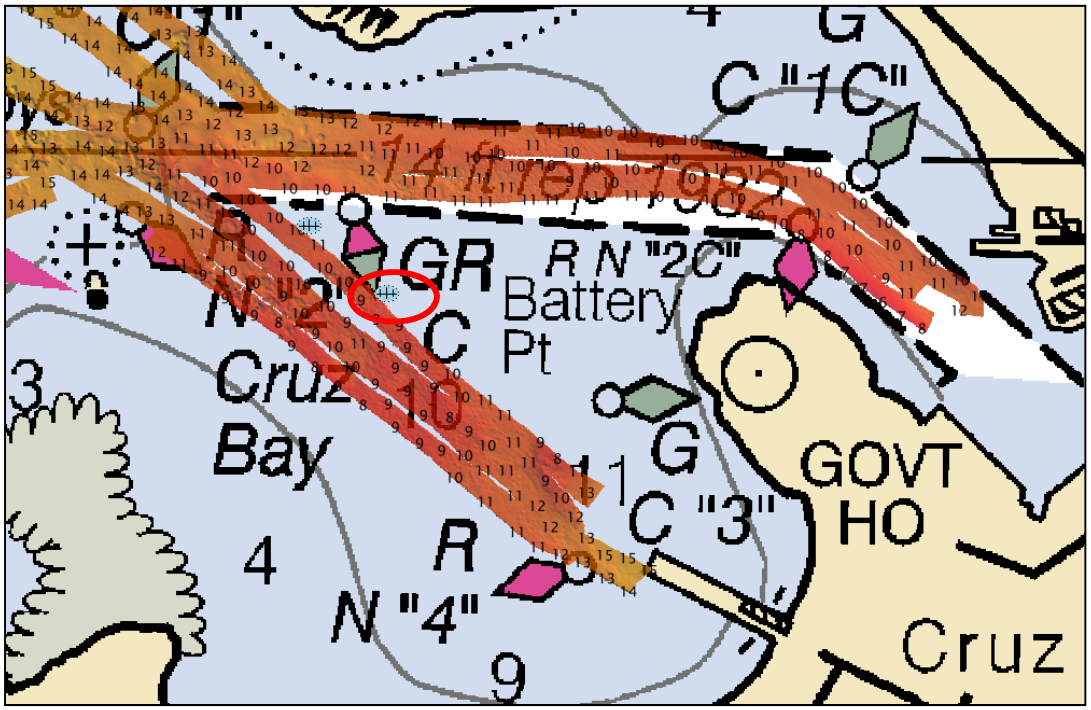
Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.332717 N
Longitude:	64.797151 W
MBES least depth:	N/A
SSS contact height:	2.76 ft
Contact dimensions:	6.03 ft x 6.11 ft x 2.76 ft

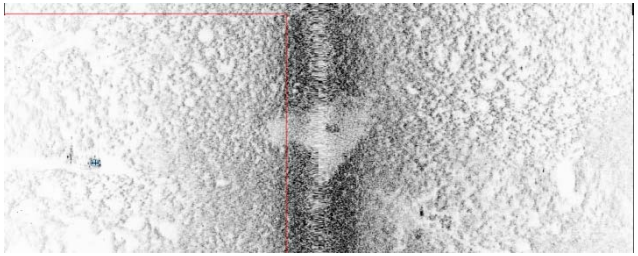
Comments:

Submerged wreck located in central Cruz Bay. No least depth is available, recommend further investigation.

Additional media / information:



Wreck in central Cruz Bay.



SSS imagery showing a wreck in Cruz Bay , 6.03 ft length, 6.11 ft width, and 2.76 ft height.

Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

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NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

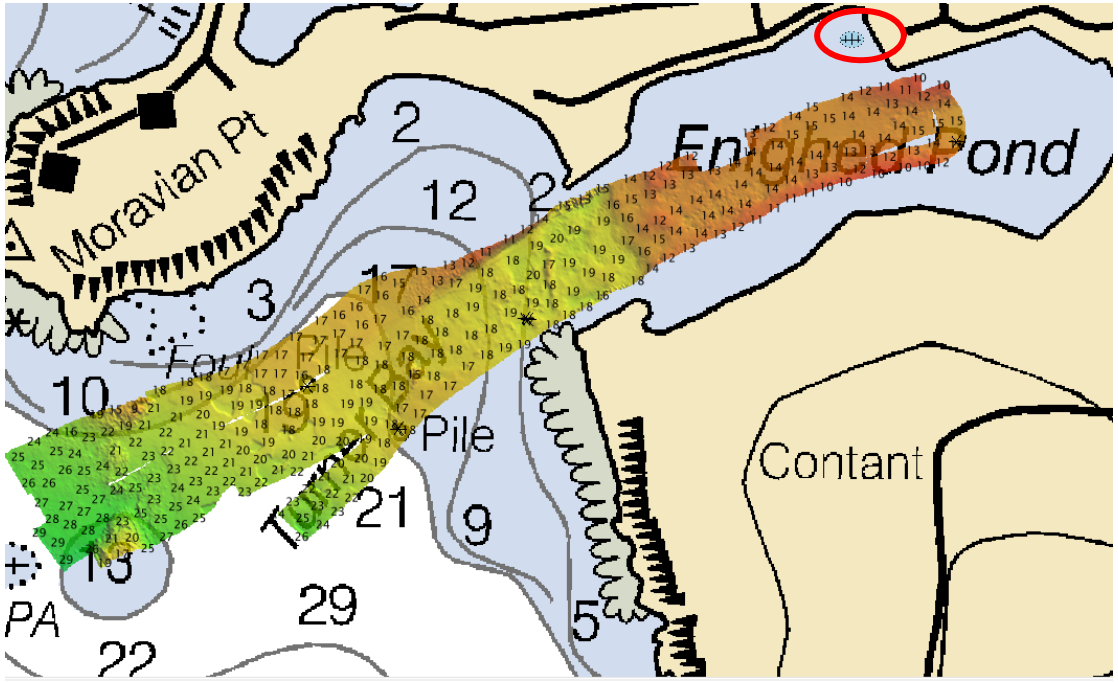
Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

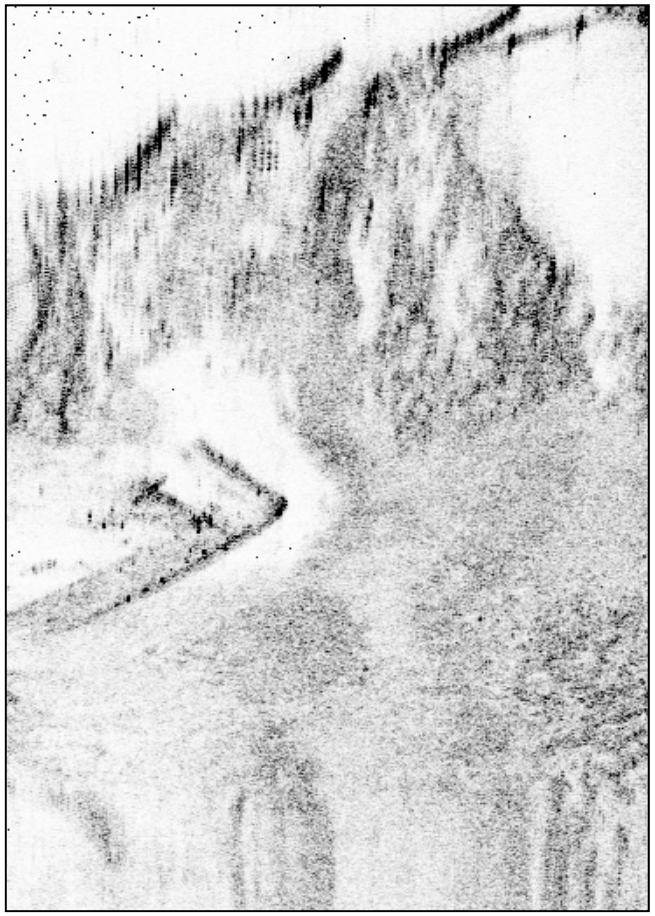
Date:	10/4/2017
Latitude:	18.327626 N
Longitude:	64.794667 W
MBES least depth:	N/A
SSS contact height:	2 ft
Contact dimensions:	44.5 ft x 8 ft x 2 ft

Comments:

Submerged wreck located in Enighed Pond. No least depth is available, recommend further investigation.

Additional media / information:





Wreck in Enighed Pond, east of Turner Bay.

SSS imagery of wreck in Enighed Pond, 44.5 ft length, 8 ft width, and a possible 2 ft height (contact is located on the edge of the SSS trace so a maximum height from SSS is unknown) .

Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

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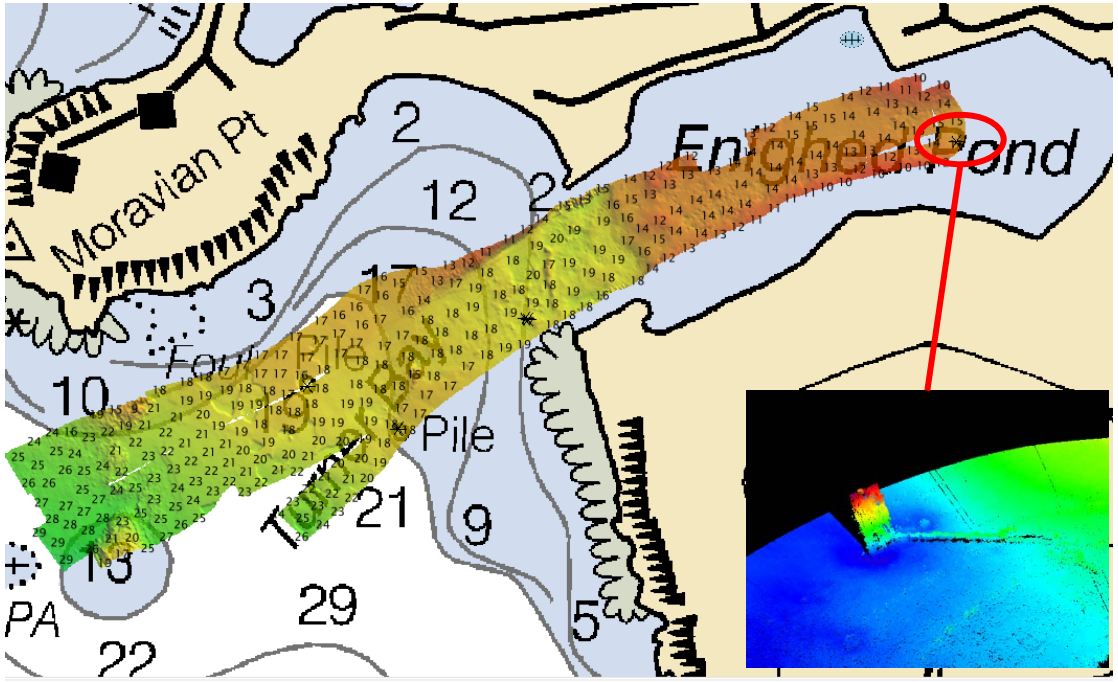
NOAA Ship *Thomas Jefferson* (S-222)
Supplemental Contact Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE - OFFICE OF COAST SURVEY

Contact:
Commanding Officer / Chief of Party
CDR Chris van Westendorp, NOAA
co.thomas.jefferson@noaa.gov

Date:	10/4/2017
Latitude:	18.327066 N
Longitude:	64.794053 W
MBES least depth:	11 ft
SSS contact height:	3.69 ft
Contact dimensions:	9.85 ft x 4.10 ft x 3.69 ft

Comments:

Obstruction located in eastern Enighed Pond. Observed least depth cannot be confirmed due to lack of MBES coverage. Recommend further investigation.

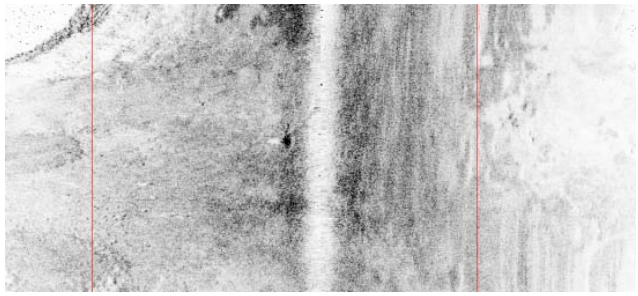


Obstruction in Enighed Pond, east of Turner Bay.

Project:	S-I950-TJ-17	**Chart Number:**	25647
Survey:	F00704	**Sounding Units:**	Feet (NOAA rounded)
Locality:	St Thomas & St John	**Datum:**	MLLW
Sublocality:	Redhook Bay to Cruz Bay	**Date of survey:**	4 Oct 2017

Additional media / information:

MBES coverage of an obstruction with least depth of 11 ft.



SSS imagery showing a obstruction in eastern Enighed Pond, 9.85 ft length, 4.10 ft width, and a possible 3.69 ft height.

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APPROVAL PAGE

F00704

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

The following products will be sent to NCEI for archive

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

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.

Approved: MCGOVERN.MEGHAN.ELIZABETH.1284020495 Digitally signed by MCGOVERN.MEGHAN.ELIZABETH.1284020495 Date: 2020.02.12 13:31:15 -05'00'

Commander Meghan McGovern NOAA
Chief, Atlantic Hydrographic Branch