H11918

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey: **Navigable Area Survey**

Registry Number: **H11918**

LOCALITY

State: Maryland

General Locality: Central Chesapeake Bay

Sub-locality: South of Cedar Point

2010

CHIEF OF PARTY
LTjg Megan R. Guberski, NOAA

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 (11-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

H11918

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:	**Maryland**
General Locality:	**Central Chesapeake Bay**
Sub-Locality:	**South of Cedar Point**
Scale:	**1:10,000** Date of Survey: **06/17/08 to 05/05/2010**
Instructions Dated:	**07/14/2008** Project Number: **OPR-E349-BH-08**
Vessel:	**NOAA S/V BAY HYDROGRAPHER, S-5501**
	NOAA R/V BAY HYDROGRAPHER II, S-5401
Chief of Party:	**LTjg Megan R. Guberski**
Surveyed by:	**BAY HYDROGRAPHER and BAY HYDRO II**
Soundings by:	**ODOM Echotrac MK III**
	Reson Seabat 7125 Multibeam Echosounder
Graphic record scaled by:	**N/A**
Graphic record checked by:	**N/A**
Protracted by:	**N/A** Automated Plot: **N/A**
Verification by:	***Atlantic Hydrographic Branch Personnel***
Soundings in:	**Meters at MLLW**

Remarks: ***Notes in Bold, Red Italics were made during office processing.***

1) All Times are UTC.
2) This is a Navigable Area Survey.
3) Projection is UTM Zone 18 North.

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DESCRIPTIVE REPORT

to accompany
NAVIGABLE AREA SURVEY H11918

Scale of Survey: 1:10,000
Year of Survey: 2008-2010
NOAA S/V *Bay Hydrographer*, S5501
NOAA R/V *Bay Hydro II*, S5401
LTJjg Megan R. Guberski, Officer in Charge

A. AREA SURVEYED

This navigable area survey was conducted in accordance with Hydrographic Survey letter Instructions for Navigable Area Project OPR-E349-08-BH, Survey H11918 Central Chesapeake Bay, Maryland. The original instructions are dated July 14, 2008.

This descriptive report encompasses an area of the central portion of Chesapeake Bay from the 4 meter (m) curve at Cedar Point 38°18'07.26"N, 076°21'32.82"W eastward to 38°18'09.28"N, 076°21'25.43"W and south to 4m curve at 38°15'00.80"N, 076°22'00.94"W eastward to38°15'00.80"N, 076°22'00.94"W. The purpose of this survey is to provide a contemporary data to update the National Ocean Service (NOS) suite of nautical charts. This project responds to requests made by the Maryland Port Administration, Association of Maryland Pilots, U.S. Army Corps of Engineers, and the U.S. Coast Guard.

Prevalent maritime traffic on this portion of the Chesapeake Bay consists of international bulk and container trade ships. The concurrent expansion of the world fleet has led to considerable expansion and improvement of the facilities at the Port of Baltimore. Pleasure craft are also very prominent in the survey area and consist of personal watercraft, local crab fishermen, and chartered fishing cruises. ***Concur.***

Linear nautical miles of single beam mainscheme sounding lines	195
Linear nautical miles of Multibeam mainscheme sounding lines	14
Linear nautical miles of side scan sonar mainscheme sounding lines	188.4
Linear nautical miles of developments other than mainscheme lines	70
Linear nautical miles of crosslines from single beam/Multibeam combined	11
Number of bottom samples collected	10

Table 3: Metrics detailing the linear nautical miles covered for survey H11918

Dates of Acquisition:

2008

Calendar Date	DN
17 June	169
20 June	172
23 June	175
24 June	176
25 June	177
27 June	179
22 July	204
24 July	206
25 July	207
28 July	210
29 July	211
12 Nov	317

2010

Calendar Date	DN
15 April	105
16 April	106
21 April	111
22 April	112
27 April	117
28 April	118
30 April	120
5 May	125
6 May	126

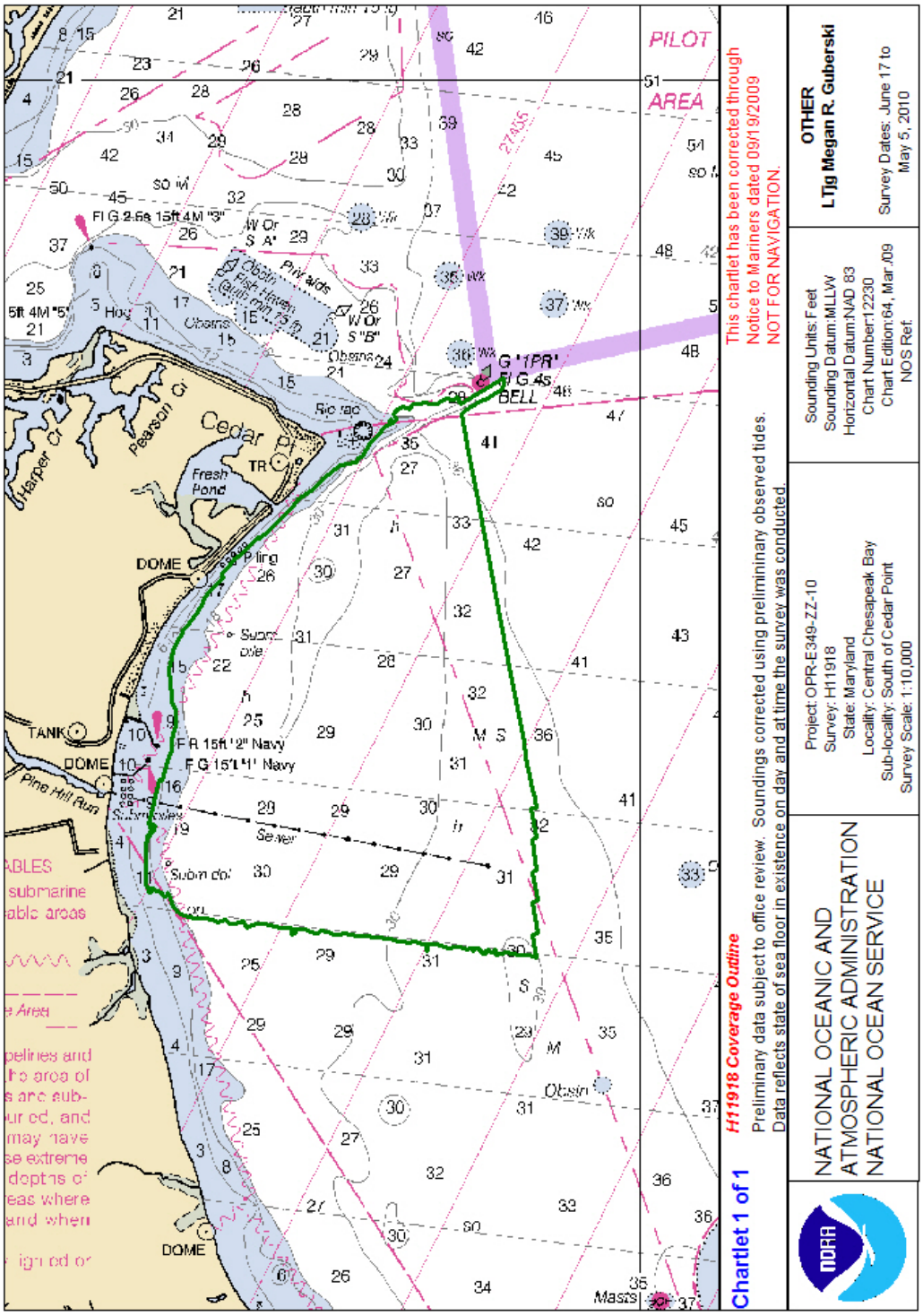


Figure 2: Complete survey limits & data coverage

B. DATA ACQUISITION AND PROCESSING

Refer to OPR-E349-BH-08, H11918 *Data Acquisition and Processing Report (DAPR) for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement soundings and survey data, and deviations from the DAPR are included in his descriptive report. ***Included with survey deliverables.***

B.1 EQUIPMENT

The following platforms were used to acquire data for Project OPR-E349-BH_08, Survey H11918.

VESSEL	ACQUSITION TYPE	SONAR
S/V Bay Hydrographer	Side Scan Sonar	Klein LW5000
	Vertical Beam	Odom Echotrac MKIII
R/V Bay Hydro II	Multi Beam	RESON 7125

Table 2. Survey Vessels used for H11918

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

B.2 QUALITY CONTROL

B.2.1 Sounding Coverage

As per Letter Instructions, survey OPR-E349-BH-08, H11918 was conducted using 200% SSS with concurrent VBES Coverage, and Object Detection MBES coverage over AWOIS items and features. ***Concur.***

B.2.2 Side Scan Sonar Quality Control (SSS)

SSS coverage was proven by creation of 100% and 200% coverage mosaics. ***Concur with clarification. The 200% mosaic is of poor quality.***

The following are known problems in the SSS data:

- In October of 2009 the SSS Transceiver Processing Unit (TPU) was removed for upgrade, leaving the vessel unable to collect SSS data. The remaining SSS holidays were filled in with Object Detection MBES data.

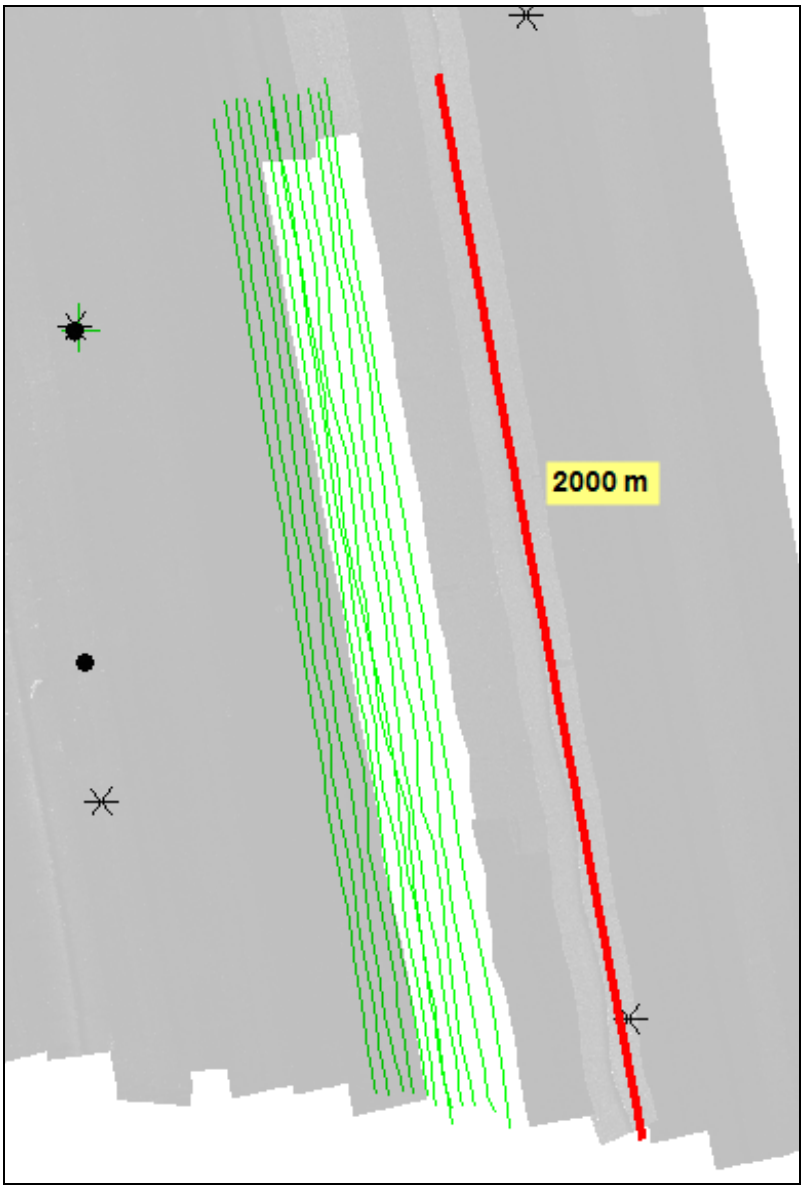


Figure 2: SSS and VBES holidays covered by MBES data

- In regions of significantly shallow water, a float was attached to the towfish to prevent the sensor from striking bottom during speed changes. The float was adjusted to keep the towfish at the correct altitude; however choppy seas induced motion in the towfish. The resultant imagery was degraded, but remained within object detection limits.

During data acquisition, daily confidence checks were made on the SSS imagery. These checks were accomplished by towing the sonar orthogonally over visually conspicuous linear objects, and observing the returning imagery across the width of the swaths

B.2.3 Multibeam Echosounder Quality Control (MBES) ***Concur with section.***

Object Detection MBES coverage was acquired over assigned AWOIS items, to develop SSS contacts, and to fill in SSS coverage holidays. Coverage requirements were monitored by the creation of 50cm Combined Uncertainty and Bathymetry Estimator (CUBE) grids, and subsequent inspection of the Density child layer.

The following are known failures in MBES coverage requirements:

- The 4-meter depth contour was not fully defined. Data was acquired only up to the charted 12 ft contour.
- Assigned AWOIS #4020 was not developed. The feature was too far inshore to safely investigate.
- Assigned AWOIS #4021 was not fully developed. The assigned 300-meter search radius extended too far inshore to cover completely.
- Assigned AWOIS #4136 was not developed. The feature was too far inshore to safely investigate.
- A shoal located around 38° 17.98’N, 076° 21.30’W was not developed. Congruent lines of VBES data show a clear ridge, but no MBES data was acquired to verify least depth.

For detailed reports on all features, refer to Appendix II of this document.

Due to excessive noise in the RESON 7125 outer beams, a post-processing filter was applied to all MBES data, rejecting the outer 20 beams (40 beams total) of the swath. Resulting holidays were then inspected, and high quality soundings reaccepted.

Angular biases were resolved via a Patch Test done on DN 105 (2010). Further quality control was accomplished through analysis of the Uncertainty and Standard Deviation child layers of the CUBE surface.

B.2.4 Vertical Beam Quality Control (VBES) ***Concur with section.***

VBES data was acquired in conjunction with SSS data, and used to provide general bathymetry across the survey area.

The following are known problems experienced by the VBES:

- The High Frequency channel registered a fixed depth of 0.8m over the course of the survey. The error is assumed to be the result of marine growth on the face of

the transducer. The Low Frequency channel remained unaffected, and was used as the source of Vertical Beam data.

- In January 2009 the *S/V Bay Hydrographer* was taken offline without completing the VBES holidays. The replacement vessel, *R/V Bay Hydro II* did not have an operational VBES. The VBES holidays were filled in with Object Detection MBES data. Refer to Figure 2.

Quality of sounding data was checked by systematic comparisons between Multibeam soundings and Single Beam soundings throughout the survey area.

B.2.5 Crosslines

S/V Bay Hydrographer collected 11 linear nautical miles (lnm) of Single Beam Echosounder (SBES) cross lines, equating to 5% of main scheme SBES data. The cross lines are in agreement, within one foot, of their respective data sets. ***Concur with clarification. Less than 2% of crossline coverage was achieved over full extents of survey.***

B.2.6 Junctions

The following contemporary surveys junction with H11918 ***Concur.***

Registry Number	Scale	Date	Relative Location
H11598	1:10,000	~~2008~~ ***2005***	South of Cedar Point in central Chesapeake Bay, MD
H11450	1:10,000	~~2005~~ ***2008***	North of Cedar Point in central Chesapeake Bay, MD

Table 4: Junction survey

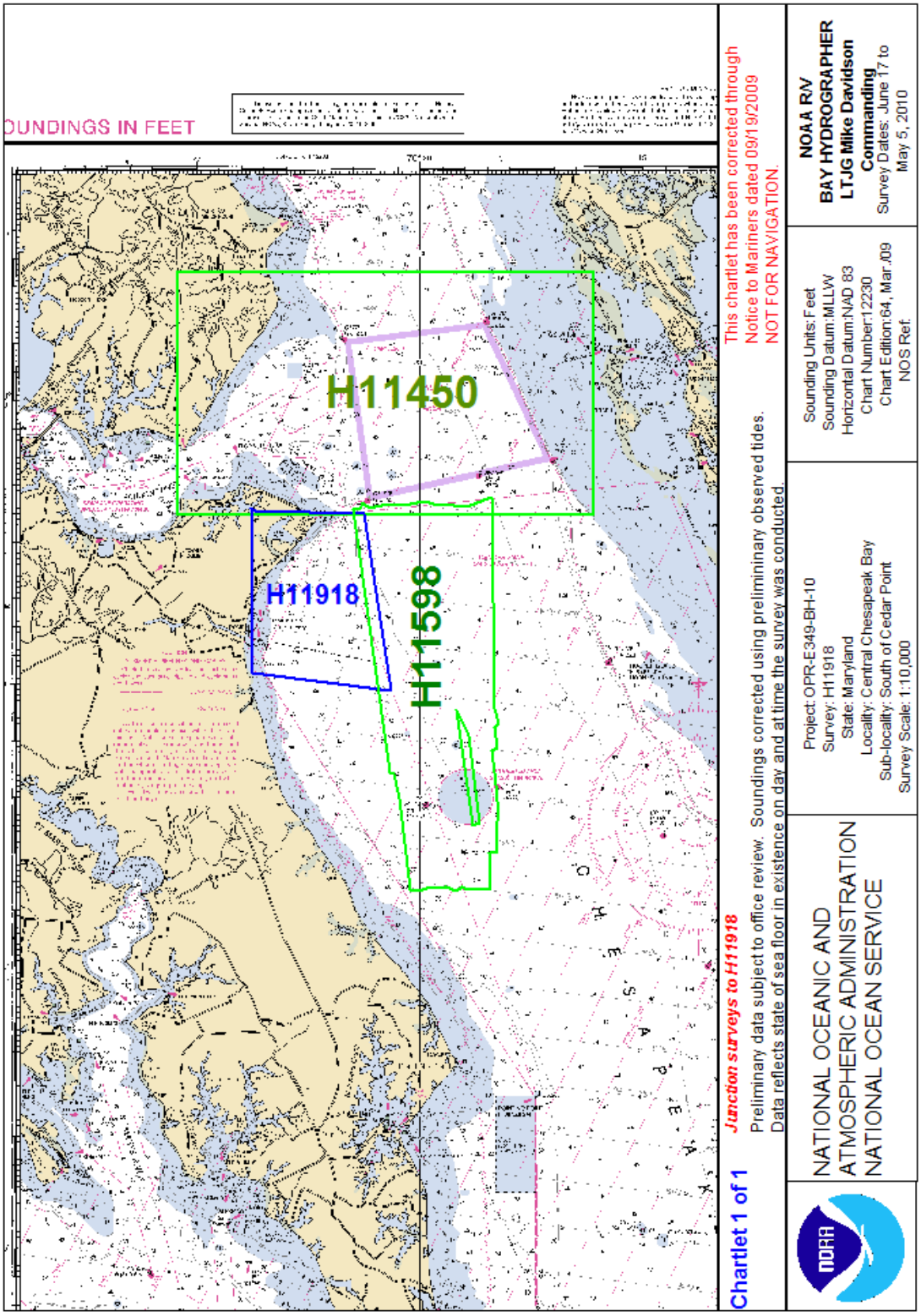


Figure 3. H11918 Junction Surveys

The following contemporary surveys, H11450 and H11598 were found to be in good agreement with H11918.

Registry Number	Registry Number	Depth difference (cm)
H11918	H11598	< 4
H11918	H11450	< 6

Table 4: Junction Comparison

B.3 CORRECTIONS TO ECHO SOUNDINGS *Concur*

All sounding data were reduced to mean lower-low water (MLLW) using approved tides from the primary station 8577330 at Solomons Island, MD, adjusted for tidal constituents and residuals provided by CO-OPS as specified in the Project Instructions and illustrated in Figure 4.

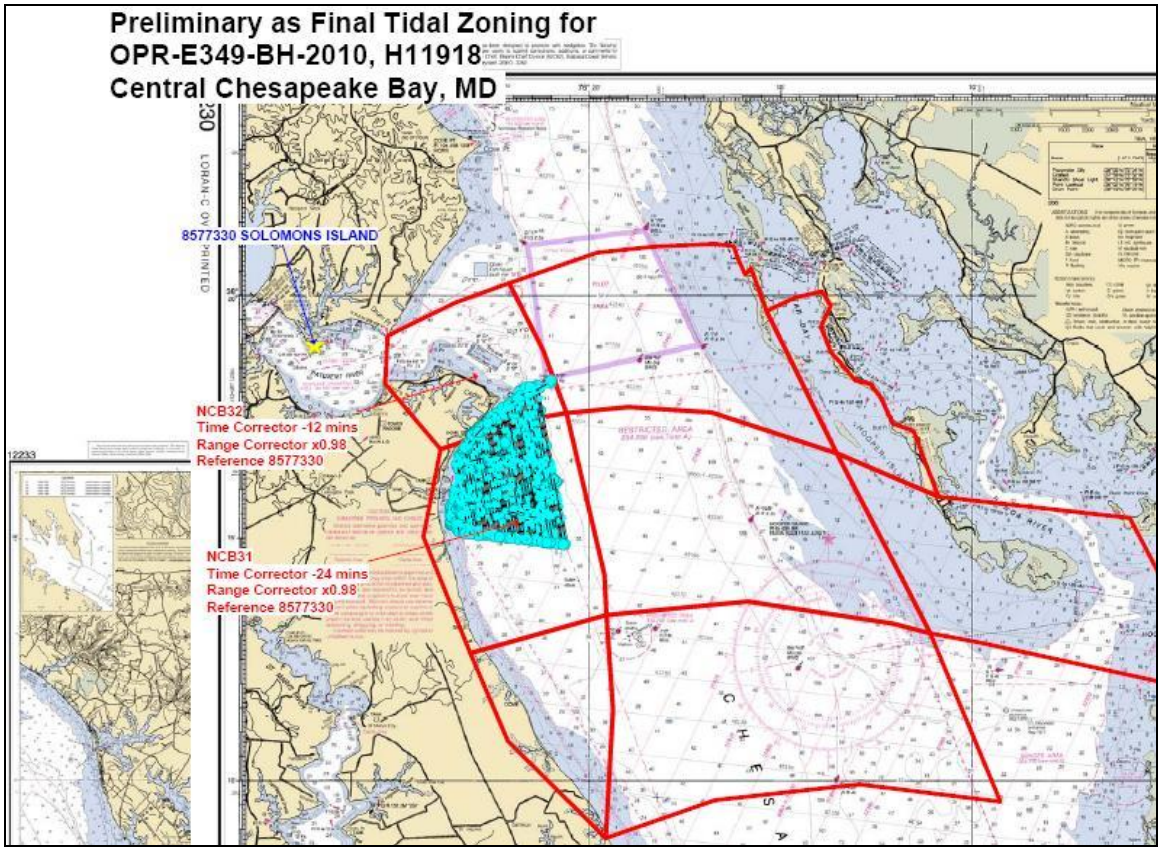


Figure 4: Final Tide Zoning

All methods and instruments used for sound velocity correction were as described in the DAPR. All sound velocity casts are loaded into the survey's PSS as individual "generic position" features (GPs), with the depth versus sound velocity information contained in the remarks.

B.4 DATA PROCESSING *Concur*

A detailed description of data processing techniques can be found in section B.2 of the DAPR.

B.4.1 Total Propagated Error (TPE)

The Total Propagated Error parameters for H11918 are as follows:

Tide Values (Meters)		Sound Speed Values (Meters/Second)	
Measured	Zoning	Measured	Zoning
0.02	0.02	2	0.5

Table 5: TPE model for sound speed and tides

B.4.2 BASE Surfaces and Mosaics

Acquisition Type	SONAR	Surface/Mosaic
Bathymetry	Multibeam: RESON 7125	H11918_MBES_CUBE_50cm.csar0 H11918_MBES_CUBE_50cm_Final.csar0
	Vertical Beam: Odom Echotrac MKIII	H11918_VBES_Uncertainty_5m.csar0 H11918_VBES_Uncertainty_5m_Final.csar0
Imagery	Side Scan Sonar: Klein LW5000	H11918_Mosaic_100%_1m.tif H11918_Mosaic_200%_1m.tif

Table 6: Sonar surfaces and mosaics

H11918 was processed using the CUBE algorithm. Disambiguation parameters were set to the 0.5 meter resolution of the NOAA Cube Parameters. Refer to the FPM for further discussion of CUBE Parameters. ***Concur. MBES grids were processed in CUBE while VBES was processed as Uncertainty Grid.***

C. VERTICAL AND HORIZONTAL CONTROL *Concur.*

No Horizontal or Vertical control stations were established during the course of H11918. Per FPM instructions, no Horizontal & Vertical Control Report has been generated.

C.1 VERTICAL CONTROL *Concur.*

The vertical datum for this project was Mean Lower Low Water (MLLW). The operating National Water Observation Network (NWLON) station at Solomons Island, MD (857-7330) served as datum control. Finalized water levels were applied to all soundings.

A request for delivery of final approved (verified) tides for this survey was forwarded to CO-OPS on 17 June 2010 in accordance with the FPM and project letter instructions. Preliminary zoning was accepted as final from final smooth tide report from CO-OPS. Verified zoning and water levels were applied to all bathymetry for the survey.

C.2 HORIZONTAL CONTROL

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), Zone 18N. Coast Guard GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard Beacon at Annapolis, MD (301 kHz) was used during this survey. ***Concur.***

No horizontal control stations were established by the field party for this survey.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

Compilation Team: Be aware that chart 12230 has approx. a 40m offset.

Project H11918 was compared with the following charts:

Chart	Edition	Date	RNC Date	1:40000
12264	30th	7Jul 2007	26 June 2010	1:40000
12233	37th	1 Jan 2007	26 June 2010	1:40000
12230	64th	1 March 2009	26 June 2010	1:80000
US5VA22M	15	26 March 2010	29 March 2010	
US5MD21M	12	7June 2010	8 June 2010	

Table 7: Charts affected by Survey H11918

Comparison between survey H11918 and charted depths show the survey area to be deeper than currently charted. In addition, contour lines have shifted towards the shore. These changes are likely due to the scouring action of the effluent discharged from the Patuxent River.

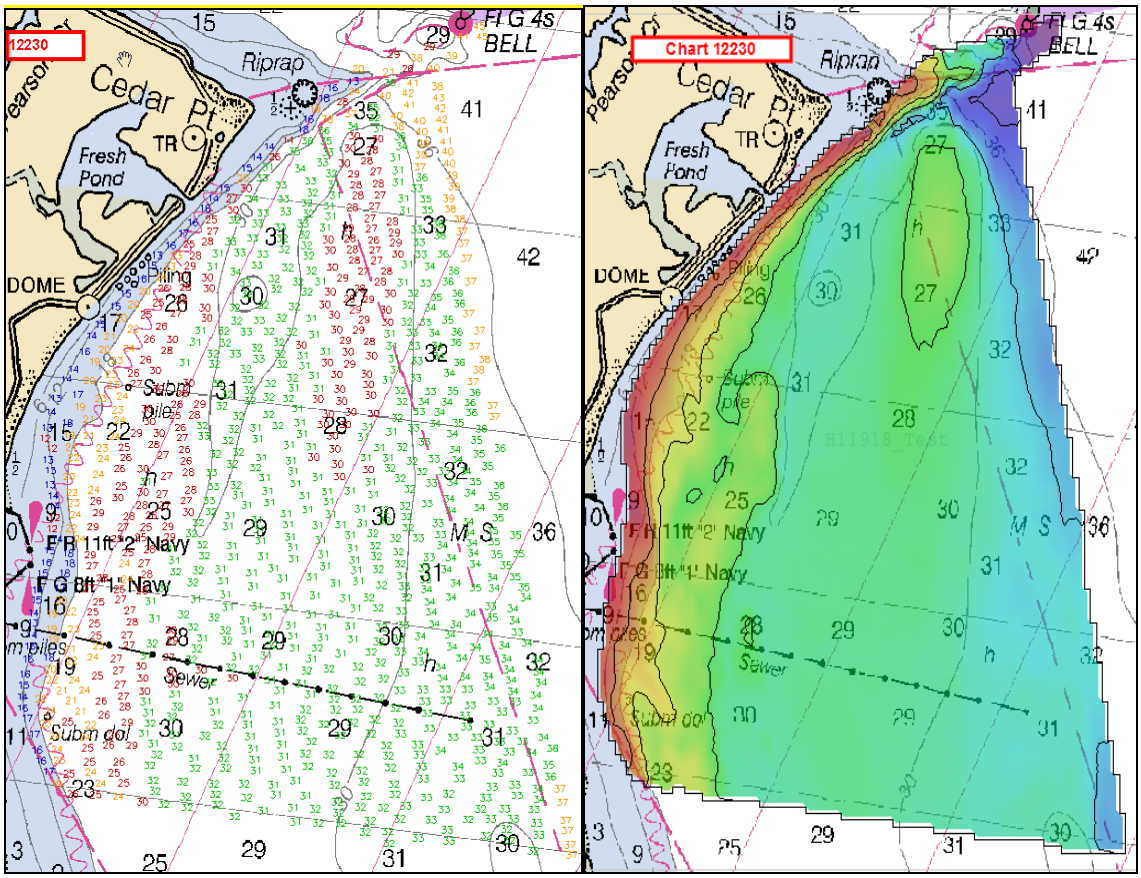


Figure 5: Differences between chart and surveyed depths

D.2 Additional Results

D.2.1 Automated Wreck and Obstruction Information Service (AWOIS) items

There are six AWOIS items assigned for full investigation within the bounds of H11918. For full discussion refer to the Survey Feature Report in Appendix II of this Descriptive Report. ***Concur***

Note: AWOIS #14776 was outside the bounds of this project and will not be addressed. ***Concur***

D.2.2 Shore Line ***Concur***.

Two new near shore features were observed inside the survey area.

- A T-pier, located at: 38° 17' 20.5"N, 076° 22' 58.0"W

Figure 6: T-Pier (70208004.tif)

- A fish weir, located around: 38° 15’ 07.8”N, 076° 23’ 29.6”W

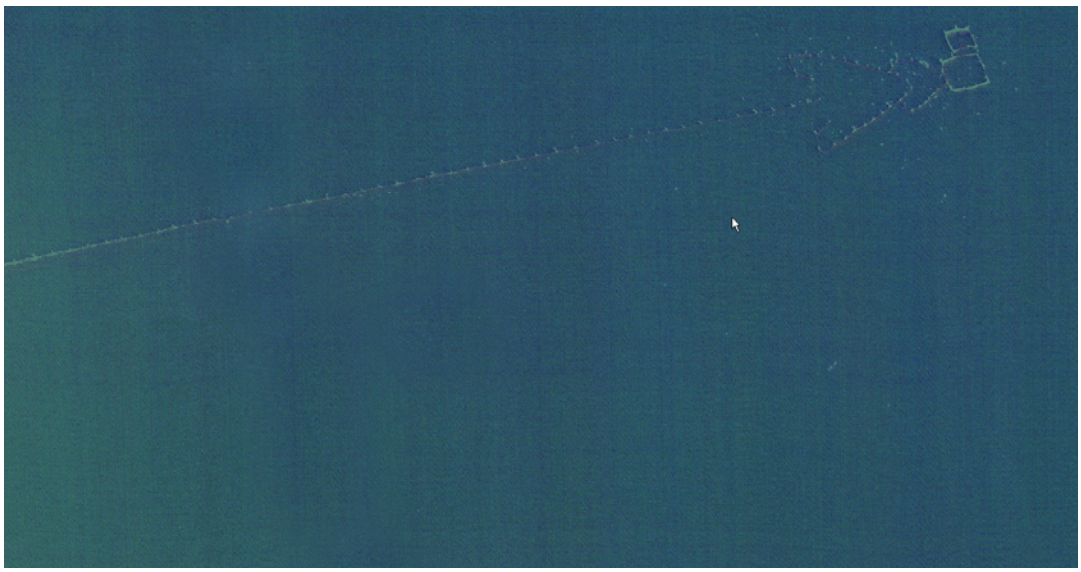


Figure 7a: Fish weir ortho image (80967712.tif)

Figure 7b: Eastern end of Fish Weir

See Appendix II for detailed discussion of these features, and Appendix V for geo-tiffs and metadata from seamless.USGS.Gov. ***Concur***.

D.2.3 Charted Features

For a detailed discussion of all charted features, refer to Appendix II of this report. ***Concur***.

D.2.4 Charted Pipelines and Cables

The survey area contained one charted pipe line, beginning at 38°15'50.73"N, 076°23'55.13"W and extending to 38 ° 15'24.95"N, 076°21'07.10"W. This pipe outfall was observed as charted. ***Do not concur. Indicated by SSS and correlated with bathy grids, the offshore end does not correlate to the charted sewer. The offshore end of the pipeline is located at approx.*** 38-15-31.547N, 076-21-58-179W

The survey area contained one charted cable, beginning at 38°17'35.42"N, 076°22'33.47"W, thence to 38°15'52.01N, 076°23'48.96"W, and exiting the survey area at 38°15'08.64"N, 076°23'24.82"W. No noticeable discrepancies were observed in the location of this charted feature. ***Concur***.

D.2.5 Bridges, Ferry Routes and Overhead cables *Concur.*

There are no bridges or overhead cables in this survey area.

D.3 Danger to Navigation

One DtoN was identified and reported to NOAA's Office of Coast Survey, Marine Charting Division for verification and final submission to the Fifth Coast Guard District. A copy of each Danger to Navigation Report is included in Appendix I

- DtoN 1.1 – an uncharted wreck with a least depth of 5.12 meters located at 38°17'54.225N, 076°21'40.795W. ***Concur.***

D.4 Aids to Navigation *Concur.*

The Green "IPR" buoy is located within the limits of the survey. It was found to be on station.

There are two fixed lights within the limits of the survey, located at the ends the Navy Small Boat Basin breakwaters. Their location was not verified due to restricted access.

D.5 Coast Pilot Information

A coast pilot report for the area was submitted to MCD as part survey OPR-E349-BH-06, H11598. The report has been included as part of the submitted package for reference. ***Concur.***

D.6 Bottom Samples

A total of ten samples were acquired. Refer to Supplemental Survey Records & Correspondences in Appendix V ***Concur.***

D.7 Adequacy of Survey

Except as noted in section B.2.3 of this report, this survey is considered complete and adequate to supersede charted depths within the common area as per requirements specified in the Project Letter Instructions. ***Concur .***

D.8 Summary and Recommendations for Additional Work

The Hydrographer recommends revisiting the area to develop the shoal discussed in section B.2.3 ***Concur. Some AWOIS items not developed and 4m depth curve not defined.***

E. APPROVAL SHEET

As Lead Hydrographer, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the Office of Coast Survey Hydrographic Surveys Division's Field Procedures Manual, and NOS Hydrographic Specifications and Deliverables. Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy.

All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to N/CS33 Atlantic Hydrographic Branch.

Survey H11918 is adequate to superseded charted soundings in their common areas.

Listed below are supplemental reports submitted separately that contain additional information relevant to this survey.

Title	Date Sent	Office
Data and Acquisition and Processing Report	n/a	N/CS33
Tides and Water Levels Package for OPR-E349-BH-08	n/a	N/OPS1
Coast Pilot Report for OPR-E349-BH-08	n/a	N/CS26

Respectfully Submitted:

Digitally signed by Nicole Trenholm
Date: 2010.08.24 10:13:19 -04'00'

Nicole M. Trenholm, ERT Contractor
BAY HYDROGRAPHER II

Digitally signed by Robert W. Mowery
DN: cn=Robert W. Mowery, o=BAY HYDROGRAPHER, ou=NOAA/NOS/OCS/NSD/NRB, email=Robert.Mowery@noaa.gov, c=US
Date: 2010.08.24 10:12:11 -04'00'

Robert W. Mowery, Survey Technician
BAY HYDROGRAPHER II

Approved and Forwarded:

Digitally signed by Megan Guberski
Date: 2010.08.25 08:03:46 -04'00'

Megan R. Guberski, LTJG/NOAA
Officer in Charge/ BAY HYDROGRAPHER II

Appendix I

Dangers to Navigation

-One

H11918 Danger to Navigation

Registry Number: H11918
State: Maryland
Locality: Central Cheasapeake Bay
Sub-locality: South of Cedar Point
Project Number: OPR-E349-BH-08
Survey Date: 04/28/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12264	30th	07/01/2007	1:40,000 (12264_1)	USCG LNM: 04/06/2010 (04/13/2010) NGA NTM: 12/14/1996 (04/24/2010)
12230	63rd	12/01/2006	1:80,000 (12230_1)	USCG LNM: 04/29/2008 (05/20/2008) NGA NTM: 11/02/2002 (05/24/2008)
12280	6th	09/01/2005	1:200,000 (12280_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?

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

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	H11918_3.1_16.80ft_DTON__WRECK_retain	Wreck	5.12 m	38° 17' 54.2" N	076° 21' 40.8" W	---

1.1) H11918_3.1_16.80ft_DTON__WRECK_retain

DANGER TO NAVIGATION

Survey Summary

Survey Position:	38° 17' 54.2" N, 076° 21' 40.8" W
Least Depth:	5.12 m (= 16.80 ft = 2.801 fm = 2 fm 4.80 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.960 m ; **TVU (TPEv)** ±0.234 m
Timestamp:	2010-118.12:55:59.234 (04/28/2010)
Survey Line:	hdcs_data / bhii_s5401_reson7125_2010 / 2010-118 / 021_1255
Profile/Beam:	723/22
Charts Affected:	12264_1, 12230_1, 12280_1, 13003_1

Remarks:

Feature is an uncharted wreck with least depth of 16.8', found at location 38°17'54.124" , -076°21'40.470". Soundings were acquired by RESON 7125 MBES, and reduced to MLLW using preliminary (observed) tides and zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
hdcs_data/bhii_s5401_reson7125_2010/2010-118/021_1255	723/22	0.00	000.0	Primary
hdcs_data/bhii_s5401_reson7125_2010/2010-118/023_1301	365/21	8.50	291.5	Secondary
hdcs_data/bh_s5501_klein5000_sss200/2008-206/031_1741	0001	20.01	172.1	Secondary
hdcs_data/bh_s5501_klein5000_sss200/2008-206/032_1645	0001	21.54	319.4	Secondary
hdcs_data/bh_s5501_klein5000_sss100/2008-176/031_1450	0001	22.26	193.9	Secondary

Hydrographer Recommendations

The hydrogapher recommends charting a dangerous wreck.

Cartographically-Rounded Depth (Affected Charts):

17ft (12264_1, 12230_1, 12280_1)

2 ¾fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 2:dangerous wreck

NINFOM - Retain charted WRECKS

QUASOU - 6:least depth known

SORDAT - 20100505

SORIND - US,US,graph,H11918

TECSOU - 3:found by multi-beam

VALSOU - 5.122 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Verified as real in MBES and SSS. Was submitted as DTON and applied to updated raster. Retain as charted.

COMPILATION: Shown on raster chart 12233; 37th Ed., 01/2007 and smaller scale charts as a dangerous wreck, least depth 17 feet. Office processing determined that position is different from the Raster and ENC US5MD21M charted positions. Additionally, the least depth values of the wreck as charted on ENC would round to 16 feet using NOAA rounding rules. Delete charted dangerous wreck, least depth 16.7333 feet. Chart a dangerous wreck, least depth 16.8045 feet at the present survey position.

Feature Images

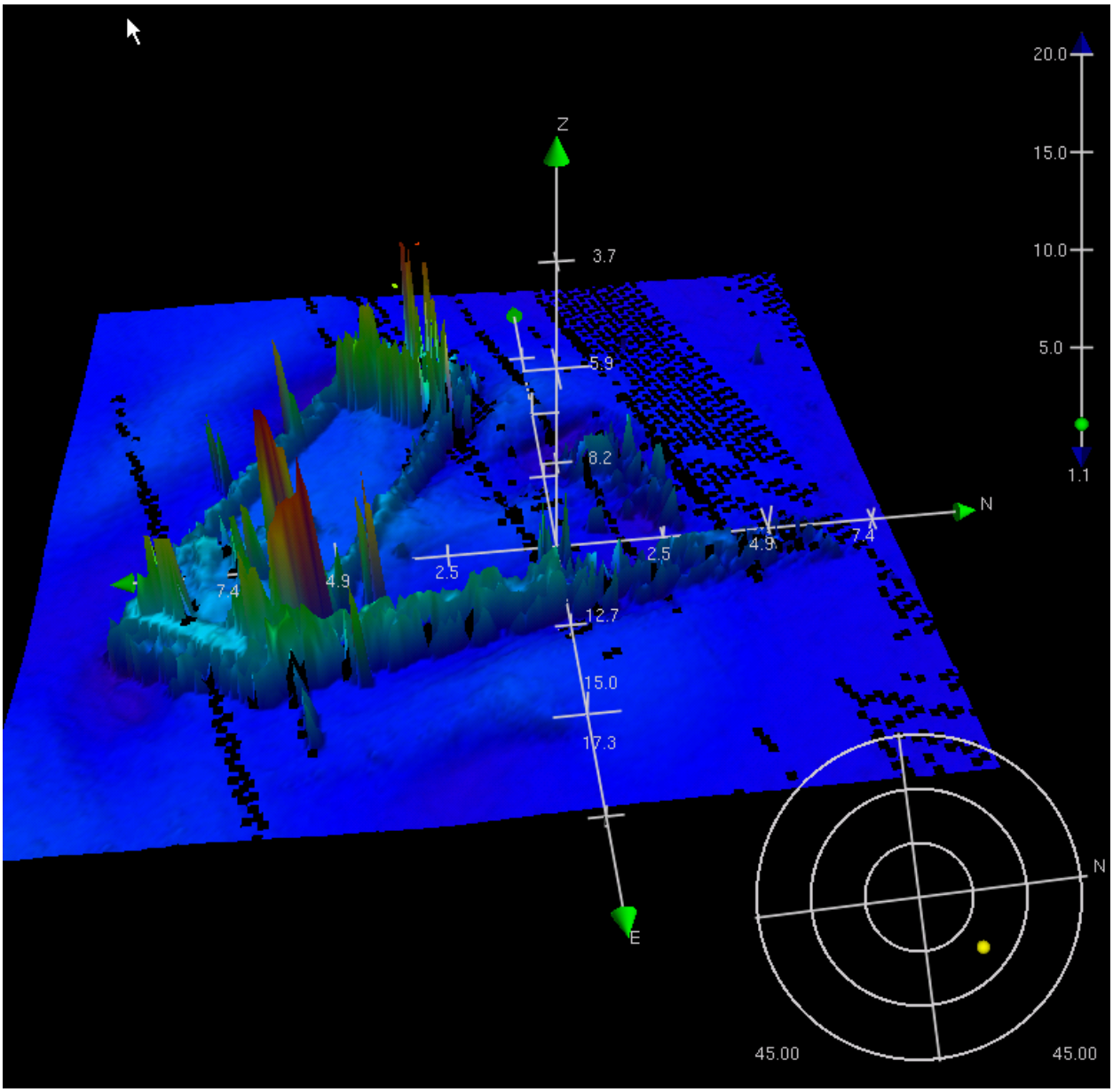


Figure 1.1.1

Appendix II

Survey Features Report

1. **AWOIS Items**

   -six

2. **Charted Features**

   -seven

3. **Uncharted Features**

   -three

4. **Bluenote Disprovals**

   -fifteen

H11918 AWOIS

Registry Number: H11918
State: Maryland
Locality: Central Cheasapeake Bay
Sub-locality: South of Cedar Point
Project Number: OPR-E349-BH-08
Survey Date:

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12233	37th	01/01/2007	1:40,000 (12233_1)	USCG LNM: 11/17/2009 (02/02/2010) NGA NTM: 04/05/1997 (02/13/2010)
12264	30th	07/01/2007	1:40,000 (12264_1)	USCG LNM: 04/06/2010 (04/13/2010) NGA NTM: 12/14/1996 (04/24/2010)
12230	63rd	12/01/2006	1:80,000 (12230_1)	USCG LNM: 04/29/2008 (05/20/2008) NGA NTM: 11/02/2002 (05/24/2008)
12280	6th	09/01/2005	1:200,000 (12280_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?

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

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	H11918-2.2_AWOIS_#4019_Subm_Pile_update	AWOIS	[no data]	[no data]	[no data]	---
1.2	H11918-2.3_AWOIS#4020__not developed_retain	AWOIS	[no data]	[no data]	[no data]	---
1.3	H11918-2.4_AWOIS#4021_OBSTRN_update	AWOIS	[no data]	[no data]	[no data]	---
1.4	H11918-2.5_RipRap_OBSTRN_retain	AWOIS	[no data]	[no data]	[no data]	---
1.5	H11918-2.6_AWOIS_#13632_Piles_retain	AWOIS	[no data]	[no data]	[no data]	---
1.6	H11918-2.7_AWOIS_#13633_Sewer_update	AWOIS	[no data]	[no data]	[no data]	---

1.1) AWOIS #4019 - H11918-2.2_AWOIS_#4019_Subm_Pile_update

No Primary Survey Feature for this AWOIS Item

Search Position: 38° 16' 46.7" N, 076° 23' 03.1" W
Historical Depth: [None]
Search Radius: 300
Search Technique: SD, S2, SWMB
Technique Notes: [None]

History Notes:

04019

HISTORY

H7092/46--CS-287; 1:10,000 SCALE SURVEY; SEXTANT FIXES ON SHORE SIGNALS FOR CONTROL; FISH STAKE LOCATED IN LAT 38-16-46.22W LONG 76-23-04.32W; CHARTED AS A PILE; SIGNAL NET; POSITION SCALED FROM SURVEY.

BP89279/74--OPR-512-AHP-74; CHART DEFICIENCIES INVESTIGATION; FISH STAKE REP GONE; REVISED ON CHART TO SUBM PILE. (ENTERED 12/31/84 MSM)

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE. VISUAL SEARCH AT CHART DATUM.IF NOT VISIBLE, A SSS, BOTTOM DRAG OR DIVER INVESTIGATION IS REQUIRED (50M MINIMUM RADIUS). IF FOUND, LEAST DEPTH AND POSITION ARE REQUIRED.

ASSIGNED: S-E211-HFP-86

Survey Summary

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

AWOIS item #4019, submerged pile not seen in any SSS lines.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 4019	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends removing subm pile symbol and text from chart. All bathy features found during MBES development were deemed insignificant.

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	NATSUR - 4:sand
	NINFOM - Delete charted submerged pile
	QUASOU - 6:least depth known
	SORDAT - 20100505
	SORIND - US,US,graph,H11918
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Submerged Pile was verified in MBES and SSS as an existing feature. Update features position to survey lat/long

COMPILATION: Concur. Delete charted submerged pile.

Feature Images

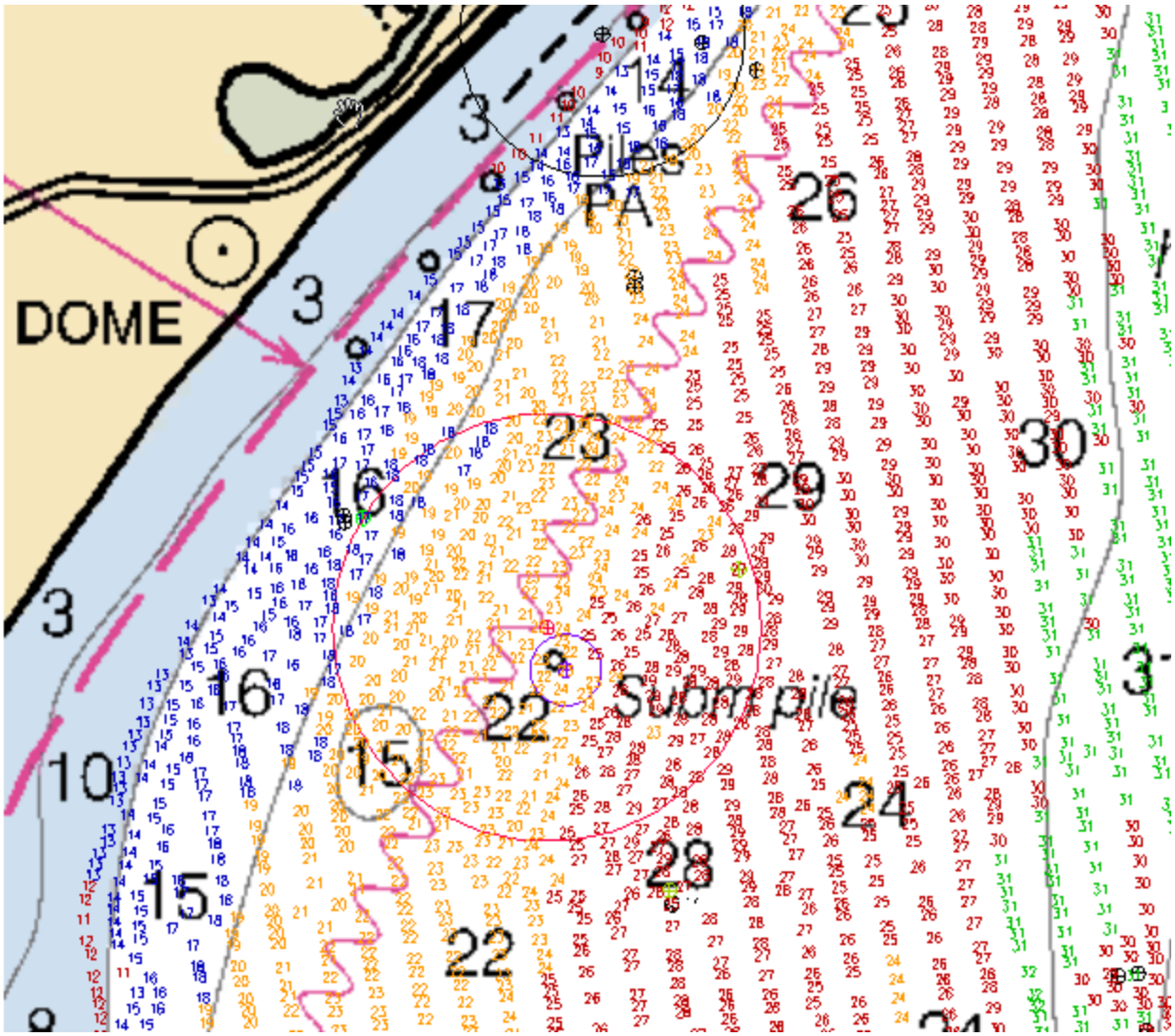


Figure 1.1.1

1.2) AWOIS #4020 - H11918-2.3_AWOIS#4020__not developed_retain

No Primary Survey Feature for this AWOIS Item

Search Position: 38° 15' 49.5" N, 076° 23' 49.6" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

04020

HISTORY

H7092/46--CS-287; 1:10,000 SCALE SURVEY; SEXTANT FIXES ON SHORE SIGNALS FOR CONTROL; NUMEROUS BROKEN PILINGS IN AREA BOUNDED BY LAT 38-15-45.39N LONG 76-23-48.74W, LAT 38-15-52.82N LONG 76-23-48.84W, LAT 38-15-52.82N LONG 76-23-52.84W AND LAT 38-15-45.31N LONG 76-23-52.53W; POSITIONS SCALED FROM SURVEY.

BP89279/74--OPR-512-AHP-74; CHART DEFICIENCIES INVESTIGATION; PILINGS REP GONE REVISE ON CHART TO SUBM PILING. (ENTERED 12/31/84 MSM)

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE. VISUAL SEARCH AT CHART DATUM.IF NOT VISIBLE, A SSS, BOTTOM DRAG OR DIVER INVESTIGATION IS REQUIRED (50M MINIMUM RADIUS). IF FOUND, LEAST DEPTH AND POSITION ARE REQUIRED.

ASSIGNED: S-E211-HFP-86

Survey Summary

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

The charted piling were not observed visually. The area was deemed too shallow to approach, and was therefore not developed by Side Scan or Multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 4020	0.00	000.0	Primary

Hydrographer Recommendations

Retain as charted

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	NINFOM - Retain submerged piles as charted
	SORDAT - 20100505
	SORIND - US,US,graph,H11918

Office Notes

SAR NOTES: Area not surveyed due to shallow approach.

COMPILATION: Concur, retain submerged piles as charted.

Feature Images

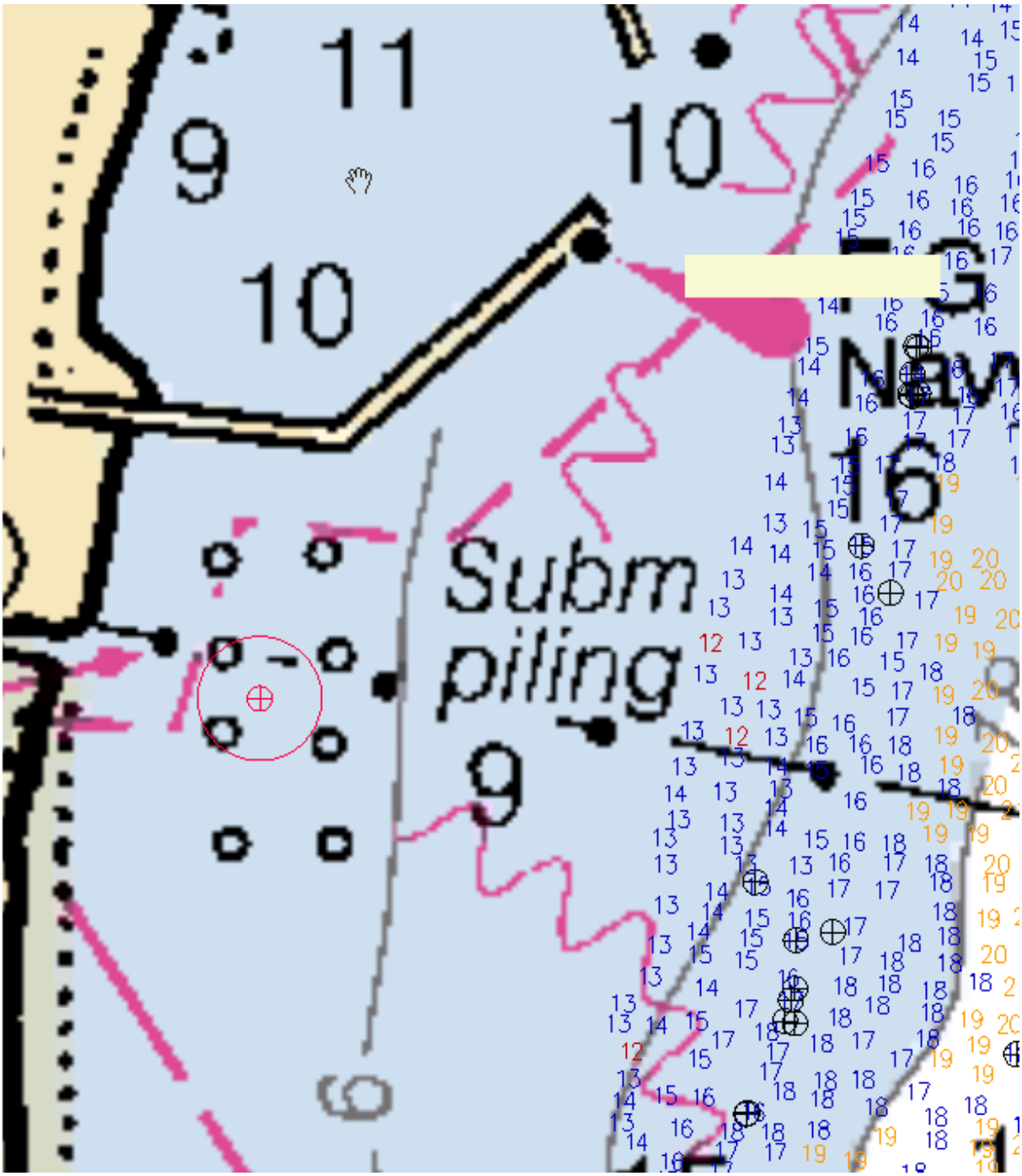


Figure 1.2.1

1.3) AWOIS #4021 - H11918-2.4_AWOIS#4021_OBSTRN_update

No Primary Survey Feature for this AWOIS Item

Search Position: 38° 15' 26.3" N, 076° 23' 31.4" W

Historical Depth: [None]

Search Radius: 300

Search Technique: SD, S2, SWMB

Technique Notes: [None]

History Notes:

04021

HISTORY

H7092/46--CS287; 1:10,000 SCALE SURVEY; SEXTANT FIXES ON SHORE SIGNALS FOR CONTROL; DOLPHIN LOCATED IN LAT 38-15-25.83N LONG 76-23-32.63W; SIGNAL DOL; POSITION SCALED FROM SURVEY.

BP89279/74--OPR-512-AHP-74; CHART DEFICIENCIES INVESTIGATION; DOL REP GONE; REVISED ON CHART TO SUBM. (ENTERED 12/31/84 MSM)

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE. VISUAL SEARCH AT CHART DATUM.IF NOT VISIBLE, A SSS, BOTTOM DRAG OR DIVER INVESTIGATION IS REQUIRED (50M MINIMUM RADIUS). IF FOUND, LEAST DEPTH AND POSITION ARE REQUIRED.

ASSIGNED: S-E211-HFP-86

Survey Summary

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

Due to safety concerns, this AWOIS search radius was terminated at the 12 ft contour. No dolphin was found inside the accessible area of the search radius.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 4021	0.00	000.0	Primary
Bottom_Samples_GPs_.txt	2	289.13	222.7	Secondary

Hydrographer Recommendations

The hydrographer recommends either moving the submerged dolphin inshore of the 12 ft contour, or removal of the subm dol text and symbol.

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20100505
	SORIND - US,US,graph,H11918
	TECSOU - 3:found by multi-beam

Office Notes

SAR NOTES: 0.5m feature observed with MBES. This feature cannot be considered disproved due to incomplete search radius. There is a charting discrepancy for this Subm Dol feature between charts 12264 and 12233. Charting offset is 55m.

COMPILATION: Concur, feature disproved by MBES. Delete charted submerged dolphin.

Feature Images

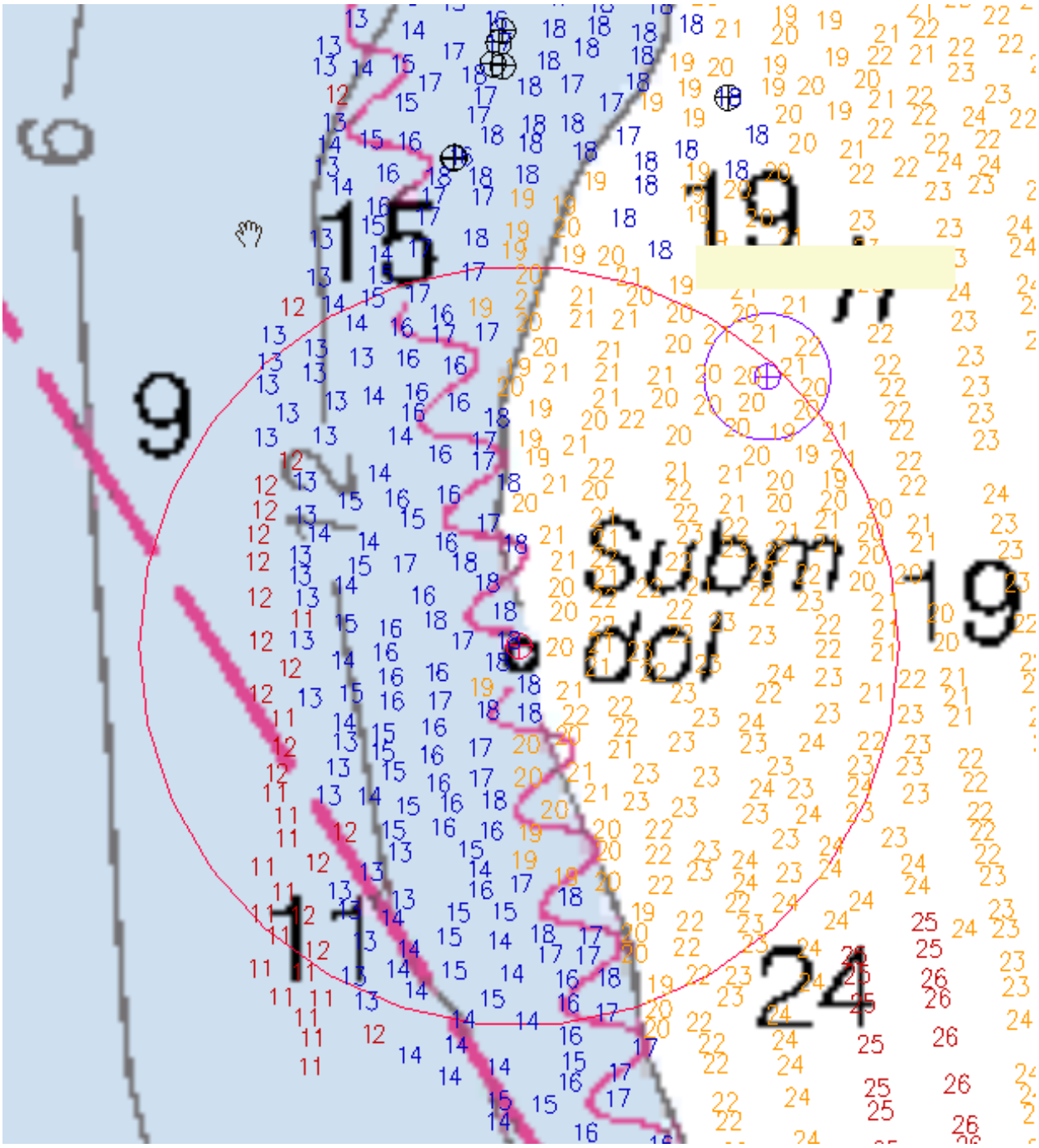


Figure 1.3.1

1.4) AWOIS #4136 - H11918-2.5_RipRap_OBSTRN_retain

No Primary Survey Feature for this AWOIS Item

Search Position: 38° 17' 56.5" N, 076° 22' 07.3" W
Historical Depth: [None]
Search Radius: 200
Search Technique: SD, S2, SWMB
Technique Notes: [None]

History Notes:

UNKNOWN SOURCE--ROCK AWASH CHARTED IN LAT 38-17-57.0N, LONG 76-22-09.4W; POSITION SCALED FROM CHART AT 1:40,000. (ENTERED MSM 6/85)
MAR--10/85; S-E211-HFP-85; LAUNCH DRIFTED ONTO RIP RAP THAT EXTENDS WESTWARD FROM EXPOSED ROCK BREAKWATER AROUND ABANDONED LIGHTHOUSE; LEADING EDGE OF SUBM RIP RAP IN LAT 38-17-55.9N, LONG 76-22-08.7W. (ENTERED MSM 5/86)
H10193/85--S-E211-HFP-85; ROCK AWASH WAS LOCATED 35.2M SOUTH OF CHARTED POSITION IN LAT 38-17-56.1N, LONG 76-22-08.51W; BARES 1 FT.; EVALUATOR RECOMMENDS DELETING CHARTED ROCK AND APPLY THROUGH PRESENT SURVEY. (UPDATED MSM 1/88)

Survey Summary

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

Due to safety concerns, this AWOIS item was not developed.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 4136	0.00	000.0	Primary

Hydrographer Recommendations

Retain rock and rip rap as charted.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:
NINFOM - Retain obstruction as charted
QUASOU - 1:depth known
SORDAT - 20100505
SORIND - US,US,graph,H11918
TECSOU - 11:satelite imagery
WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Feature verified with Orthoimagery

COMPILATION: Concur, retain obstruction as charted.

Feature Images

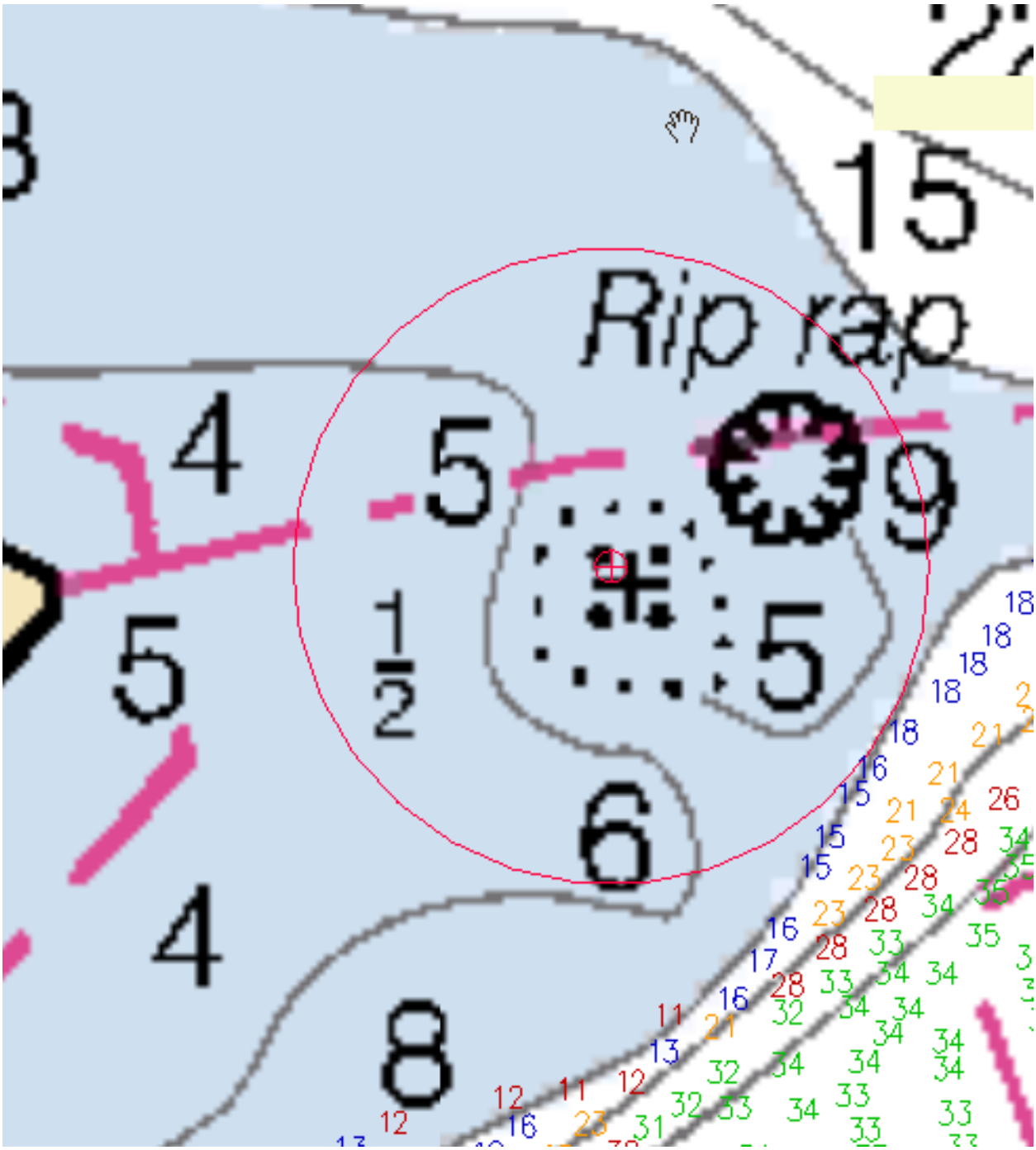


Figure 1.4.1

1.5) AWOIS #13632 - H11918-2.6_AWOIS_#13632_Piles_retain

No Primary Survey Feature for this AWOIS Item

Search Position: 38° 17' 13.5" N, 076° 22' 60.0" W

Historical Depth: [None]

Search Radius: 200

Search Technique: VS, VBES, MB

Technique Notes: [None]

History Notes:

BP89279/74 -- MULTIPLE PILINGS IDENTIFIED ON BP. CENTER OF GROUP OF PILINGS AT APPROX POSITION 38/17/13.48N 76/22/59.97W (ENTERED 5/18/06, SME)

Survey Summary

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

AWOIS # 13632 was identified visually in the field. The pilings are visible at high tide.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 13632	0.00	000.0	Primary

Hydrographer Recommendations

Retain AWOIS #13632 pilings PA.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: NINFOM - Retain piles as charted

SORDAT - 20100505

SORIND - US,US,graph,H11918

Office Notes

SAR NOTES: Field unit visually verified this feature. Retain.

COMPILATION: Concur, retain piles as charted.

Feature Images

Figure 1.5.1

Figure 1.5.2

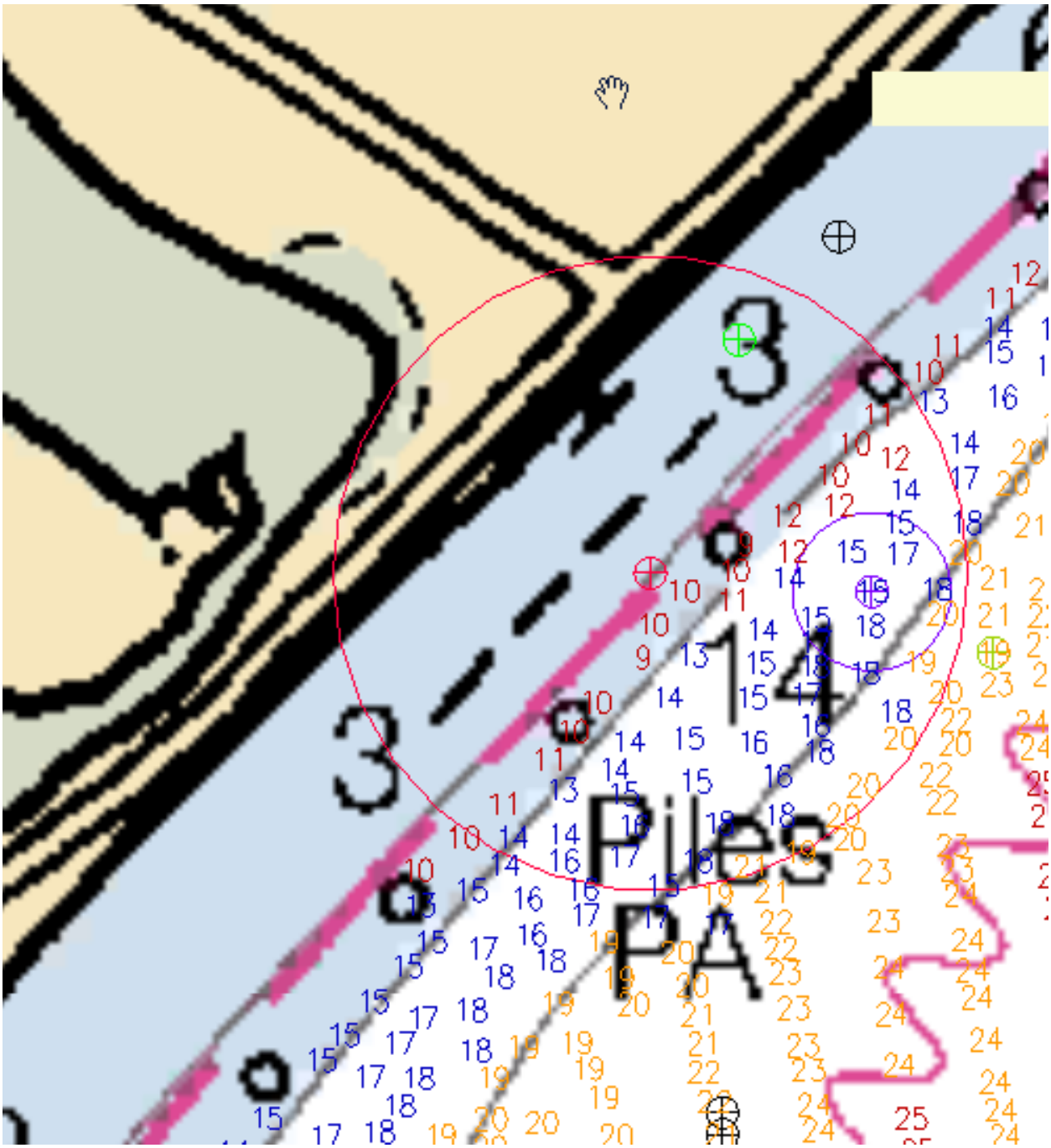


Figure 1.5.3

1.6) AWOIS #13633 - H11918-2.7_AWOIS_#13633_Sewer_update

No Primary Survey Feature for this AWOIS Item

Search Position: 38° 15' 24.0" N, 076° 21' 11.5" W

Historical Depth: [None]

Search Radius: 0

Search Technique: VS, VBES, MB

Technique Notes: SEE RADIUS TABLE FOR SEARCH AREA

History Notes:

CL-421/83 -- ST. MARY'S COUNTY METROPOLITAN COMISSION; 20IN DIAMETER SEWER OUTFALL PIPE INSTALLED. SEWER ENDPOINTS 38/15/51.5N 76/23/57.5W AND 38/15/24N 76/21/11.5W (ENTERED 05/18/06, SME)

Survey Summary

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

The sewer was developed with object detection level MBES coverage. The sewer appeared to be entirely covered by the seafloor bottom and posed no significant threat to navigation. There was no evidence that the sewer endpoints have changed.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 13633	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends that the position of the sewer be retained as charted.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20100505

SORIND - US,US,graph,H11918

TECSOU - 2,3:found by side scan sonar,found by multi-beam

Office Notes

SAR NOTES: Indicated by SSS Mosaics correlated with bathy grids, the offshore end of the sewer pipeline does not correlate to the charted sewer. The offshore end of the pipeline is located at 38-15-31.40825N, 076-21-57-79576W.

COMPILATION: Do not concur. The charted sewer does not extend as far offshore as charted. Delete charted sewer. Add sewer with inshore end at 38°15'49.175" , -076°23'55.812" and offshore end at 38°15'31.547" , -076°21'58.179".

Feature Images

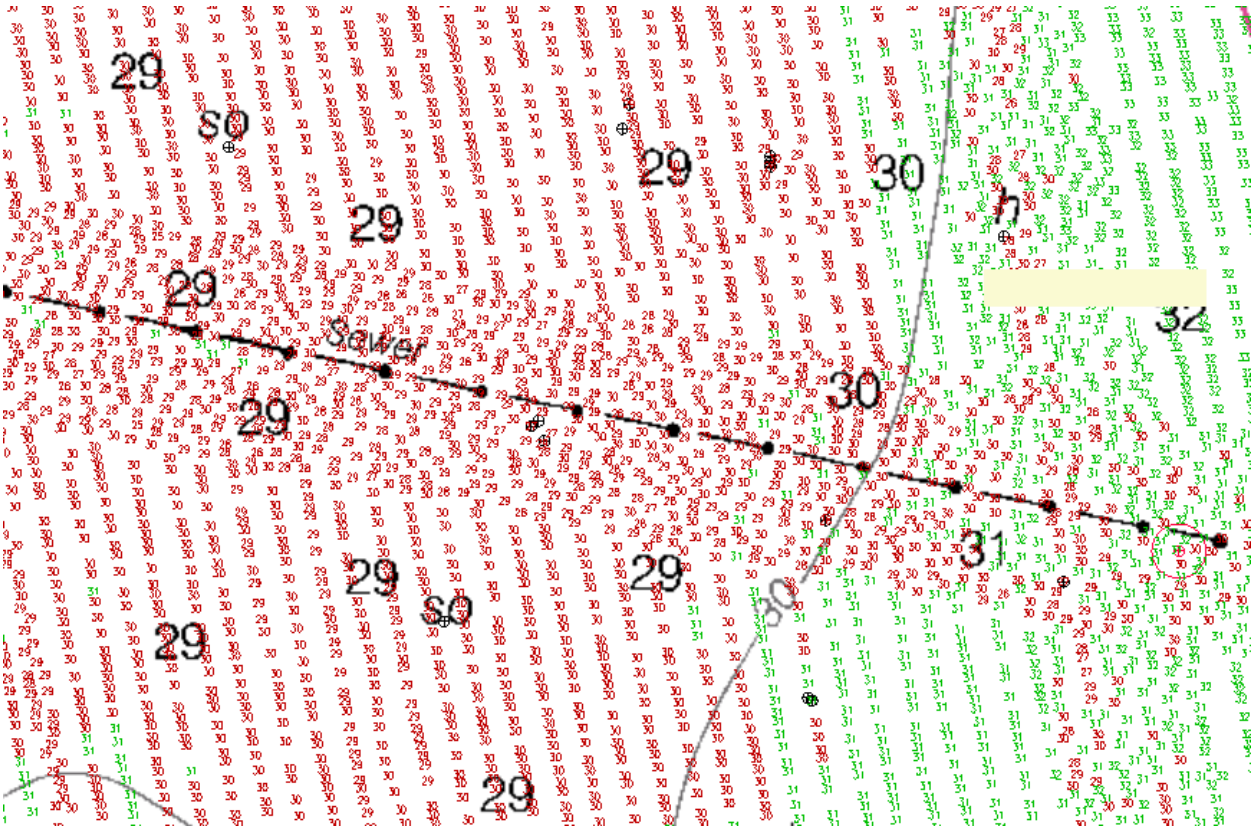


Figure 1.6.1

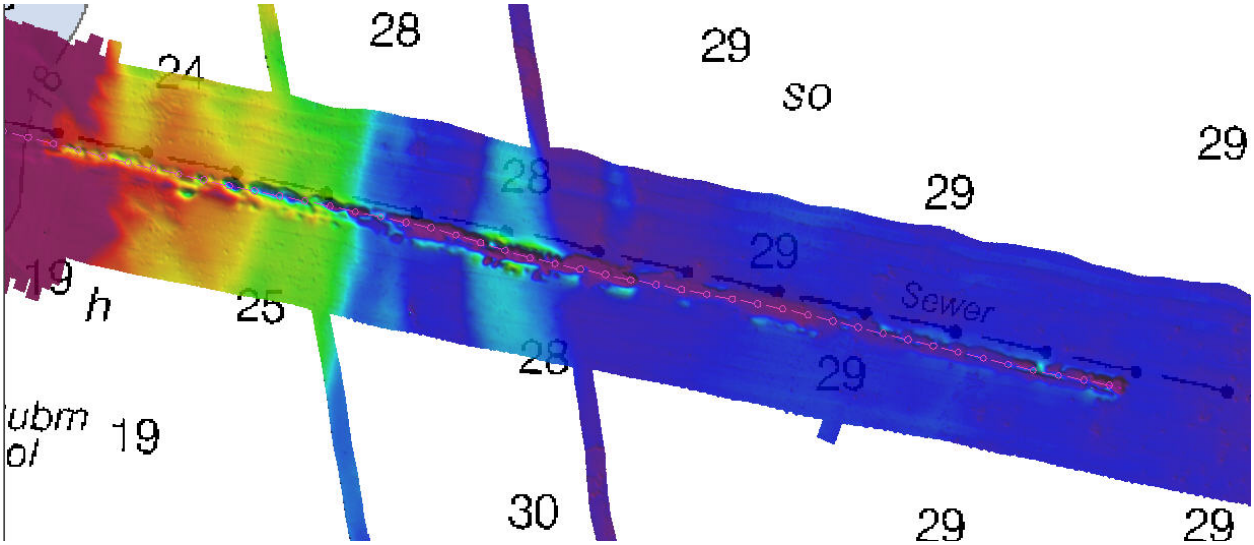


Figure 1.6.2

H11918 Charted Features

Registry Number: H11918
State: Maryland
Locality: Central Cheasapeake Bay
Sub-locality: South of Cedar Point
Project Number: OPR-E349-BH-08
Survey Dates: 06/20/2008 - 05/05/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12233	37th	01/01/2007	1:40,000 (12233_1)	USCG LNM: 11/17/2009 (02/02/2010) NGA NTM: 04/05/1997 (02/13/2010)
12264	30th	07/01/2007	1:40,000 (12264_1)	USCG LNM: 04/06/2010 (04/13/2010) NGA NTM: 12/14/1996 (04/24/2010)
12230	63rd	12/01/2006	1:80,000 (12230_1)	USCG LNM: 04/29/2008 (05/20/2008) NGA NTM: 11/02/2002 (05/24/2008)
12280	6th	09/01/2005	1:200,000 (12280_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?

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

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	OBSTRUCTION-not in suvey area	AWOIS	[no data]	[no data]	[no data]	---
1.2	H11918-2.5_RipRap_OBSTRN_retain	AWOIS	[no data]	[no data]	[no data]	---
1.3	H11918-2.6_AWOIS_#13632_Piles_retain	AWOIS	[no data]	[no data]	[no data]	---
1.4	36.23_ft_Shoal-Chart Sounding	Shoal	11.04 m	38° 18' 06.8" N	076° 21' 16.2" W	---
1.5	27ft Subm Pile	Obstruction	8.20 m	38° 16' 49.3" N	076° 22' 52.1" W	---
1.6	H11918-1.9 27ft OBSTRN (uncharted)	Obstruction	8.37 m	38° 16' 44.8" N	076° 21' 20.2" W	---
1.7	T Pier (uncharted)	GP	[None]	38° 17' 20.3" N	076° 22' 55.1" W	---

1.1) AWOIS #3428 - OBSTRUCTION-not in suvey area

No Primary Survey Feature for this AWOIS Item

Search Position:	38° 14' 08.2" N, 076° 20' 16.8" W
Historical Depth:	[None]
Search Radius:	100
Search Technique:	SD, S2, SWMB
Technique Notes:	[None]

History Notes:

HISTORY
CL1412/68--COE RECEIVED APPLICATION FROM USN AIR STATION TO INSTALL
RADAR TARGET IN LAT.38-14-15N, LONG.76-20-18W. STRUCTURE TO EXTEND
APPROX.. 17.5 FT ABOVE MLW.
CL1052/70--CONSTRUCTION COMPLETED AT THE ABOVE POS.
CL1382/80--OPR-E609-RU/HE-78, WIRE DRAG INVESTIGATION LOCATED
AN OBSTRUCTION IN POS. LAT.38-14-7.8N, LONG.76-20-18W.
A NOS/NAVY DIVING TEAM VERIFIED THE OBSTRUCTION AND
SECURED A SURFACE MARKER, NO CLEARANCE DEPTH GIVEN.
(ENTERED, 2/6/84,MCR)
FE267/84; OPR-S-E404-PE-84--CHARTED SUBM OBSTR AT LAT 38-14-07.8N, LONG
76-20-18W SEARCHED FOR BY SSS AND CONSTANT TENSION WIRE DRAG. SMALL CONTACT
WITH LESS THAN 1 METER SHADOW NOTED ON SONARGRAM AT APPROX. POS. LAT
38-14-09N, LONG 76-20-19W. DRAG DEEMED INEFFECTIVE DUE TO "SPLIT" AT CHARTED
POS. INFO PROVIDED TO SHIP PEIRCE DURING FE BY PATUXENT RIVER NAVAL AIR TEST
CENTER SAYS THAT CHARTED SUBM OBSTR TO BE FORMER LIGHTED PILE AT GEODETIC
POS. LAT 38-14-15.57408N, LONG 76-20-24.68551W. LIGHTED PILE DESTROYED BY
ICE IN 1970'S. NOS/NAVY TEAM REPORT DESTROYED PILE LOCATED AND MARKED AT
CHARTED POS. (SEE CL1382/80). EVALUATOR RECOMMENDS CHARTED SUBM OBSTR BE
RETAINED AND CONSIDERATION GIVEN TO CHARTING SUBM OBSTR AT GEODETIC
POSITION, DUE TO POSITIONAL DIFFERENCES NOTED BY SOURCES. (UPDATED 5/89 GM)

SURVEY REQUIREMENTS
FULL--VERIFY OR DISPROVE, BY 400% SIDE SCAN SONAR SEARCH OR BOTTOM
SWEEP TO RADIUS OF 500 METERS MINIMUM. LEAST DEPTH REQUIRED IF FOUND.
NOT ASSIGNED

Survey Summary

Charts Affected: 12233_1, 12230_1, 12280_1, 13003_1

Remarks:

Resolved in H11958

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 3428	0.00	000.0	Primary

Hydrographer Recommendations

Resolved in H11958

S-57 Data

[None]

Office Notes

[None]

1.2) AWOIS #4136 - H11918-2.5_RipRap_OBSTRN_retain

No Primary Survey Feature for this AWOIS Item

Search Position: 38° 17' 56.5" N, 076° 22' 07.3" W
Historical Depth: [None]
Search Radius: 200
Search Technique: SD, S2, SWMB
Technique Notes: [None]

History Notes:

UNKNOWN SOURCE--ROCK AWASH CHARTED IN LAT 38-17-57.0N, LONG 76-22-09.4W; POSITION SCALED FROM CHART AT 1:40,000. (ENTERED MSM 6/85)
MAR--10/85; S-E211-HFP-85; LAUNCH DRIFTED ONTO RIP RAP THAT EXTENDS WESTWARD FROM EXPOSED ROCK BREAKWATER AROUND ABANDONED LIGHTHOUSE; LEADING EDGE OF SUBM RIP RAP IN LAT 38-17-55.9N, LONG 76-22-08.7W. (ENTERED MSM 5/86)
H10193/85--S-E211-HFP-85; ROCK AWASH WAS LOCATED 35.2M SOUTH OF CHARTED POSITION IN LAT 38-17-56.1N, LONG 76-22-08.51W; BARES 1 FT.; EVALUATOR RECOMMENDS DELETING CHARTED ROCK AND APPLY THROUGH PRESENT SURVEY. (UPDATED MSM 1/88)

Survey Summary

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

Due to safety concerns, this AWOIS item was not developed.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 4136	0.00	000.0	Primary

Hydrographer Recommendations

Retain rock and rip rap as charted.

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	NINFOM - Retain obstruction as charted
	QUASOU - 1:depth known
	SORDAT - 20100505
	SORIND - US,US,graph,H11918
	TECSOU - 11:satelite imagery
	WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Feature verified with Orthoimagery

COMPILATION: Concur, retain obstruction as charted.

Feature Images

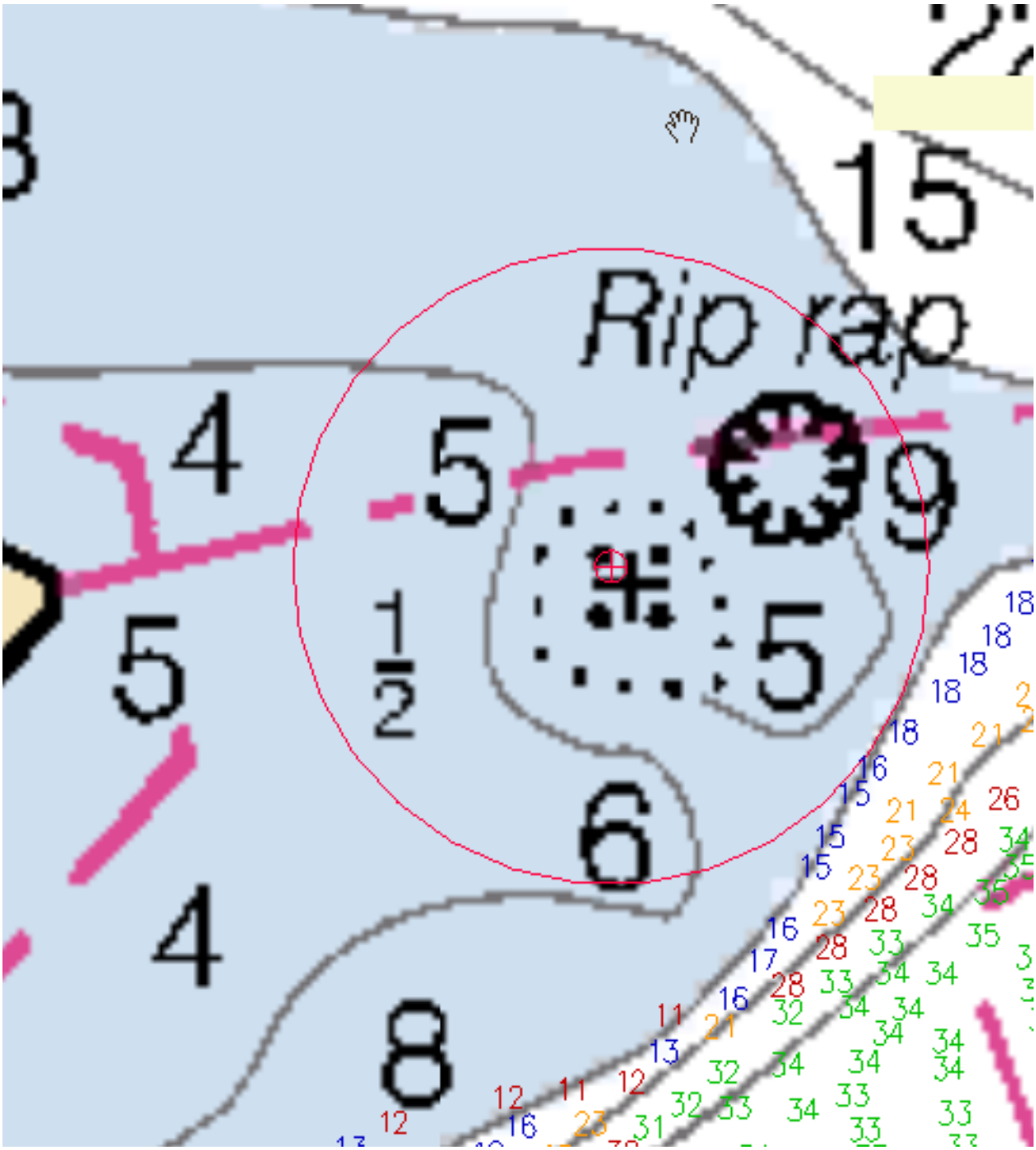


Figure 1.2.1

1.3) AWOIS #13632 - H11918-2.6_AWOIS_#13632_Piles_retain

No Primary Survey Feature for this AWOIS Item

Search Position: 38° 17' 13.5" N, 076° 22' 60.0" W

Historical Depth: [None]

Search Radius: 200

Search Technique: VS, VBES, MB

Technique Notes: [None]

History Notes:

BP89279/74 -- MULTIPLE PILINGS IDENTIFIED ON BP. CENTER OF GROUP OF PILINGS AT APPROX POSITION 38/17/13.48N 76/22/59.97W (ENTERED 5/18/06, SME)

Survey Summary

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

AWOIS # 13632 was identified visually in the field. The pilings are visible at high tide.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-E349-06	AWOIS # 13632	0.00	000.0	Primary

Hydrographer Recommendations

Retain AWOIS #13632 pilings PA.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: NINFOM - Retain piles as charted

SORDAT - 20100505

SORIND - US,US,graph,H11918

Office Notes

SAR NOTES: Field unit visually verified this feature. Retain.

COMPILATION: Concur, retain piles as charted.

Feature Images

Figure 1.3.1

Figure 1.3.2

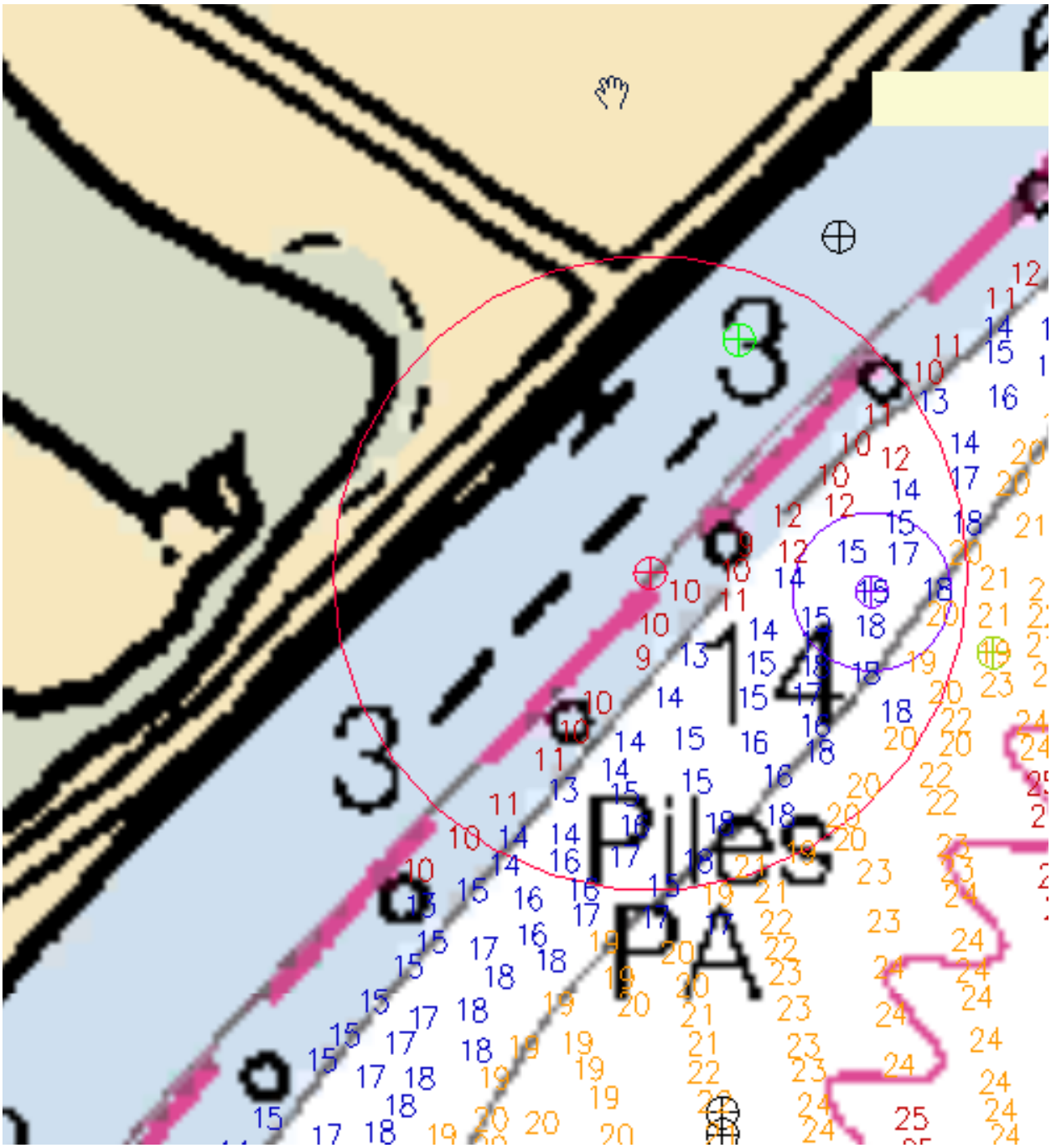


Figure 1.3.3

1.4) 36.23_ft_Shoal-Chart Sounding

Survey Summary

Survey Position:	38° 18' 06.8" N, 076° 21' 16.2" W
Least Depth:	11.04 m (= 36.23 ft = 6.038 fm = 6 fm 0.23 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.140 m
Timestamp:	2008-172.15:08:52.746 (06/20/2008)
Survey Line:	hdcs_data / bh_s5501_sb / 2008-172 / 002_1419
Profile/Beam:	44907/1
Charts Affected:	12264_1, 12230_1, 12280_1, 13003_1

Remarks:

An 36.23ft shoal was identified during post processing of VBES mainscheme data.

Feature Correlation

Address	Feature	Range	Azimuth	Status
hdcs_data/bh_s5501_sb/2008-172/002_1419	44907/1	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the sounding be retained as charted.

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	OBJNAM - 36.23_ft_Shoal
	QUASOU - 6:least depth known
	SORDAT - 20100505
	SORIND - US,US,nsurf,H11918
	TECSOU - 1:found by echo-sounder

Office Notes

COMPILATION: Concur, refer to H11918_CS.000

Feature Images

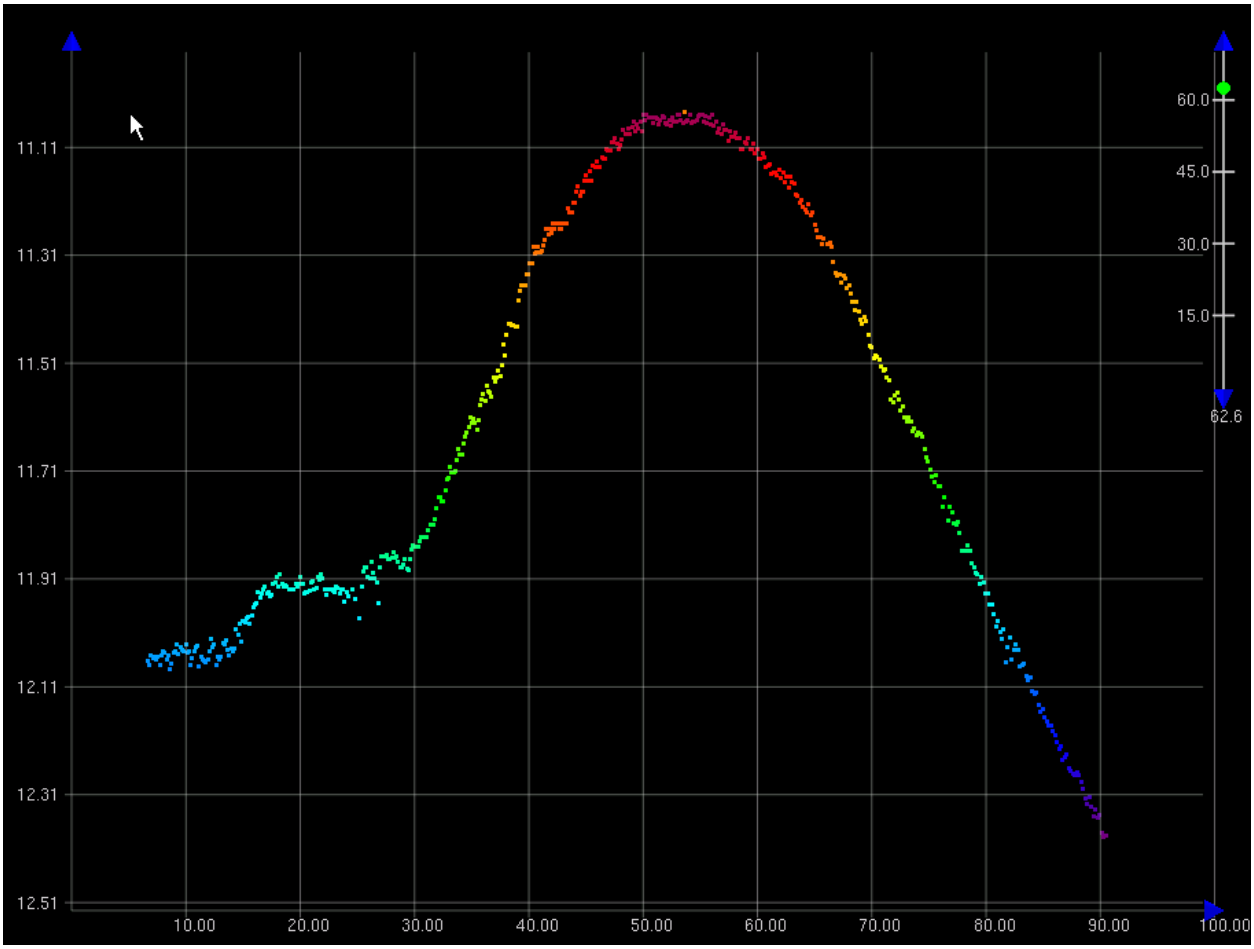


Figure 1.4.1

1.5) 27ft Subm Pile

Survey Summary

Survey Position: 38° 16' 49.3" N, 076° 22' 52.1" W

Least Depth: 8.20 m (= 26.90 ft = 4.483 fm = 4 fm 2.90 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.236 m

Timestamp: 2010-111.14:50:48.944 (04/21/2010)

Survey Line: hdcs_data / bhii_s5401_reson7125_2010 / 2010-111 / 123_1450

Profile/Beam: 370/79

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

Insignificant pile features were located at 38.28035869 , -076.38114227 during AWOIS #4019 MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
hdcs_data/bhii_s5401_reson7125_2010/2010-111/123_1450	370/79	0.00	000.0	Primary
hdcs_data/bh_s5501_klein5000_sss200/2008-210/012_1611	0001	280.10	059.7	Secondary (grouped)

Hydrographer Recommendations

Hydrographer recommends removing AWOIS_#4019 subm pile symbol and text from chart. All bathy features found during MBES development were deemed insignificant.

Cartographically-Rounded Depth (Affected Charts):

27ft (12264_1, 12230_1, 12280_1)

4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: NINFOM - Delete charted submerged pile

QUASOU - 6:least depth known

SORDAT - 20100505

SORIND - US,US,graph,H11918

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 8.198 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: 27ft Subm Pile: verified as existing; documented in MBES and SSS data.

COMPILATION: Concur, submerged pile is deemed insignificant. Delete charted submerged pile.

Feature Images

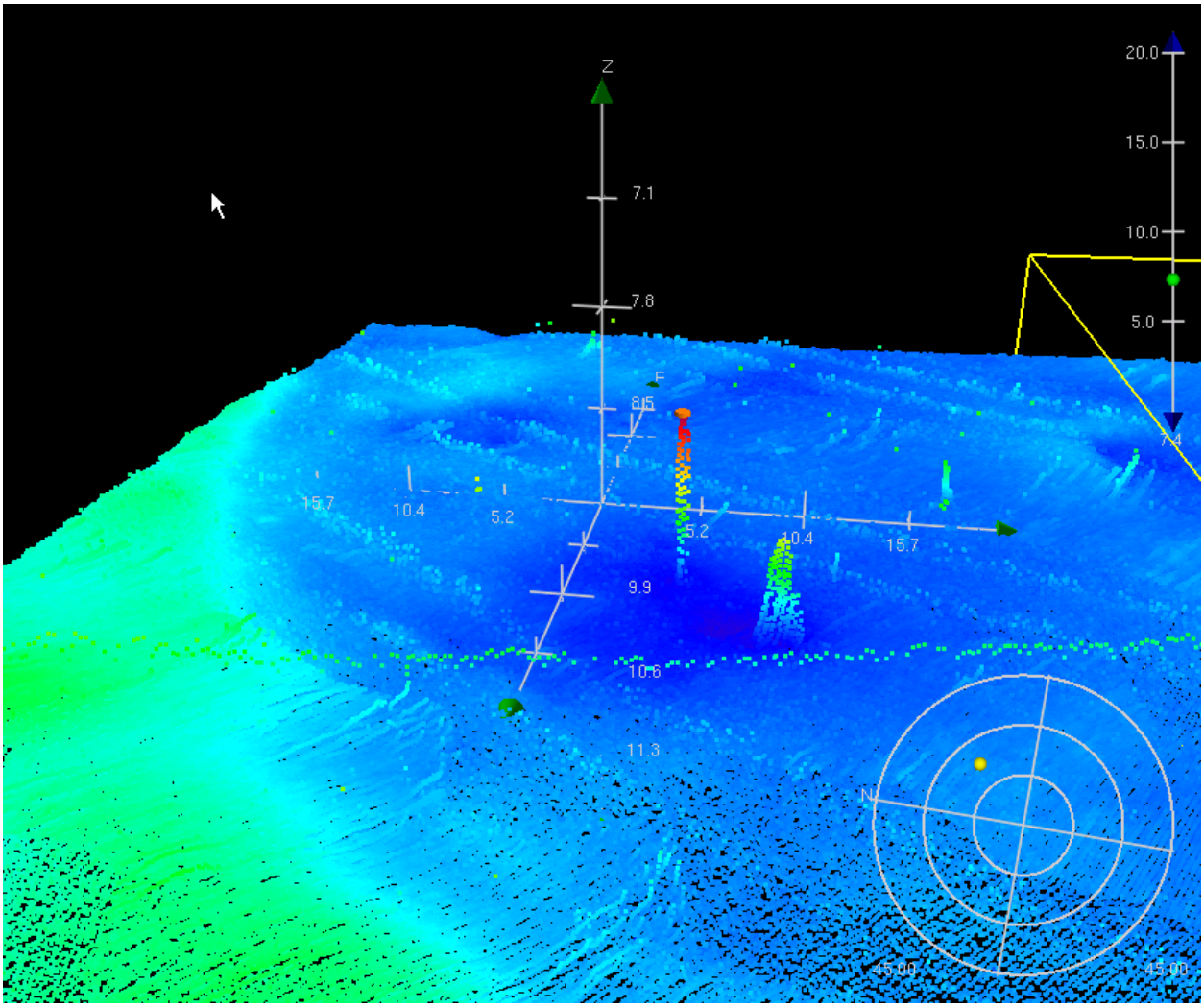


Figure 1.5.1

1.6) H11918-1.9 27ft OBSTRN (uncharted)

Survey Summary

Survey Position: 38° 16' 44.8" N, 076° 21' 20.2" W

Least Depth: 8.37 m (= 27.45 ft = 4.575 fm = 4 fm 3.45 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.235 m

Timestamp: 2010-118.13:27:27.737 (04/28/2010)

Survey Line: hdcs_data / bhii_s5401_reson7125_2010 / 2010-118 / 025_1327

Profile/Beam: 223/394

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

An 27.4 ft obstruction was discovered at location 38°16'44.794" , -076°21'20.240" during main scheme SSS and VBES post processing. The feature was later developed with object detection MBES coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
hdcs_data/bhii_s5401_reson7125_2010/2010-118/025_1327	223/394	0.00	000.0	Primary
hdcs_data/bh_s5501_klein5000_sss100/2008-176/032_1407	0002	3.27	119.5	Secondary (grouped)
hdcs_data/bh_s5501_klein5000_sss200/2008-206/032_1657	0001	19.03	358.9	Secondary (grouped)
hdcs_data/bh_s5501_klein5000_sss100/2008-176/031_1450	0002	23.87	036.0	Secondary (grouped)
hdcs_data/bh_s5501_klein5000_sss200/2008-206/030_1817	0002	293.83	058.6	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends that a dangerous obstruction is charted at 38-16-44.8N, 076-21-20.2W

Cartographically-Rounded Depth (Affected Charts):

27ft (12264_1, 12230_1, 12280_1)

4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: OBJNAM - 27.45_ft__Obstruction

QUASOU - 6:least depth known

SORDAT - 20100505

SORIND - US,US,graph,H11918

TECSOU - 1,2,3:found by echo-sounder,found by side scan sonar,found by multi-beam

VALSOU - 8.367 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: OBSTRN verified as existing; documented in MBES and SSS data.

COMPILATION: Concur, add obstruction at survey position: 38°16'44.794", -076°21'20.240".

Feature Images

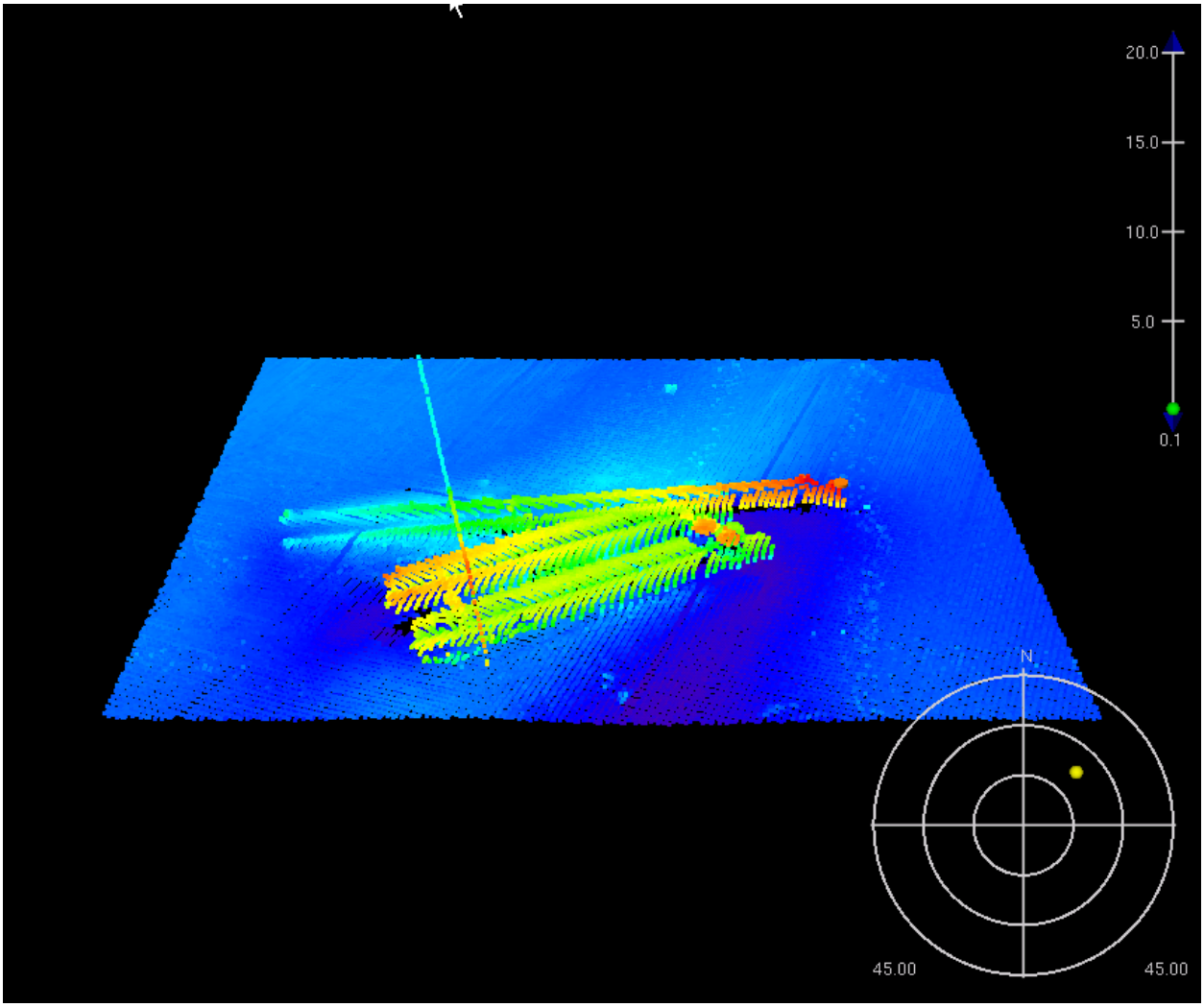


Figure 1.6.1

1.7) T Pier (uncharted)

Survey Summary

Survey Position: 38° 17' 20.3" N, 076° 22' 55.1" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-125.00:00:00.000 (05/05/2010)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_PIER.000

GP No.: 0226000000020001

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

The northeast end of the T-shaped pier is located at 38.28898300 , -076.38196000. Orthoimage geotiff and html metada from seamless.USGS.Gov will be included in the Descriptive_Report\Appendices\V_Supplemental_Survey_Records__Correspondence.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_PIER.000	0226000000020001	0.00	000.0	Primary
H11918_E349_BH/AHB_H11918/PSS/H11918_PIER.000	0226000000010001	0.00	000.0	Secondary (grouped)
t_pier_GPS.txt	2	1.55	223.4	Secondary (grouped)
t_pier_GPS.txt	3	2.27	192.1	Secondary (grouped)
t_pier_GPS.txt	1	55.74	135.1	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends that a T-shaped pier is added to the chart.

S-57 Data

Geo object 1: Shoreline Construction (SLCONS)

Attributes: NINFOM - Chart Pier

SORDAT - 20100505

SORIND - US,US,graph,H11918

WATLEV - 2:always dry

Office Notes

SAR NOTES: Verified with Orthoimagery. Pier exists on chart 12264 but has offset position (pier is 140m from charted position) Update charted position.

COMPILATION: Concur, delete charted pier centered at approximately 38°17'16.624" , -076°23'00.751" and add pier at survey position: 38°17'20.303" , -076°22'55.099".

Feature Images

Figure 1.7.1

Figure 1.7.2

H11918 UnCharted Features

Registry Number: H11918
State: Maryland
Locality: Central Cheasapeake Bay
Sub-locality: South of Cedar Point
Project Number: OPR-E349-BH-08
Survey Dates: 01/01/1990 - 04/28/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12233	37th	01/01/2007	1:40,000 (12233_1)	USCG LNM: 11/17/2009 (02/02/2010) NGA NTM: 04/05/1997 (02/13/2010)
12264	30th	07/01/2007	1:40,000 (12264_1)	USCG LNM: 04/06/2010 (04/13/2010) NGA NTM: 12/14/1996 (04/24/2010)
12230	63rd	12/01/2006	1:80,000 (12230_1)	USCG LNM: 04/29/2008 (05/20/2008) NGA NTM: 11/02/2002 (05/24/2008)
12280	6th	09/01/2005	1:200,000 (12280_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?

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

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	H11918-1.9 27ft OBSTRN (uncharted)	Obstruction	8.37 m	38° 16' 44.8" N	076° 21' 20.2" W	---
1.2	H11918-1.10 26ft OBSTRN (uncharted)	Obstruction	8.05 m	38° 15' 46.9" N	076° 21' 42.4" W	---
1.3	Fish_Weir_Offshore_GP	Obstruction	[None]	38° 15' 08.2" N	076° 23' 27.8" W	---

1.1) H11918-1.9 27ft OBSTRN (uncharted)

Survey Summary

Survey Position: 38° 16' 44.8" N, 076° 21' 20.2" W

Least Depth: 8.37 m (= 27.45 ft = 4.575 fm = 4 fm 3.45 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.235 m

Timestamp: 2010-118.13:27:27.737 (04/28/2010)

Survey Line: hdcs_data / bhii_s5401_reson7125_2010 / 2010-118 / 025_1327

Profile/Beam: 223/394

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

An 27.4 ft obstruction was discovered at location 38°16'44.794" , -076°21'20.240" during main scheme SSS and VBES post processing. The feature was later developed with object detection MBES coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
hdcs_data/bhii_s5401_reson7125_2010/2010-118/025_1327	223/394	0.00	000.0	Primary
hdcs_data/bh_s5501_klein5000_sss100/2008-176/032_1407	0002	3.27	119.5	Secondary (grouped)
hdcs_data/bh_s5501_klein5000_sss200/2008-206/032_1657	0001	19.03	358.9	Secondary (grouped)
hdcs_data/bh_s5501_klein5000_sss100/2008-176/031_1450	0002	23.87	036.0	Secondary (grouped)
hdcs_data/bh_s5501_klein5000_sss200/2008-206/030_1817	0002	293.83	058.6	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends that a dangerous obstruction is charted at 38-16-44.8N, 076-21-20.2W

Cartographically-Rounded Depth (Affected Charts):

27ft (12264_1, 12230_1, 12280_1)

4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: OBJNAM - 27.45_ft__Obstruction

QUASOU - 6:least depth known

SORDAT - 20100505

SORIND - US,US,graph,H11918

TECSOU - 1,2,3:found by echo-sounder,found by side scan sonar,found by multi-beam

VALSOU - 8.367 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: OBSTRN verified as existing; documented in MBES and SSS data.

COMPILATION: Concur, add obstruction at survey position: 38°16'44.794", -076°21'20.240".

Feature Images

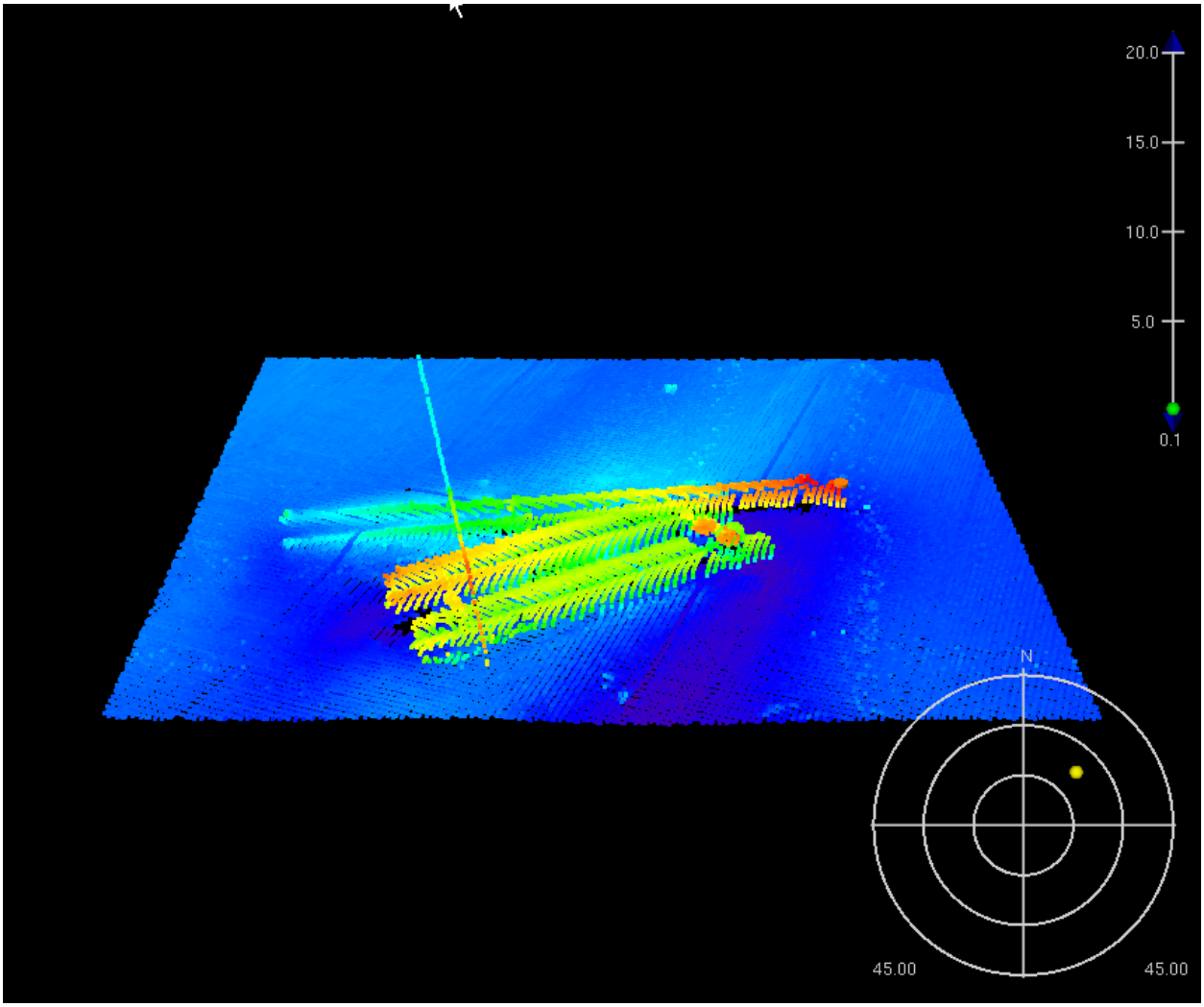


Figure 1.1.1

1.2) H11918-1.10 26ft OBSTRN (uncharted)

Survey Summary

Survey Position:	38° 15' 46.9" N, 076° 21' 42.4" W
Least Depth:	8.05 m (= 26.41 ft = 4.402 fm = 4 fm 2.41 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.234 m
Timestamp:	2010-118.14:36:46.512 (04/28/2010)
Survey Line:	hdcs_data / bhii_s5401_reson7125_2010 / 2010-118 / 033_1436
Profile/Beam:	237/132
Charts Affected:	12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

At 38°15'46.879" , -076°21'42.385" an obstruction of 26.4 ft was identified in post processing of a MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
hdcs_data/bhii_s5401_reson7125_2010/2010-118/033_1436	237/132	0.00	000.0	Primary
hdcs_data/bh_s5501_klein5000_sss100/2008-177/024_1403	0001	6.88	177.3	Secondary (grouped)
hdcs_data/bh_s5501_klein5000_sss200/2008-207/025_1537	0001	18.97	178.1	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends that a 26 ft obstruction be added to the chart at 38°15'46.879" , -076°21'42.385".

Cartographically-Rounded Depth (Affected Charts):

26ft (12233_1, 12264_1, 12230_1, 12280_1)

4 ¼fm (13003_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	NINFOM - Add obstruction
	QUASOU - 6:least depth known
	SORDAT - 20100505
	SORIND - US,US,graph,H11918

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 8.051 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Feature verified with SSS and MBES

COMPILATION: Do not concur. Add obstruction 8.05 m (26.41 ft)at survey position: 38°15'46.879" , -076°21'42.385".

Feature Images

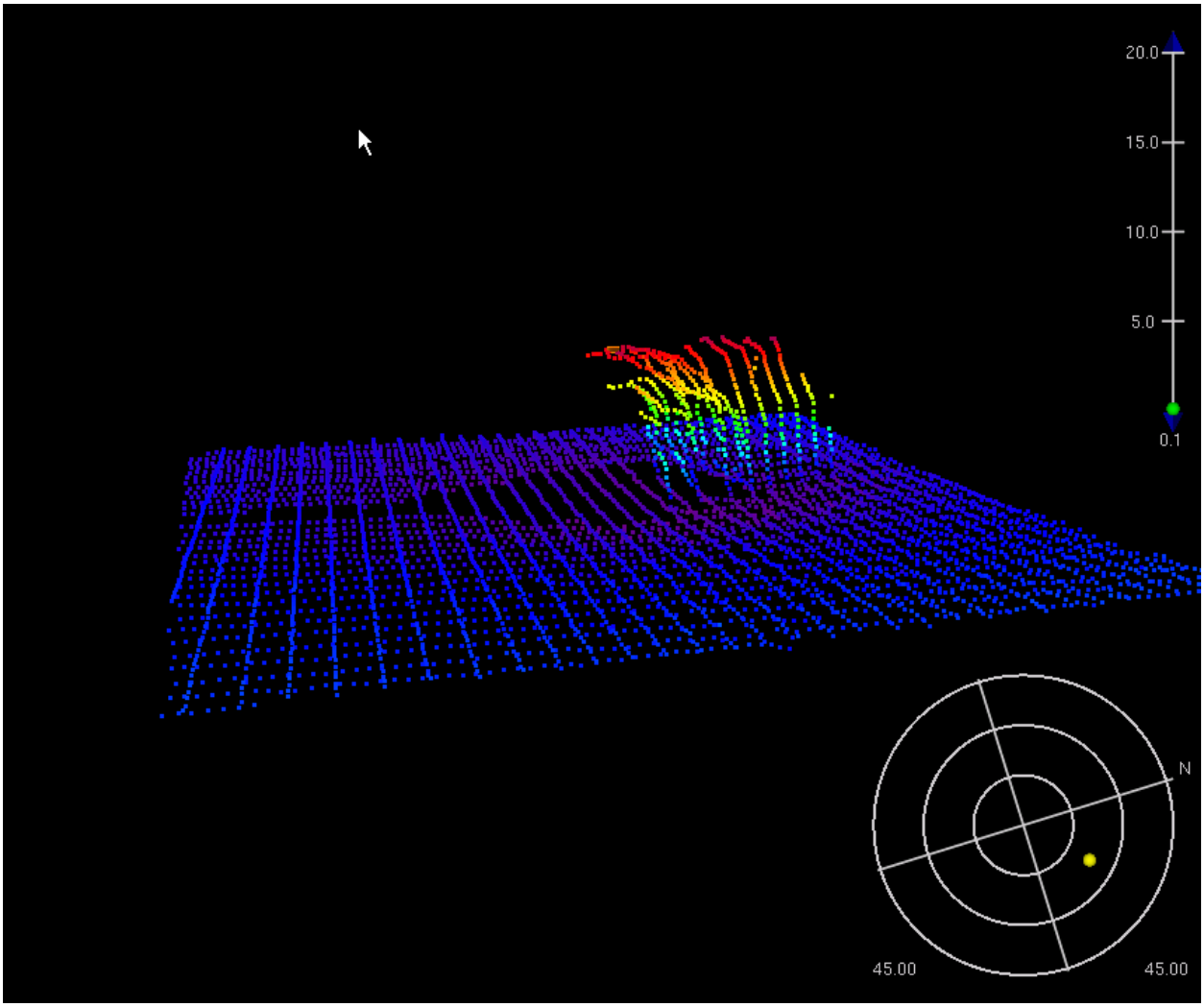


Figure 1.2.1

1.3) Fish_Weir_Offshore_GP

Survey Summary

Survey Position:	38° 15' 08.2" N, 076° 23' 27.8" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Fish_weir_GPs.txt
GP No.:	3
Charts Affected:	12233_1, 12230_1, 12280_1, 13003_1

Remarks:

A uncharted fish weir was identified during survey aqusition. Orthoimage geotiff and html metada from seamless.USGS.Gov will be included in the Descriptive_Report\Appendices\V_Supplemental_Survey_Records__Correspondence.

Feature Correlation

Address	Feature	Range	Azimuth	Status
Fish_weir_GPs.txt	3	0.00	000.0	Primary

Hydrographer Recommendations

The fish weir inshore point is at 38°15'05.122" , -076°23'42.28" and extends off shore to 38°15'08.120" , -076°23'27.76".

The hydrographer recommends that a fish weir symbol should be added to the chart.

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	INFORM - identified by naked eye by crew during aquisition
	NATCON - 6:wooden
	OBJNAM - Fish_Weir_Offshore_GP
	QUASOU - 2:depth unknown
	SORDAT - 20100505
	SORIND - US,US,graph,H11918
	STATUS - 7:temporary

TECSOU - 11:satelite imagery

WATLEV - 2:always dry

Office Notes

SAR NOTES: Verified by field unit. Chart Fish Weir

COMPILATION: Concur, add fish weir.

Feature Images

Figure 1.3.1

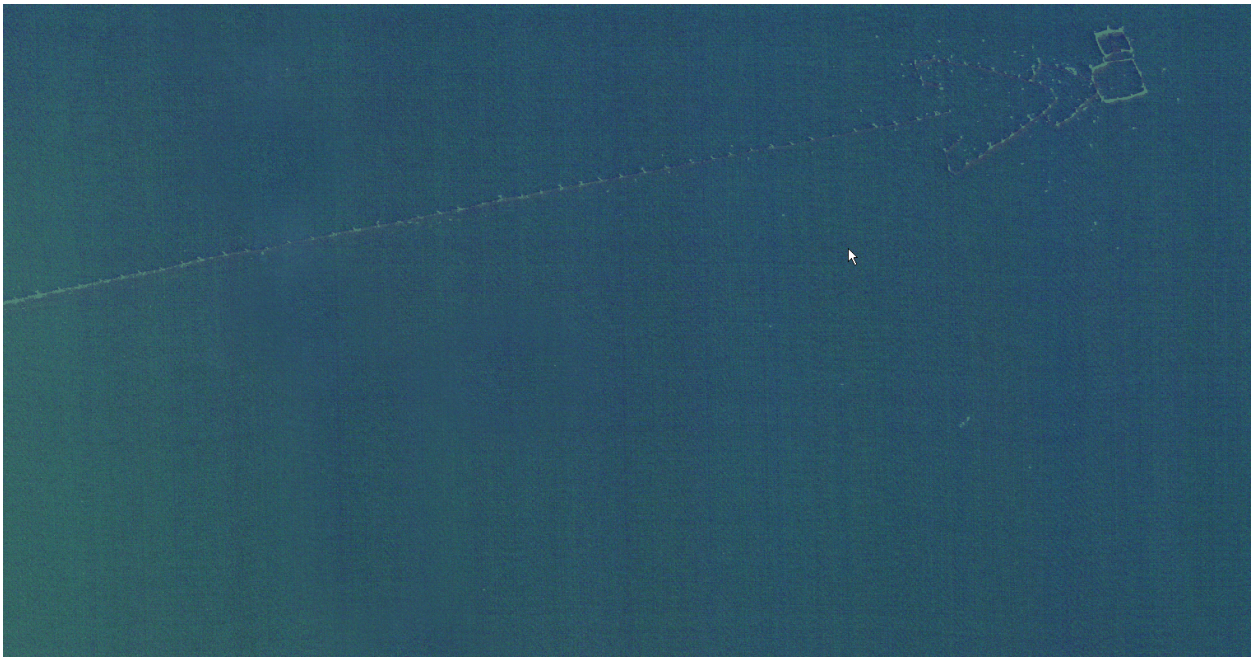


Figure 1.3.2

H11918 Bluenote Disprovals

Registry Number: H11918
State: Maryland
Locality: Central Cheasapeake Bay
Sub-locality: South of Cedar Point
Project Number: OPR-E349-BH-08
Survey Date: 01/01/1981

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12233	37th	01/01/2007	1:40,000 (12233_1)	USCG LNM: 11/17/2009 (02/02/2010) NGA NTM: 04/05/1997 (02/13/2010)
12264	30th	07/01/2007	1:40,000 (12264_1)	USCG LNM: 04/06/2010 (04/13/2010) NGA NTM: 12/14/1996 (04/24/2010)
12230	63rd	12/01/2006	1:80,000 (12230_1)	USCG LNM: 04/29/2008 (05/20/2008) NGA NTM: 11/02/2002 (05/24/2008)
12280	6th	09/01/2005	1:200,000 (12280_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?

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

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	US 0000143473 00001	GP	[None]	38° 15' 26.2" N	076° 23' 31.4" W	---
1.2	US 0000143477 00001	GP	[None]	38° 15' 35.6" N	076° 23' 20.3" W	---
1.3	US 0000143472 00001	GP	[None]	38° 16' 40.4" N	076° 23' 12.6" W	---
1.4	US 0000143478 00001	GP	[None]	38° 16' 22.0" N	076° 23' 03.3" W	---
1.5	US 0000143476 00001	GP	[None]	38° 15' 08.4" N	076° 23' 03.3" W	---
1.6	US 0000143466 00001	GP	[None]	38° 16' 45.0" N	076° 23' 02.8" W	---
1.7	US 0000143479 00001	GP	[None]	38° 17' 16.6" N	076° 23' 01.3" W	---
1.8	US 0000143474 00001	GP	[None]	38° 17' 18.0" N	076° 22' 57.5" W	---
1.9	US 0000143475 00001	GP	[None]	38° 15' 48.8" N	076° 22' 23.6" W	---
1.10	US 0000143470 00001	GP	[None]	38° 15' 36.6" N	076° 22' 12.4" W	---

1.11	US 0000143468 00001	GP	[None]	38° 15' 20.6" N	076° 22' 07.4" W	---
1.12	US 0000143480 00001	GP	[None]	38° 15' 43.6" N	076° 21' 24.9" W	---
1.13	US 0000143467 00001	GP	[None]	38° 17' 01.4" N	076° 21' 18.3" W	---
1.14	US 0000143469 00001	GP	[None]	38° 17' 57.3" N	076° 21' 13.3" W	---
1.15	US 0000143471 00001	GP	[None]	38° 16' 11.9" N	076° 21' 05.7" W	---

1.1) US 0000143473 00001

Survey Summary

Survey Position: 38° 15' 26.2" N, 076° 23' 31.4" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230710001

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230710001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete submerged dolphin

Office Notes

Delete submerged dolphin

1.2) US 0000143477 00001

Survey Summary

Survey Position: 38° 15' 35.6" N, 076° 23' 20.3" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230750001

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230750001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.3) US 0000143472 00001

Survey Summary

Survey Position: 38° 16' 40.4" N, 076° 23' 12.6" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230700001

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230700001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete disproved shoal

Office Notes

Delete disproved shoal

1.4) US 0000143478 00001

Survey Summary

Survey Position: 38° 16' 22.0" N, 076° 23' 03.3" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230760001

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230760001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.5) US 0000143476 00001

Survey Summary

Survey Position: 38° 15' 08.4" N, 076° 23' 03.3" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230740001

Charts Affected: 12233_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230740001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.6) US 0000143466 00001

Survey Summary

Survey Position: 38° 16' 45.0" N, 076° 23' 02.8" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 02260002306A0001

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	02260002306A0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete charted submerged pile

Office Notes

Delete charted submerged pile

1.7) US 0000143479 00001

Survey Summary

Survey Position: 38° 17' 16.6" N, 076° 23' 01.3" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230770001

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230770001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete charted SLCONS

Office Notes

Delete charted SLCONS

1.8) US 0000143474 00001

Survey Summary

Survey Position: 38° 17' 18.0" N, 076° 22' 57.5" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230720001

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230720001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete charted SOUNDG

Office Notes

Delete charted SOUNDG

1.9) US 0000143475 00001

Survey Summary

Survey Position: 38° 15' 48.8" N, 076° 22' 23.6" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230730001

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230730001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.10) US 0000143470 00001

Survey Summary

Survey Position: 38° 15' 36.6" N, 076° 22' 12.4" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 02260002306E0001

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	02260002306E0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete PIPSOL sewer

Office Notes

Delete PIPSOL sewer

1.11) US 0000143468 00001

Survey Summary

Survey Position: 38° 15' 20.6" N, 076° 22' 07.4" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 02260002306C0001

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	02260002306C0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.12) US 0000143480 00001

Survey Summary

Survey Position: 38° 15' 43.6" N, 076° 21' 24.9" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 0226000230780001

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	0226000230780001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.13) US 0000143467 00001

Survey Summary

Survey Position: 38° 17' 01.4" N, 076° 21' 18.3" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 02260002306B0001

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	02260002306B0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.14) US 0000143469 00001

Survey Summary

Survey Position: 38° 17' 57.3" N, 076° 21' 13.3" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 02260002306D0001

Charts Affected: 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	02260002306D0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete charted SOUNDG

Office Notes

Delete charted SOUNDG

1.15) US 0000143471 00001

Survey Summary

Survey Position: 38° 16' 11.9" N, 076° 21' 05.7" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H11918_E349_BH / AHB_H11918 / PSS / H11918_Bluenotes.000

GP No.: 02260002306F0001

Charts Affected: 12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11918_E349_BH/AHB_H11918/PSS/H11918_Bluenotes.000	02260002306F0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

DR_Bottom_Samples

Registry Number: H11918

State: Maryland

Locality: Central Cheasapeake Bay

Sub-locality: South of Cedar Point

Project Number: OPR-E349-BH-08

Survey Date: 01/01/1990

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12233	37th	01/01/2007	1:40,000 (12233_1)	USCG LNM: 11/17/2009 (02/02/2010) NGA NTM: 04/05/1997 (02/13/2010)
12264	30th	07/01/2007	1:40,000 (12264_1)	USCG LNM: 04/06/2010 (04/13/2010) NGA NTM: 12/14/1996 (04/24/2010)
12230	63rd	12/01/2006	1:80,000 (12230_1)	USCG LNM: 04/29/2008 (05/20/2008) NGA NTM: 11/02/2002 (05/24/2008)
12280	6th	09/01/2005	1:200,000 (12280_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?

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

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	sand	GP	[None]	38° 15' 07.7" N	076° 23' 03.0" W	---
1.2	sand	GP	[None]	38° 15' 33.1" N	076° 23' 23.4" W	---
1.3	sand	GP	[None]	38° 16' 21.4" N	076° 23' 02.9" W	---
1.4	muddy_clay	GP	[None]	38° 16' 26.9" N	076° 22' 30.9" W	---
1.5	mud	GP	[None]	38° 15' 48.0" N	076° 22' 23.3" W	---
1.6	mud	GP	[None]	38° 15' 19.8" N	076° 22' 07.1" W	---
1.7	mud	GP	[None]	38° 15' 42.7" N	076° 21' 24.7" W	---
1.8	mud_sand	GP	[None]	38° 16' 10.4" N	076° 21' 06.3" W	---
1.9	mud_sand	GP	[None]	38° 16' 58.7" N	076° 21' 16.7" W	---
1.10	sand	GP	[None]	38° 17' 25.5" N	076° 21' 44.4" W	---

1.1) sand

Survey Summary

Survey Position:	38° 15' 07.7" N, 076° 23' 03.0" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	1
Charts Affected:	12233_1, 12230_1, 12280_1, 13003_1

Remarks:

On RNC chart 12233_1 at 38.25213300 , -076.38417100 modify the seabed area from hard to sand.

Hydrographer Recommendations

On RNC chart 12233_1 at 38.25213300 , -076.38417100 modify the seabed area from hard to sand.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1:fine
	NATSUR - 4:sand
	OBJNAM - Sand
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

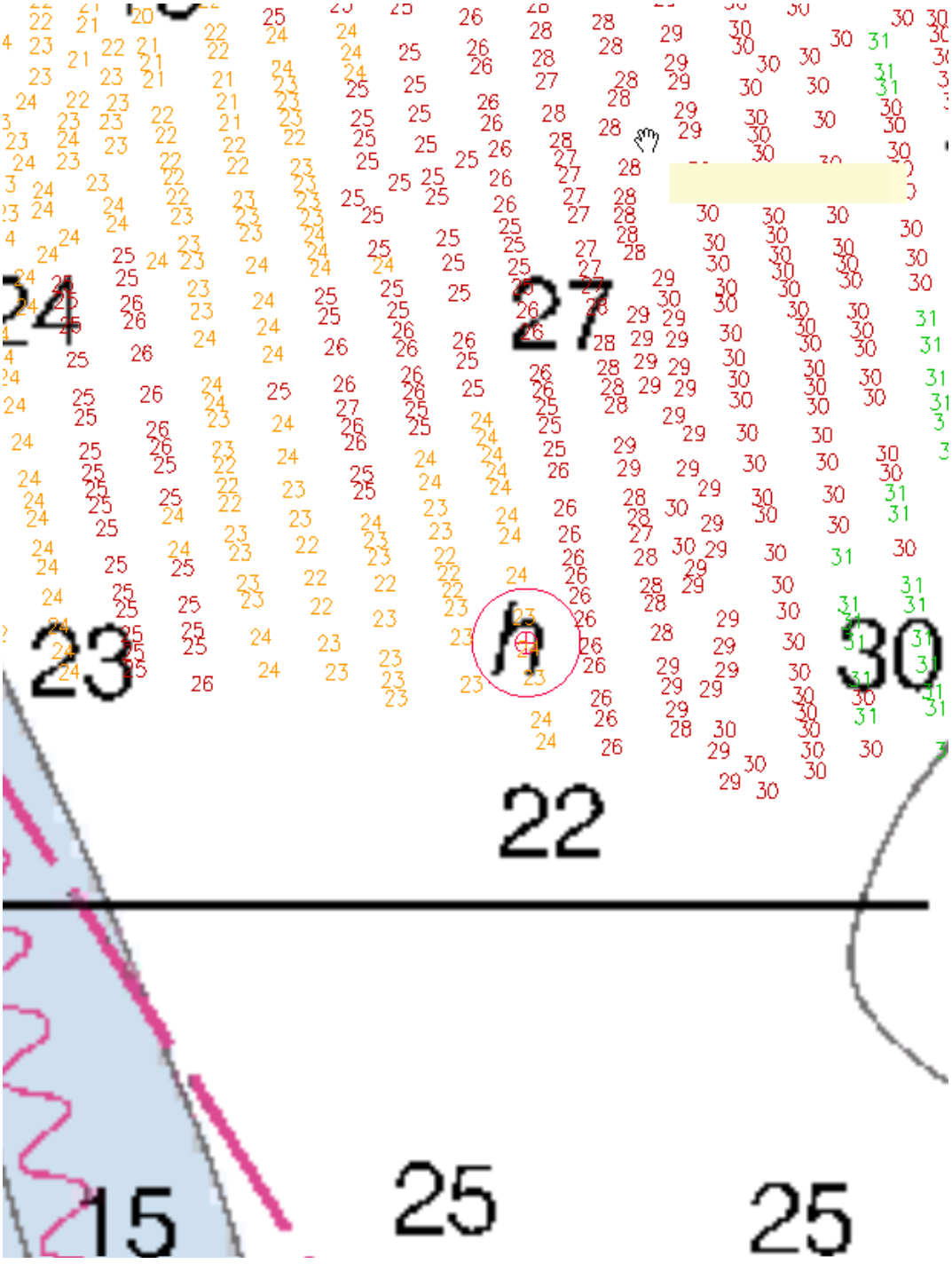


Figure 1.1.1

1.2) sand

Survey Summary

Survey Position:	38° 15' 33.1" N, 076° 23' 23.4" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	2
Charts Affected:	12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

On RNC chart 12264_1 at 38.25920500 , -076.38983000 modify the seabed area from hard to sand.

Hydrographer Recommendations

On RNC chart 12264_1 at 38.25920500 , -076.38983000 modify the seabed area from hard to sand.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1:fine
	NATSUR - 4:sand
	OBJNAM - Sand
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

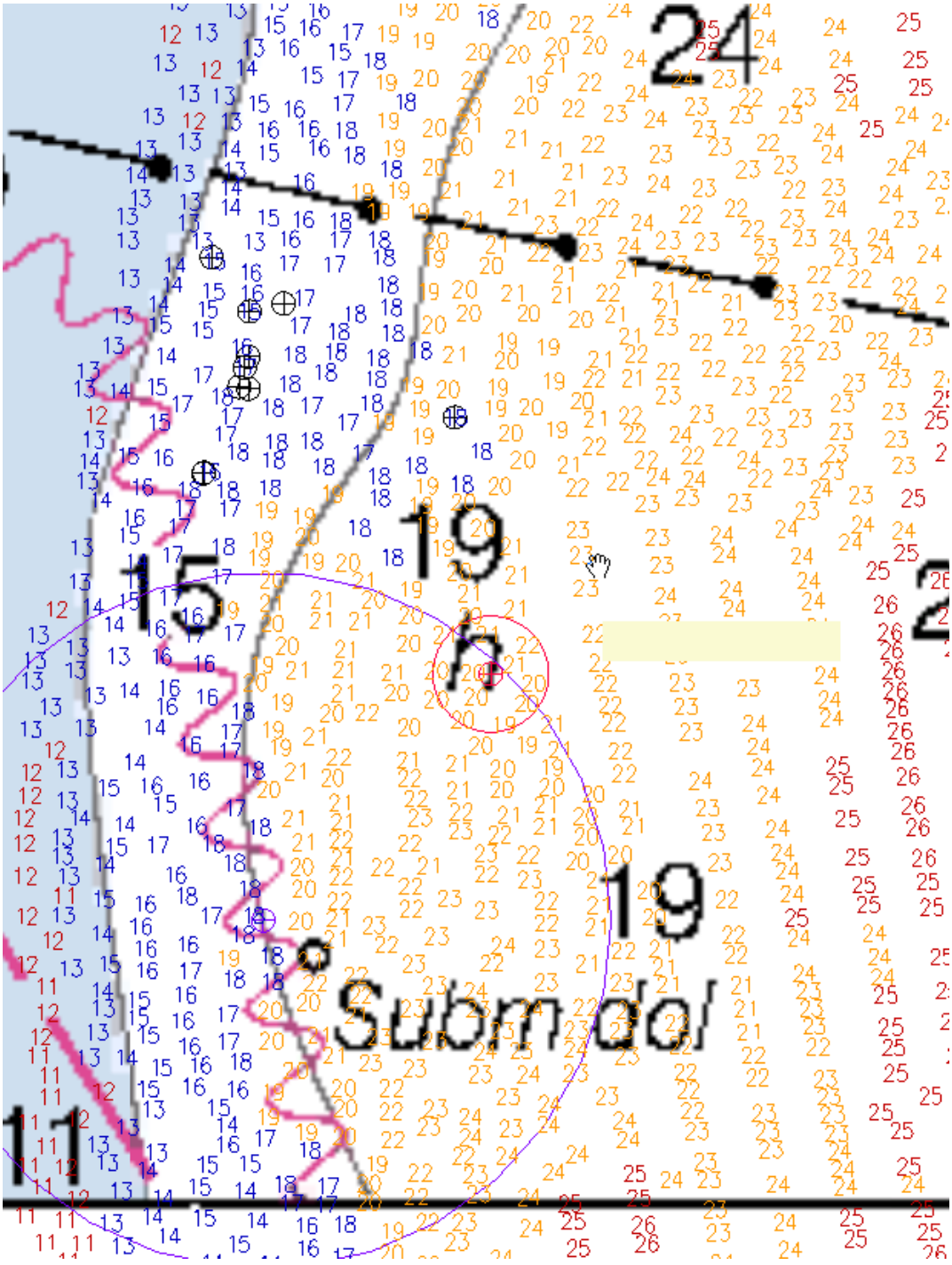


Figure 1.2.1

1.3) sand

Survey Summary

Survey Position:	38° 16' 21.4" N, 076° 23' 02.9" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	3
Charts Affected:	12264_1, 12230_1, 12280_1, 13003_1

Remarks:

On RNC chart 12264_1 at 38.27261800 , -076.38414900 modify the seabed area from hard to sand.

Hydrographer Recommendations

On RNC chart 12264_1 at 38.27261800 , -076.38414900 modify the seabed area from hard to sand.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1:fine
	NATSUR - 4:sand
	OBJNAM - Sand
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

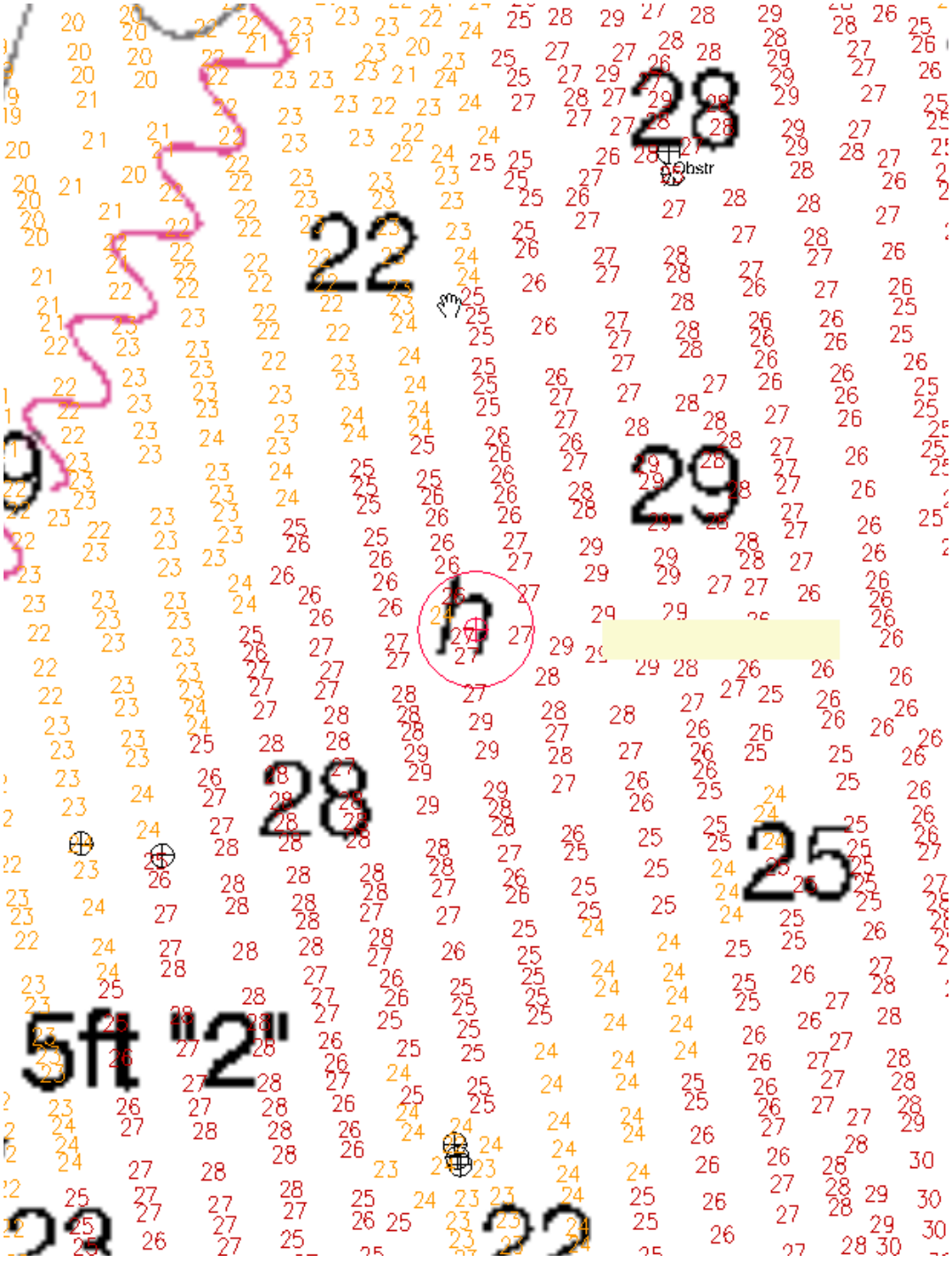


Figure 1.3.1

1.4) muddy_clay

Survey Summary

Survey Position:	38° 16' 26.9" N, 076° 22' 30.9" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	4
Charts Affected:	12264_1, 12230_1, 12280_1, 13003_1

Remarks:

On RNC chart 12264_1 and 12230_1 at 38.27413100 , -076.37525600 add the seabed area mud and clay.

Hydrographer Recommendations

On RNC chart 12264_1 and 12230_1 at 38.27413100 , -076.37525600 add the seabed area mud and clay.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1,5:fine,sticky
	NATSUR - 1,2:mud,clay
	OBJNAM - Mud Clay
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

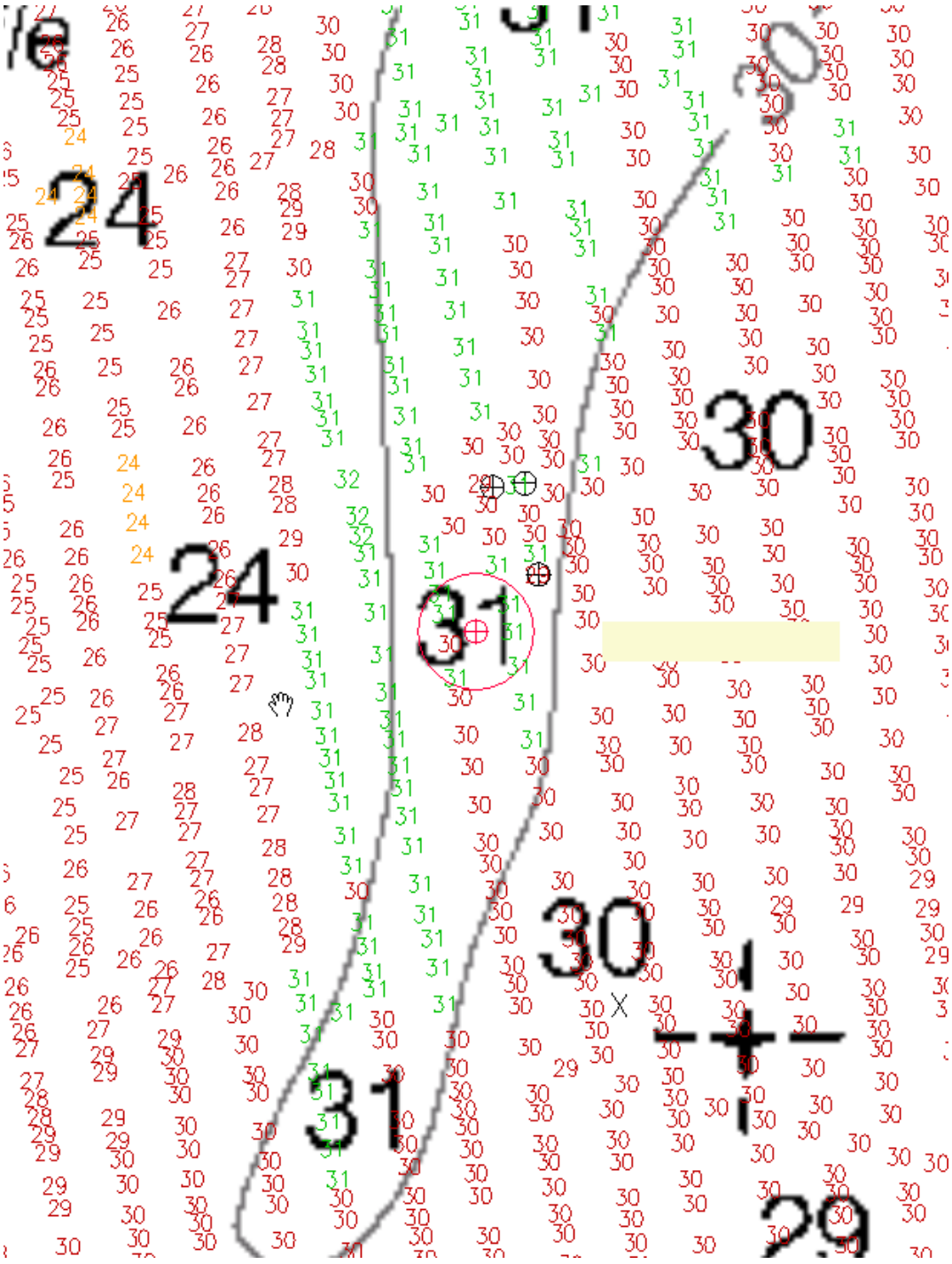


Figure 1.4.1

1.5) mud

Survey Summary

Survey Position:	38° 15' 48.0" N, 076° 22' 23.3" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	5
Charts Affected:	12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

On RNC chart 12264_1 at 38.26334200 , -076.37315000 modify the seabed area from soft to mud.

Hydrographer Recommendations

On RNC chart 12264_1 at 38.26334200 , -076.37315000 modify the seabed area from soft to mud.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1:fine
	NATSUR - 1:mud
	OBJNAM - Mud
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

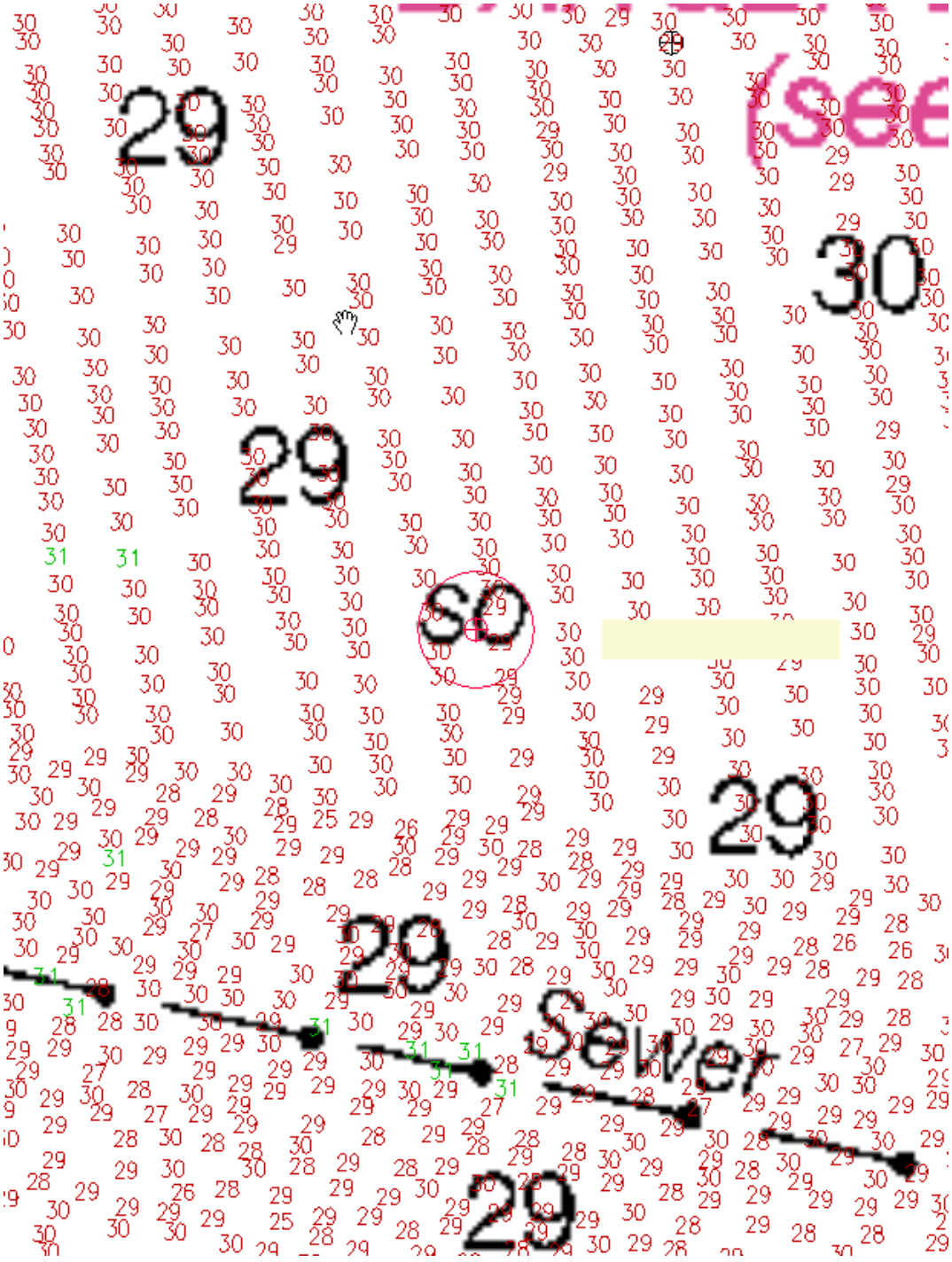


Figure 1.5.1

1.6) mud

Survey Summary

Survey Position:	38° 15' 19.8" N, 076° 22' 07.1" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	6
Charts Affected:	12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

On RNC chart 12264_1 at 38.25550700 , -076.36863200 modify the seabed area from soft to mud.

Hydrographer Recommendations

On RNC chart 12264_1 at 38.25550700 , -076.36863200 modify the seabed area from soft to mud.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1:fine
	NATSUR - 1:mud
	OBJNAM - Mud
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

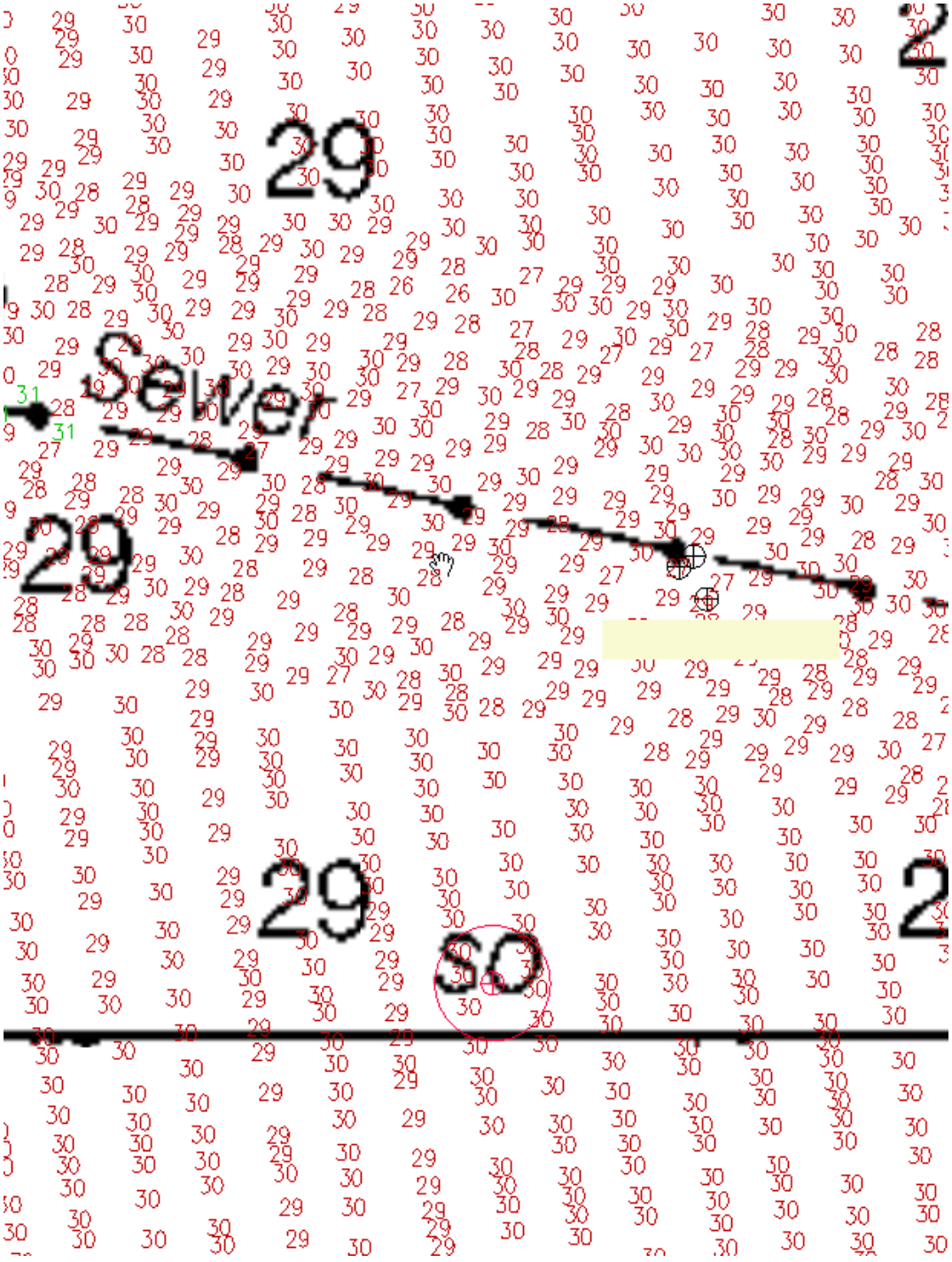


Figure 1.6.1

1.7) mud

Survey Summary

Survey Position:	38° 15' 42.7" N, 076° 21' 24.7" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	7
Charts Affected:	12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

On RNC chart 12264_1 at 38.26187300 , -076.35687100 modify the seabed area from hardto mud.

Hydrographer Recommendations

On RNC chart 12264_1 at 38.26187300 , -076.35687100 modify the seabed area from hardto mud.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1:fine
	NATSUR - 1:mud
	OBJNAM - Mud
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

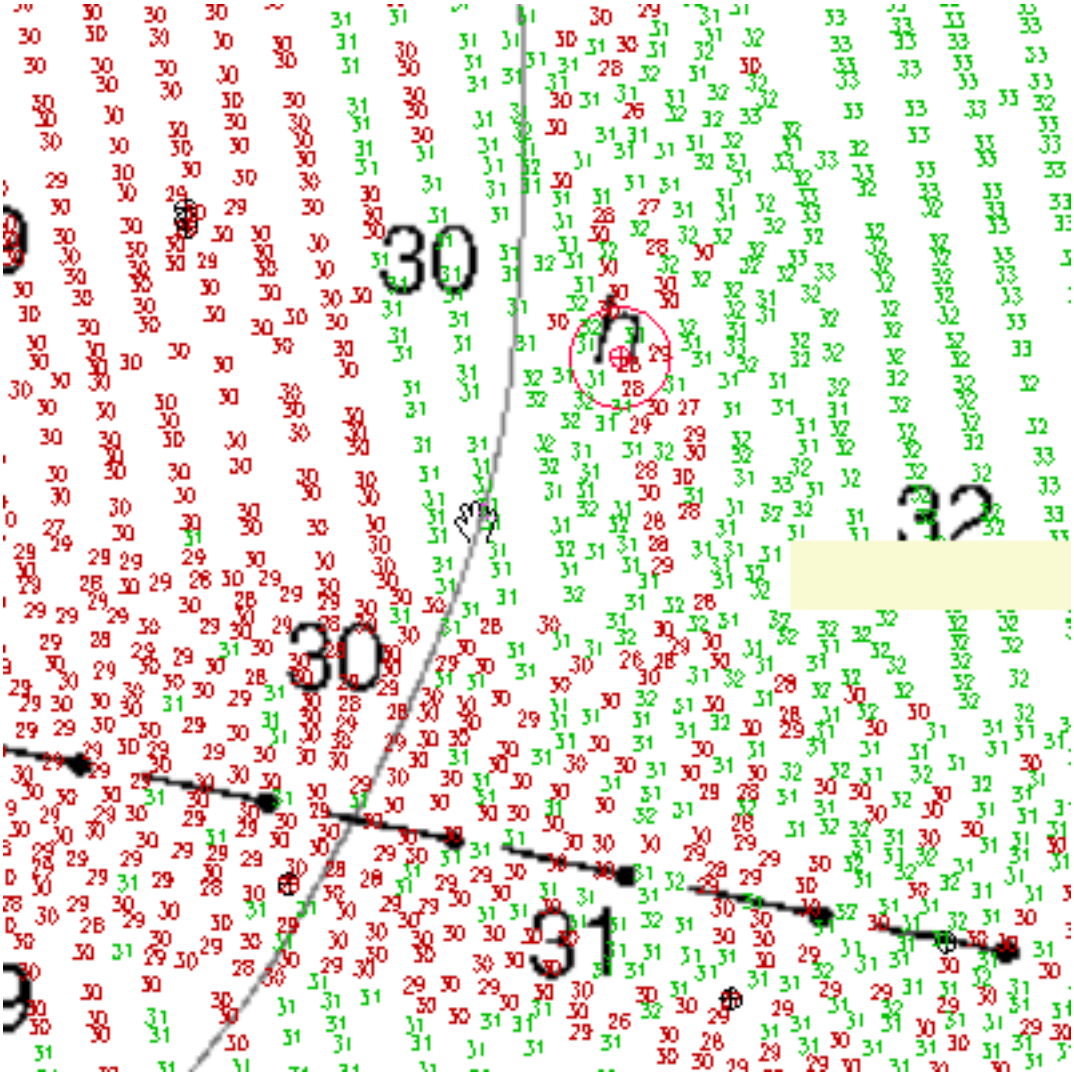


Figure 1.7.1

1.8) mud_sand

Survey Summary

Survey Position:	38° 16' 10.4" N, 076° 21' 06.3" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	8
Charts Affected:	12233_1, 12264_1, 12230_1, 12280_1, 13003_1

Remarks:

Retain M S seabed area on RNC chart 12264_1 at 38.26954500 , -076.35173700.

Hydrographer Recommendations

Retain M S seabed area on RNC chart 12264_1 at 38.26954500 , -076.35173700.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1,6:fine,soft
	NATSUR - 1,4:mud,sand
	OBJNAM - Mud Sand
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

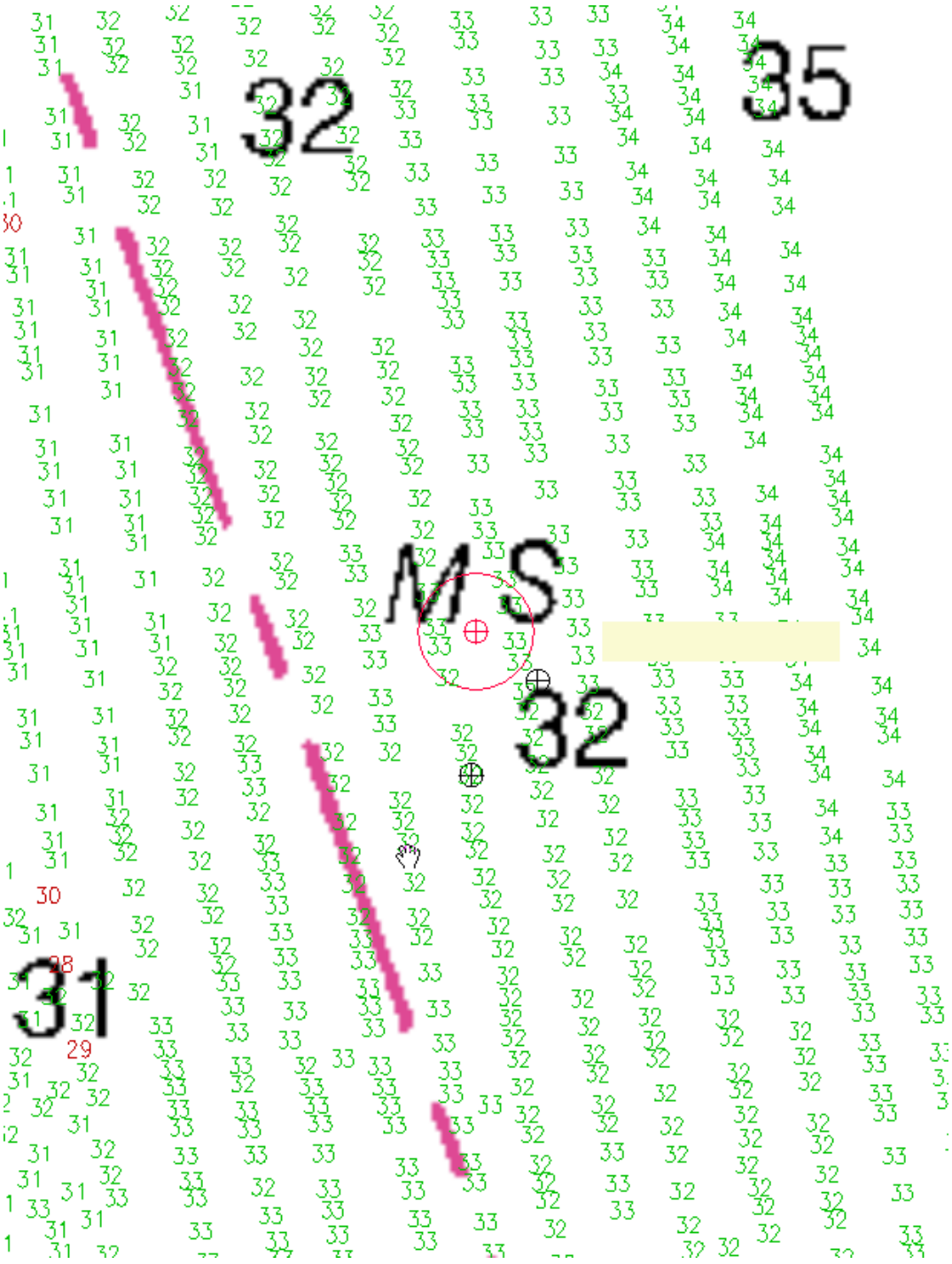


Figure 1.8.1

1.9) mud_sand

Survey Summary

Survey Position:	38° 16' 58.7" N, 076° 21' 16.7" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	9
Charts Affected:	12264_1, 12230_1, 12280_1, 13003_1

Remarks:

On RNC chart 12264_1 at 38.28298300 , -076.35464300 modify the seabed area hard to mud and sand.

Hydrographer Recommendations

On RNC chart 12264_1 at 38.28298300 , -076.35464300 modify the seabed area hard to mud and sand.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1,6:fine,soft
	NATSUR - 1,4:mud,sand
	OBJNAM - Mud Sand
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

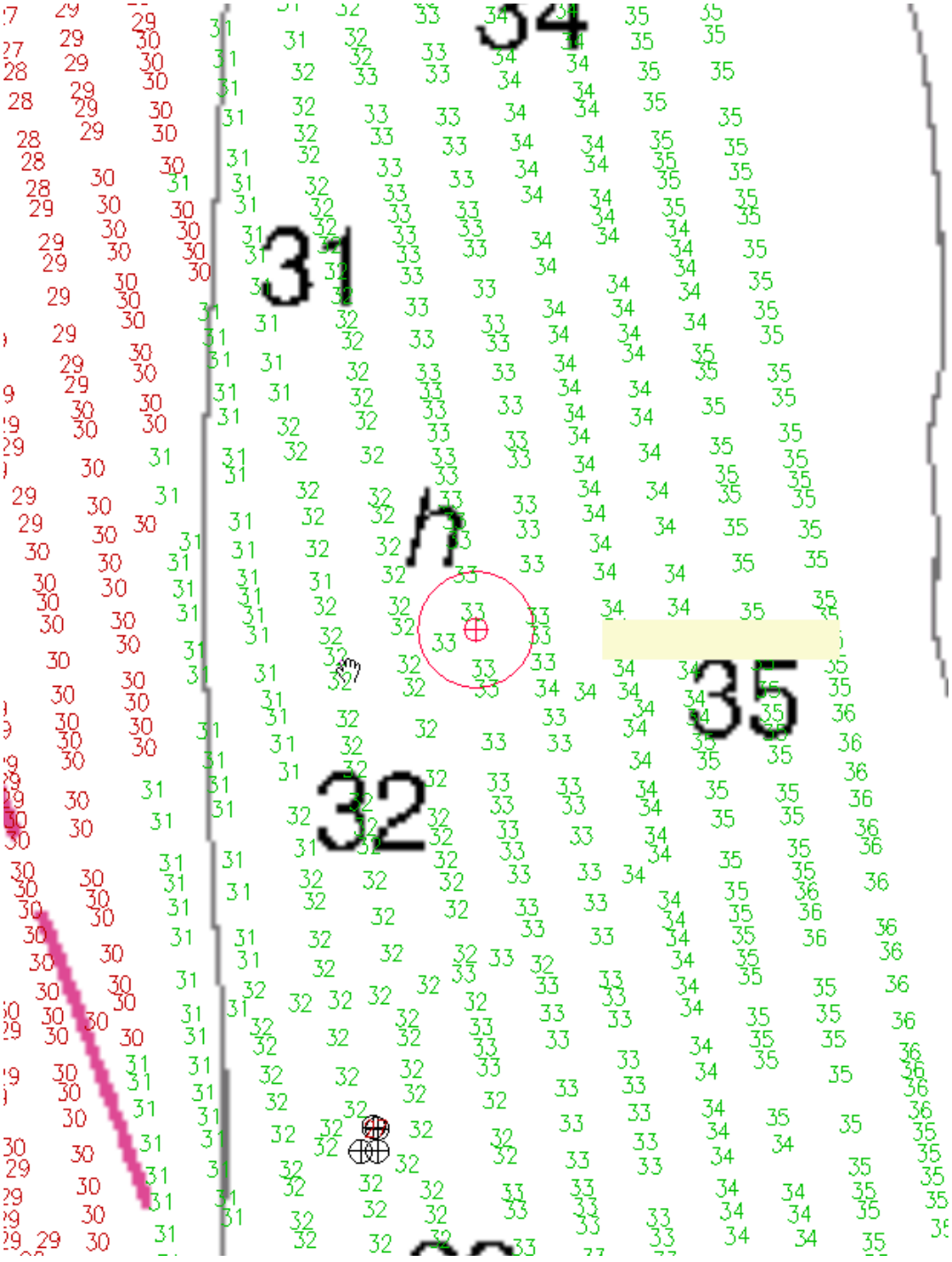


Figure 1.9.1

1.10) sand

Survey Summary

Survey Position:	38° 17' 25.5" N, 076° 21' 44.4" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	Bottom_Samples_GPs_.txt
GP No.:	10
Charts Affected:	12264_1, 12230_1, 12280_1, 13003_1

Remarks:

At 38.29042800 , -076.36234200 on RNC all charts affected add seabed area sand.

Hydrographer Recommendations

At 38.29042800 , -076.36234200 on RNC all charts affected add seabed area sand.

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATQUA - 1:fine
	NATSUR - 4:sand
	OBJNAM - Sand
	SORDAT - 20100505
	SORIND - US,US,survy,H11918

Feature Images

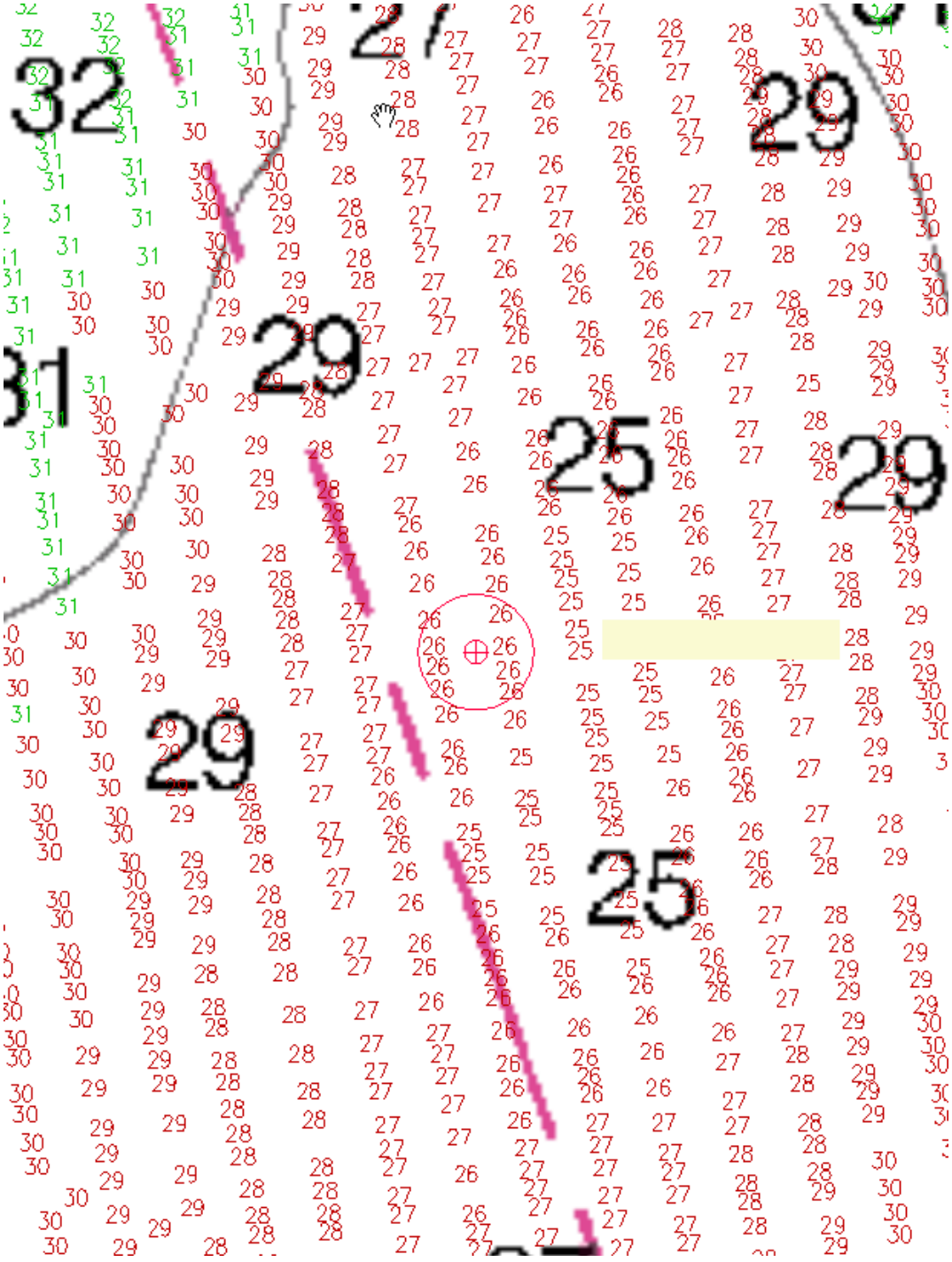
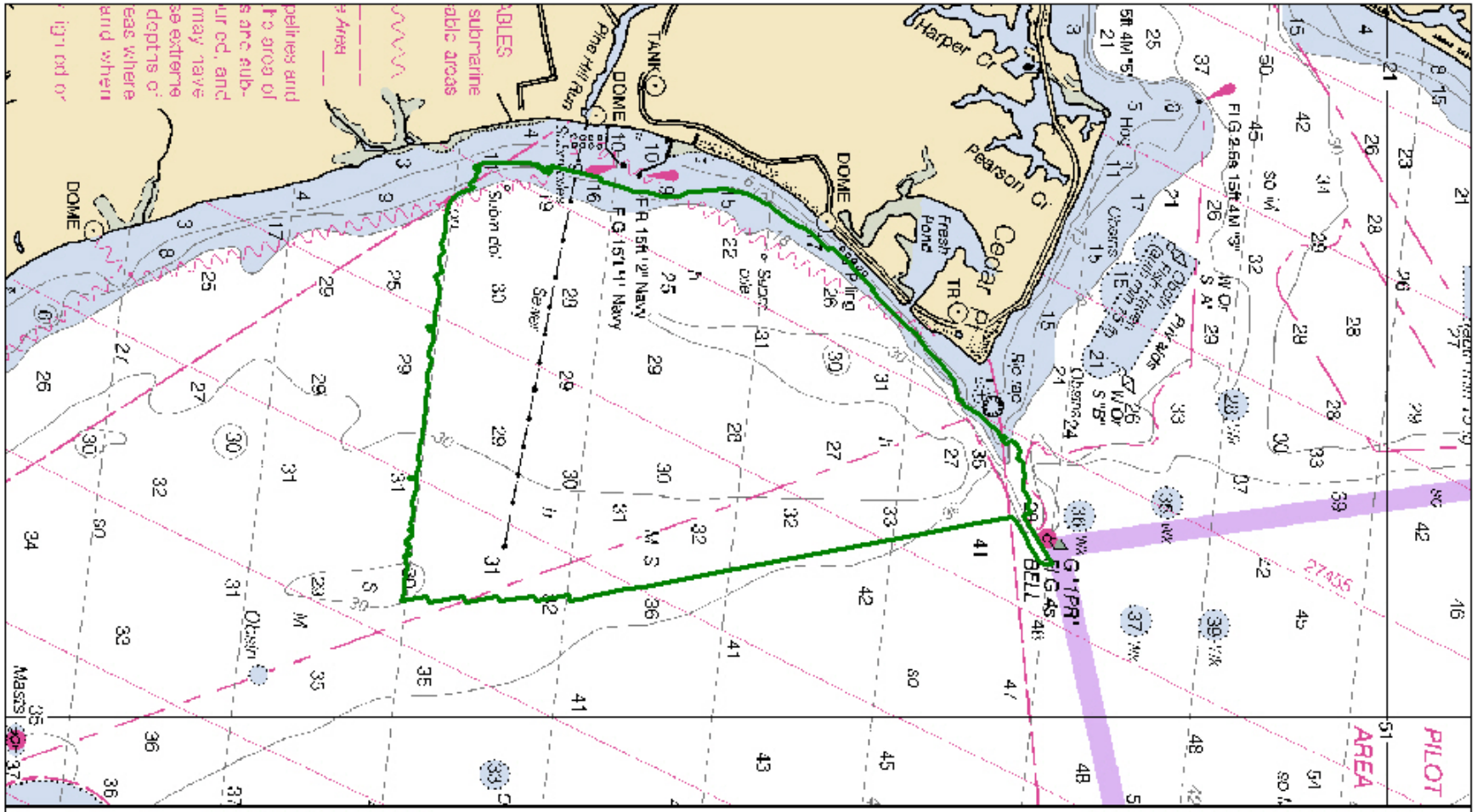


Figure 1.10.1

Appendix III

Final Progress Sketch & Survey Outline



Chartlet 1 of 1

H11918 Coverage Outline

Preliminary data subject to office review. Soundings corrected using preliminary observed tides.
Data reflects state of sea floor in existence on day and at time the survey was conducted.

This chartlet has been corrected through
Notice to Mariners dated 09/19/2009
NOT FOR NAVIGATION.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

Project: OPR-E349-ZZ-10
Survey: H11918
State: Maryland
Locality: Central Chesapeake Bay
Sub-locality: South of Cedar Point
Survey Scale: 1:10,000

Sounding Units: Feet
Sounding Datum: MLLW
Horizontal Datum: NAD 83
Chart Number: 12230
Chart Edition: 64, Mar./09
NOS Ref.

OTHER
LTjg Megan R. Guberski

Survey Dates: June 17 to May 5, 2010

Appendix IV

Tides and Water Levels

1. Tide Notes

2. Request for Approved Tides

3. Final Tide Notes

UNITED STATES DEPARMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : June 17, 2010

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-E349-BH-2010
HYDROGRAPHIC SHEET: H11918

LOCALITY: South of Cedar Point, Central Chesapeake Bay, VA
TIME PERIOD: June 17, 2008 - May 5, 2010

TIDE STATION USED: 857-7330 Solomons Island, MD
Lat. 38° 19.0'N Long. 76° 27.1' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.405 meters

REMARKS: RECOMMENDED ZONING

The survey was conducted in 2010 using preliminary zoning that was provided with OPR-E349-BH-2008. Preliminary zoning for 2008 project is accepted as the final zoning for project OPR-E349-BH-2010, H11918, during the time period between June 17, 2008 and May 5, 2010 as no changes of tidal zoning were made at the survey area since 2008.

Please use the zoning file "E349BH2008CORP_Rev" submitted with the project instructions for E349BH2008. Zones NCB31 and NCB32 are the applicable zones for H11918.

Refer to attachments for zoning information.

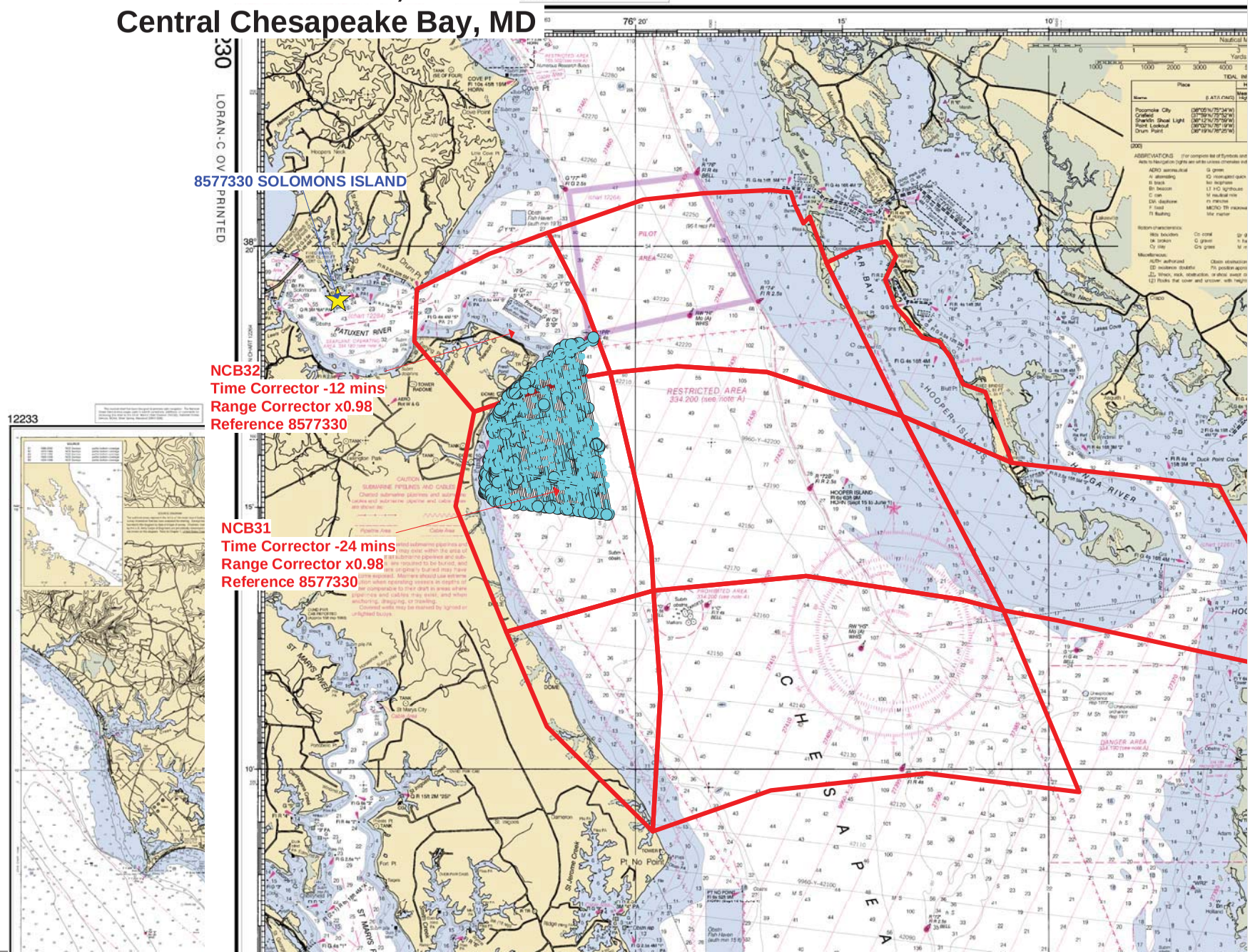
Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

Peter J. Stone

Digitally signed by Peter J. Stone
DN: cn=Peter J. Stone, o=CO-OPS, ou=NOAA/NOS, email=peter.stone@noaa.gov, c=US
Date: 2010.06.21 08:47:20 -04'00'

CHIEF, OCEANOGRAPHIC DIVISION

Preliminary as Final Tidal Zoning for OPR-E349-BH-2010, H11918 Central Chesapeake Bay, MD



Appendix V

Supplemental Survey Records & Correspondences

N/A

From View message header detail <Michael.Davidson@noaa.gov>
Sent Thursday, November 5, 2009 9:32 am
To "Kyle.Ward" <Kyle.Ward@noaa.gov>
Cc James.M.Crocker@noaa.gov , "Steve.Soherr" <Steve.Soherr@noaa.gov> , Paul Turner <Paul.Turner@noaa.gov> , Christopher Hare <Christopher.Hare@noaa.gov>
Bcc
Subject Re: Wreck PA on chart 12230 and 12233Hi Kyle,

H11918 is the sheet we are currently working on. Based on guidance from last year, we are going to be breaking the sheet up and submitting the top 1/3 of it by the end of December.

In past years, BH has been tasked throughout the year with test and evaluation missions, PR events, and show-n-tell for various customers so it has often been difficult to get more than a week at a time to focus on an assigned survey. This coming year, however, NRB is planning to focus on production work with BHII as much as possible in order to establish some baseline production capabilities of a vessel of this size and staffing. Therefore, I would hope that the remainder of H11918 will be finished by April or so. I will be in my next assignment by then, but I think the crew that will be on board will be capable of moving forward in a timely fashion (the boat will be staffed with 4 instead of 2.5 like it has been this year).

Chris, I have added you to the cc list on this email chain since NRB will be issuing project instructions for BHII beginning in CY2010. Perhaps you can work with Kyle and/or Paul to determine the AWOIS search radius.

Please let me know if there is anything that I can do to assist.

V/R,
Mike

----- Original Message -----
From: "Kyle.Ward" <Kyle.Ward@noaa.gov>
Date: Thursday, November 5, 2009 9:03 am
Subject: Re: Wreck PA on chart 12230 and 12233

> Jim,
> I agree assigning this wreck disproval to the sheet they are
> currently
> working on is the way to go. There is no sense in creating an FE
> just
> for a few lines of data, unless their current survey is going to
> take an
> extended period of time (in my opinion more than 6months).
>
> Mike,
> When do you plan to submit the sheet you are currently working on?
>
> Kyle
>
> James.M.Crocker@noaa.gov wrote:
> > Mike,
> >
> > I don't have the project information with me but I agree that
> rather than holding up the item can be assigned as a requirement
> with the sheet you are currently working and submit with that data.
> I prefer this over assigning and FE. I suspect the PA is not far
> from the sheet you are working so adding it as an AWOIS requirement
> to that sheet should not be a problem.
> >

> > Kyle please correct me if I wrong with my assumption.
> >
> > Jim
> >
> > ----- Original Message -----
> > From: Michael.Davidson@noaa.gov
> > Date: Wednesday, November 4, 2009 9:06 am
> > Subject: Re: Wreck PA on chart 12230 and 12233
> > To: James.M.Crocker@noaa.gov
> > Cc: "Steve.Soherr" <Steve.Soherr@noaa.gov>, Kyle Ward
> <Kyle.Ward@noaa.gov>, Paul Turner <Paul.Turner@noaa.gov>
> >
> >
> >
> >> CDR Crocker,
> >>
> >> Roger, sir. We will need a search radius for the wreck PA and any
> >> further information that could tie the wreck PA and the masts
> together>> as the same item. The charted masts are accurate and
> we have already
> >> acquired SSS data over them. Since the masts are exposed above
> the>> water, we did not acquire MBES data. It stands to reason
> that the wreck
> >> PA and the charted masts are actually the same vessel, but with
> the>> information that I have been able to gather so far, we can
> not state
> >> that with any certainty.
> >>
> >> One thought that I wanted to run by you was the possibility of
> going>> ahead and submitting H11598 (since it is the oldest survey
> in the
> >> field), and assigning the wreck PA an FE number. We are
> working on a
> >> sheet that is adjacent to H11598, so we could easily divert and
> survey>> the AWOIS search radius in a single day. This approach
> would prevent
> >> further delay on H11598 and would still allow us to address the
> wreck
> >> PA
> >> item in a timely manner.
> >>
> >> Please let me know if this approach is agreeable.
> >>
> >> V/R,
> >> Mike
> >>
> >>
> >>
> >> ----- Original Message -----
> >> From: James.M.Crocker@noaa.gov
> >> Date: Wednesday, November 4, 2009 8:10 am
> >> Subject: Re: Wreck PA on chart 12230 and 12233
> >>
> >> > Mike,
> >> >
> >> > So as I understand it this new wreck is in the survey area of
> the
> >> > survey you complete but have not submitted and occurred after
> your
> >>
> >> > completed your acquisition. Since we will not reassign this
> area
> >> > anytime soon I would rather you address the wreck PA as part

> of the
> >>
> >> > current survey. I will have Paul Turner get you the
> information
> >> > you need to resolve the PA and charted masts marked by the buoy.
> >> >
> >> >
> >> > Paul,
> >> >
> >> > Would you please research the wreck discussed in the attached
> >> > email, add to AWOIS and assign a search radius. Provide this
> >> > information to Mike so he can resolve this as part of his
> current
> >> > survey.
> >> >
> >> > Jim
> >> >
> >> > ----- Original Message -----
> >> > From: Michael.Davidson@noaa.gov
> >> > Date: Tuesday, November 3, 2009 3:51 pm
> >> > Subject: Wreck PA on chart 12230 and 12233
> >> > To: James M Crocker <James.M.Crocker@noaa.gov>
> >> > Cc: "Steve.Soherr" <Steve.Soherr@noaa.gov>
> >> >
> >> >
> >> > > CDR Crocker,
> >> > >
> >> > > Good afternoon sir. I spoke with Steve Soherr today
> regarding a
> >> > > somewhat recently charted wreck PA on charts 12230 and
> 12233.
> >> > We are
> >> > > doing the final chart comparison for H11598 and wanted to
> find
> >> > out if
> >> > > HSD Ops would like for us to attempt to disprove the
> charted
> >> > wreck PA
> >> > > before we submit the survey. Unless directed otherwise,
> we are
> >>
> >> > going
> >> > > to
> >> > > note that the wreck PA was added to the chart after data
> >> > acquisition
> >> > > was
> >> > > completed and therefore there are no correlating features
> in the
> >>
> >> > data> for H11598. However, if HSD Ops would like to assign
> a
> >> > search radius
> >> > > for this wreck PA, we can try to submit it along with
> H11598, as
> >>
> >> > a small
> >> > > FE at a later date, or we could just retain the PA as
> charted.>> > >
> >> > > Do you have a preference, sir?
> >> > >
> >> > > We did acquire SSS over the charted "Masts" to verify the
> >> > position, but
> >> > > we do not have sufficient information to determine if the

AHB COMPILATION LOG

General Survey Information	
REGISTRY No.	H11918
PROJECT No.	OPR-E349-BH-08
FIELD UNIT	NOAA BAY HYDROGRAPHER, BAY HYDRO II
DATE OF SURVEY	20080617 - 20100505
LARGEST SCALE CHART	***12233, edition 37, 20070101, 1:40,000***
	12264, edition 30, 20070701, 1:40,000
ADDITIONAL CHARTS	***12230, edition 64, 20090301, 1:80,000***
SOUNDING UNITS	**FEET**
COMPILER	Kolleen Mortimer

Source Grids	**File Name** H:\Compilation\H11918_E349_BH\AHB_H11918\SAR Final Products\GRIDS
	H11918_50cm_MBES_CUBE_1_Final.csar **H11918_50cm_MBES_CUBE_2_Final.csar** **H11918_50cm_MBES_CUBE_3_Final.csar** **H11918_AHB_MBES_2m_CUBE_Final.csar** **H11918_VBES_Shoal_4m_Final.bag**
Surfaces	**File Name** H:\Compilation\H11918_E349_BH\AHB_H11918\COMPILE\Working
Combined	**H11918_4m_Combined.csar**
Interpolated TIN	\Interpolated TIN**H11918_8m_InterpTIN.csar**
Shifted Interpolated TIN	\Shifted Surface**H11918_8m_InterpTIN_Shifted.csar**
Final HOBs	**File Name** H:\Compilation\H11918_E349_BH\AHB_H11918\COMPILE\Final_Hobs
Survey Scale Soundings	**H11918_SS_Soundings.hob**
Chart Scale Soundings	**H11918_CS_Soundings.hob**
Contour Layer	**H11918_Contours.hob**
Feature Layer	**H11918_Features.hob**
Meta-Objects Layer	**H11918_MetaObjects.hob**
Blue Notes	**H11918_BlueNotes.hob**
ENC Retain Soundings	

Meta-Objects Attribution	
Acronym	**Value**
M_COVR	
CATCOV	1 – coverage available
SORDAT	20100505
SORIND	US,US,graph,H11918
M_QUAL	
CATZOC	6 – zone of confidence U (data not assessed)
INFORM	NOAA Bay Hydrographer, NOAA Bay Hydro II
POSACC	10 m
SORDAT	20100505
SORIND	US,US,graph,H11918
SUREND	20100505
SURSTA	20080617
DEPARE	

DRVALV 1	10.554 ft
DRVALV2	43.163 ft
SORDAT	20100505
SORIND	US,US,graph,H11918
M_CSCL	
CSCALE	
SORDAT	
SORIND	

SPECIFICATIONS:

I. COMBINED SURFACE:
- a. Number of SAR Final Grids: 5
- b. Resolution of Combined (m): 4 m

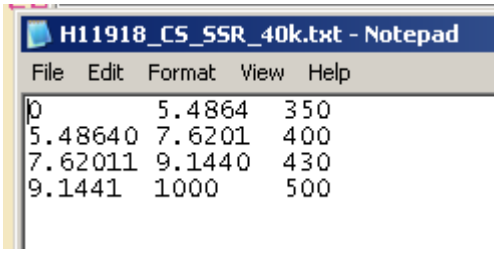
II. SURVEY SCALE SOUNDINGS (SS):
- a. Attribute Name: Depth
- b. Selection criteria: Radius, Shoal bias
- c. Radius value is: mm at map scale
  - i. Use single-defined radius: 1.0
  - ii. And/Or use radius table file: H1XXXX_SS_SSR_XXk.txt
    H1XXXX_SS_SSR_XXk.txt
- d. Queried Depth of All Soundings
  - i. Minimum: 3.217 m
  - ii. Maximum: 13.156 m

III. INTERPOLATED TIN SURFACE:
- a. Resolution (m): 8 m
- b. Interpolation method: Natural Neighbor
- c. Shift value: -0.75 ft

IV. CONTOURS:
- a. Attribute Name: Depth
- b. Use a Depth List: H11918_depth_contours.txt
- c. Output Options: Create contour lines
  - i. Line Object: DEPCNT
  - ii. Value Attribute: VALDCO

V. FEATURES:
- a. Number of Chart Features: 27
- b. Number of Non-Chart Features: 9

VI. CHART SURVEY SOUNDINGS (CS):
- a. Number of ENC CS Soundings: 117
- b. Attribute Name: Depth
- c. Selection criteria: Radius, Shoal bias
- d. Radius value is: Distance on the ground (m)
  - i. Use single-defined radius: X.XX m
  - ii. And/Or use radius table file: H11918_CS_SSR_40k.txt



Number Survey CS Soundings: 83

VII. NOTES:

[*Type text*]

ATLANTIC HYDROGRAPHIC BRANCH
H-CELL REPORT to ACCOMPANY
SURVEY H11918 (2010)

This H-Cell Report has been written to supplement and/or clarify the original Descriptive Report (DR) and pass critical compilation information to the cartographers in the Marine Chart Division. Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

B.2 QUALITY CONTROL

The AHB source depth grids for the survey's nautical chart update were 5 grids: three 50 cm resolution multibeam eschosounder development BASE surfaces, one 4m resolution shoal extracted vertical beam echosounder BASE surface, and one 2m resolution mainscheme multibeam echosounder BASE surface (*.CSAR), which were combined at 4m resolution. The survey scale soundings were created from the surface at a single defined radius of 1mm at the largest scale chart covering the respective area of the survey (Chart 12233~ 1:40,000; Chart 12263 ~ 1:40,000. The survey scale soundings were imported into a "point cloud" grid. The chart scale soundings were derived directly from the survey scale soundings point cloud grid to preserve absolute continuity between the charted depths, the survey scale soundings, and the original source grid. The chart scale soundings were selected using a sounding spacing range (SSR) file. The chart scale soundings are a subset of the survey scale soundings. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portray the bathymetry within the common area.

A UTM projected TIN surface was created from the survey scale soundings point cloud grid, from which an interpolated surface of 8m resolution was generated. The interpolated TIN surface of 8m resolution was shifted by the NOAA sounding rounding value of -0.75 feet. The shifted interpolated TIN was used to generate depth contours in feet (12, 18, 30, and 36 feet). The depth contours are forwarded to MCD for reference only. The contours were utilized during chart scale sounding selection and quality assurance efforts at AHB. The depth contours are incorporated into the SS H-Cell product as per 2009 H-Cell Specifications.

The compilation products (Final *.HOB files) for this survey are detailed in the H11918 AHB Compilation Log contained within this document. The Final HOB files include depth areas (DEPARE), depth contours (DEPCNT), soundings (SOUNDG), meta-objects (M_COVR, M_QUAL, and M_CSCL), cartographic Blue Notes ($CSYMB), and features (FSHFAC, OBSTRN, SLCONS, and WRECKS).

As dictated by Hydrographic Technical Directive 2008-8, the Final HOB files were combined into two separate H-Cell files in S-57 format. Both S-57 files were exported from CARIS S-57 Composer in feet. Quality assurance and topology checks were conducted using CARIS S-57 Composer and DKART Inspector validation tests.

The final H-Cell products are two S-57 files, in Lat/Long NAD-83. The contents of these two H-Cell deliverables are listed in the table below:

TABLE 1 - Contents of H-Cell Files

H11918_CS.000			**Scale 1:40,000**
Object Class Types	**Geographic**	**Cartographic**	**Meta**
S-57 Object Acronyms	DEPARE	$CSYMB	M_COVR
	FSHFAC		M_QUAL
	OBSTRN		
	SLCONS		
	WRECKS		
	SOUNDG		
H11918_SS.000			**Scale 1:10,000**
Object Class Types	**Geographic**		
S-57 Object Acronyms	DEPCNT		
	SOUNDG		

B.2.4 Junctions and Prior Surveys

Survey H11918 (2010) does not junction with any recent or contemporary surveys. Most present survey depths compare within 4 feet of the charted hydrography to the south, 3 feet to the east, 2 feet to the north, and 3 feet to the west.

B.4 DATA PROCESSING

The following software was used to process data at the Atlantic Hydrographic Branch:

CARIS Bathy DataBASE version 3.2/HF2
CARIS HIPS/SIPS version 7.1/HF2
CARIS S-57 Composer version 2.2/SP1/HF4
DKART Inspector version 5.1
HSTP Pydro version 11.8 (r3585)

C. HORIZONTAL AND VERTICAL CONTROL

The hydrographer makes adequate mention of horizontal and vertical control used for this survey in section C of the DR. The sounding datum for this survey is Mean Lower Low Water (MLLW), and the vertical datum is Mean High Water (MHW). Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 18 North.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

12233 (37th Edition, 01/07)
Potomac River Sandy Point Neck to Piney Point
Corrected through NM 06/07/2011
Corrected through LNM 06/07/2011
Scale 1:40,000

12264 (64th Edition, 07/07)
Chesapeake Bay Patuxent River and Vicinity
Corrected through NM 06/07/2011
Corrected through LNM 06/07/2011
Scale 1:40,000

12230 (64th Edition, 03/2009)
Chesapeake Bay Smith Point to Cove Point
Corrected through NM 08/20/2011
Corrected through LNM 08/30/2011

ENC COMPARISON

US5VA22M
Potomac River Sandy Point Neck to Piney Point
Edition 17
Application Date 2011/01/06
Issue Date 2011/01/06
Chart 12233

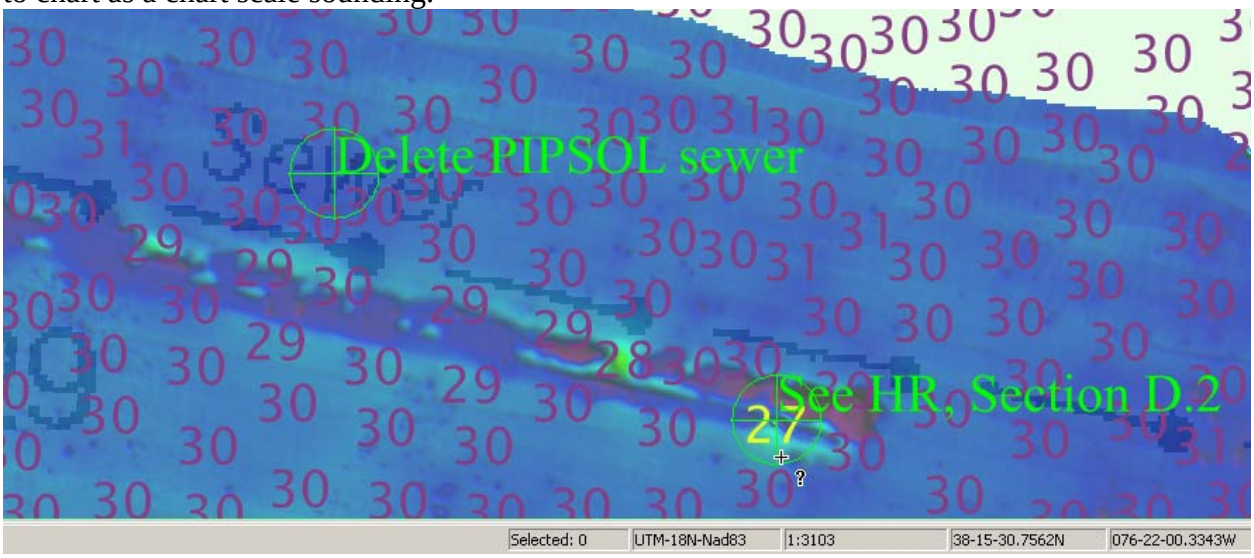
US5MD21M
Chesapeake Bay Patuxent River and Vicinity
Edition 15
Application Date 2011/06/22
Issue Date 2011/07/19
Chart 12264

US4MD20M
Chesapeake Bay Smith Point to Cove Point
Edition 13
Application Date 2010/12/10
Issue Date 2011/08/17

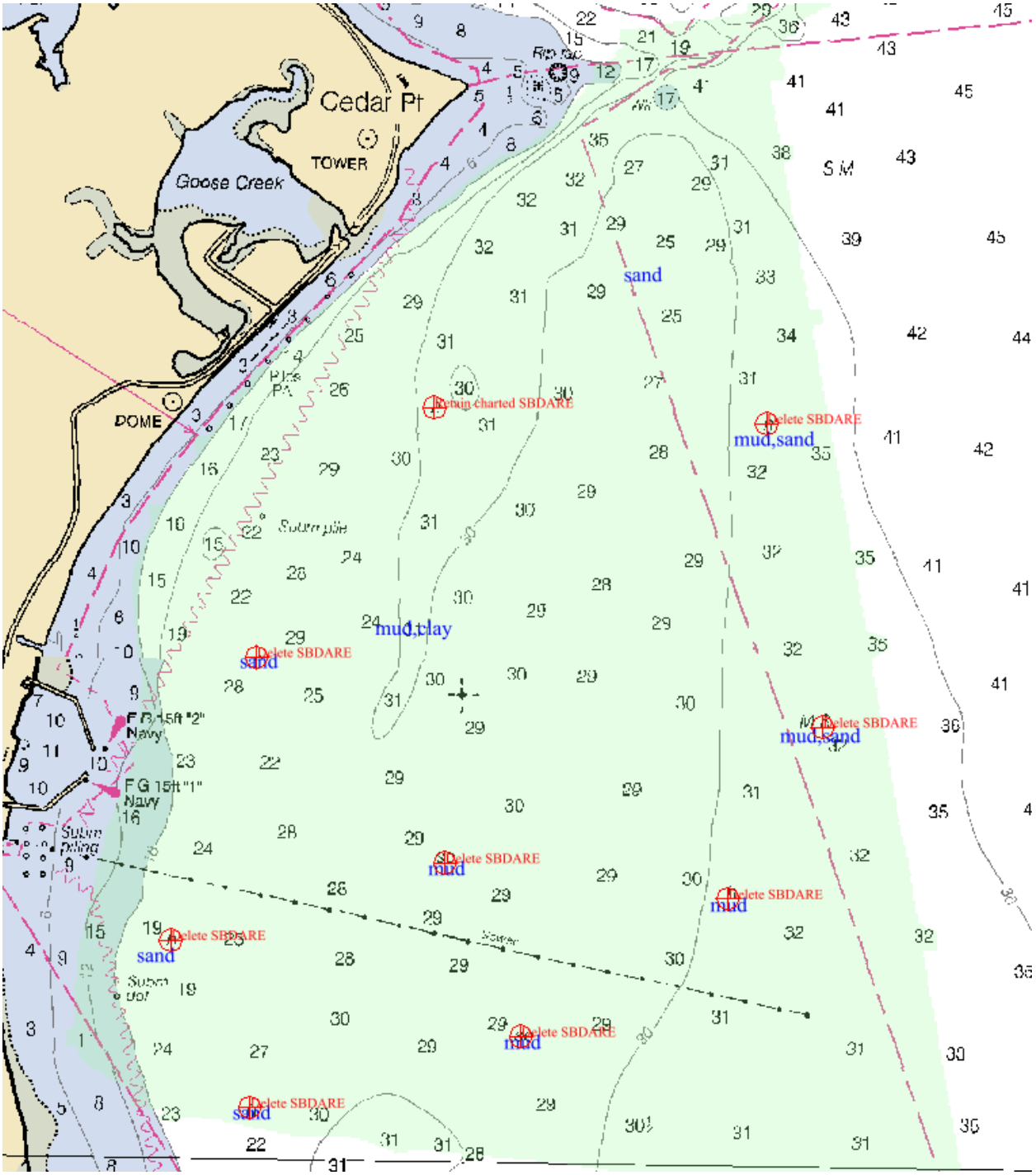
D.2 ADDITIONAL RESULTS

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section D and Appendix I and II of the DR. The hydrographer recommends that any charted features not specifically addressed either in the H-Cell files or the Blue Notes should be retained as charted. The following exceptions are noted:

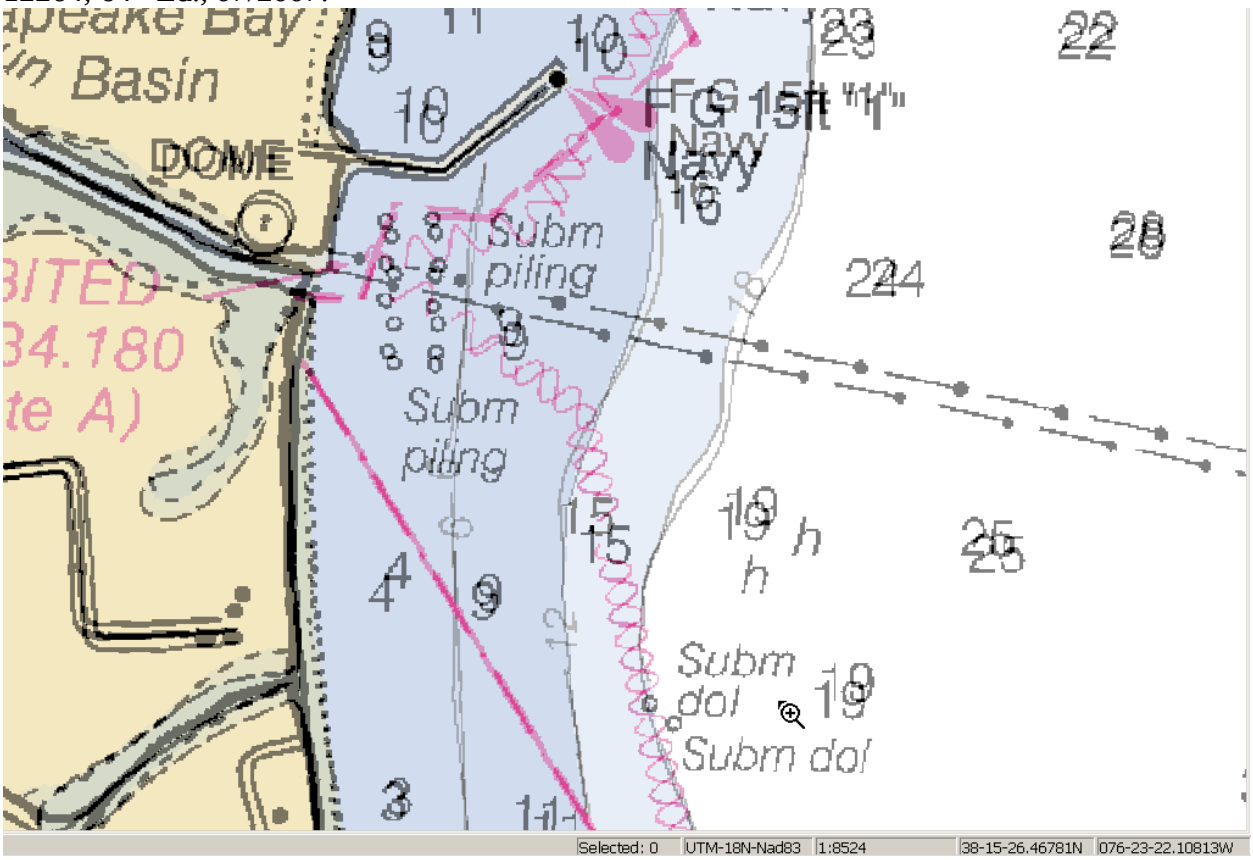
a. A 27 foot survey scale sounding is positioned at the revised sewer end. This shoal sounding appears to be related to the end of the sewer and is therefore not recommended to chart as a chart scale sounding.



b. The field unit collected a total of 10 bottom samples. Most bottom samples collected by the field were positioned near charted seabed areas. One hard seabed area was to be retained as charted.



c. There is an offset of 45-55 meters between raster charts 12233; 37th Ed., 01/2007 and 12264; 64th Ed., 07/2007.



D.6 MISCELLANEOUS

Chart compilation was completed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to the Marine Chart Division in Silver Spring, Maryland. See section D.1 of this report for a list of the Raster Charts and Electronic Navigation Charts (ENC) used for compiling the present survey.

D.7 ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell files or the Blue Notes should be retained as charted. Refer to section D and Appendix I and II of the DR for further recommendations by the hydrographer.

APPROVAL SHEET
H11918

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth contours, disposition of critical depths, cartographic symbolization, and verification or disproval of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with National Ocean Service and Office of Coast Survey requirements except where noted in the Descriptive Report and the H-Cell Report.

All final products have undergone a comprehensive review per the Hydrographic Surveys Division Office Processing Manual and are verified to be accurate and complete except where noted.

Kolleen Mortimer

Digitally signed by Kolleen Mortimer
DN: cn=Kolleen Mortimer, o=NOAA, ou=NOAA Atlantic Hydrographic Branch, email=kolleen.mckenzie@noaa.gov, c=US
Date: 2011.09.29 11:31:08 -04'00'

Kolleen Mortimer
Atlantic Hydrographic Branch

I have reviewed the H-Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet National Ocean Service requirements and standards for products in support of nautical charting except where noted.

Digitally signed by Edward Owens
DN: cn=Edward Owens, o=NOAA, ou=AHB, email=Edward.Owens@noaa.gov, c=US
Date: 2011.09.29 11:37:13 -04'00'

Approved for: _____

CDR Richard T. Brennan, NOAA
Chief, Atlantic Hydrographic Branch

Christopher Hare
HQ Survey Review
2011.10.12 09:55:20 -04'00'

Version Updated 08/23/11