H11603

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey: **Navigable Area**

Registry Number: **H11603**

LOCALITY

State: Virginia

General Locality: Southern Chesapeake Bay

Sub-locality: Middle Ground to Lynnhaven Roads

2007

CHIEF OF PARTY
LCDR Richard T. Brennan, NOAA
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

H11603

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:	**Virginia**		
General Locality:	**Southern Chesapeake Bay**		
Sub-Locality:	**Middle Ground ~~of~~** ***to*** **Lynnhaven Roads**		
Scale:	**1:10,000**	Date of Survey:	**10/30/06-09/13/07**
Instructions Dated:	**March 7, 2007**	Project Number:	**OPR-E350-RU-07**
Vessel:	**NOAA Ship RUDE**		
Chief of Party:	**LCDR Richard T. Brennan, NOAA**		
Surveyed by:	**RUDE Personnel**		
Soundings by:	**ODOM Echotrak MK II and RESON 8125 echosounders.**		
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:
1) All Times are in UTC.
2) This is a Navigable Area Hydrographic Survey.
3) Projection is UTM Zone ~~17~~ 18.
Red, bold, italic comments were made during office processing.

Table of Contents

Descriptive Report to Accompany Hydrographic Survey H11603

Project OPR-E350-RU-07
Middle Ground ~~of~~ ***to*** Lynnhaven Roads
Southern Chesapeake Bay
Scale 1:10,000
NOAA Ship RUDE

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-E350-RU-07[1], dated March 7, 2007.

Data acquisition was conducted from October 30, 2006 to September 13, 2007.

The Maryland and Virginia Pilots Associations have requested a modern hydrographic survey of the southern portion of the Chesapeake Bay, Virginia due to the movement of commercial shipping. The captains and pilots of these vessels are reliant on the accuracy of soundings on NOAA charts when making navigational choices. Updated bathymetry and object detection will help sustain safe and efficient marine commerce and transportation in the region.

Survey limits of H11603 are shown on the following page.

Table 1: H11603 Survey Statistics

Lineal Nautical Miles	
Single Beam Only	0
Multibeam Only	90.5
Side Scan Sonar Only	0
Side Scan/Single Beam	740
Crosslines	58.6
Multibeam Developments	18.6
Side Scan Developments	0
Shoreline Investigation	0
Data acquired from 30 October 2006 – 13 September 2007	
Bottom samples collected	14
AWOIS items investigated	30

[1]Filed with original field records

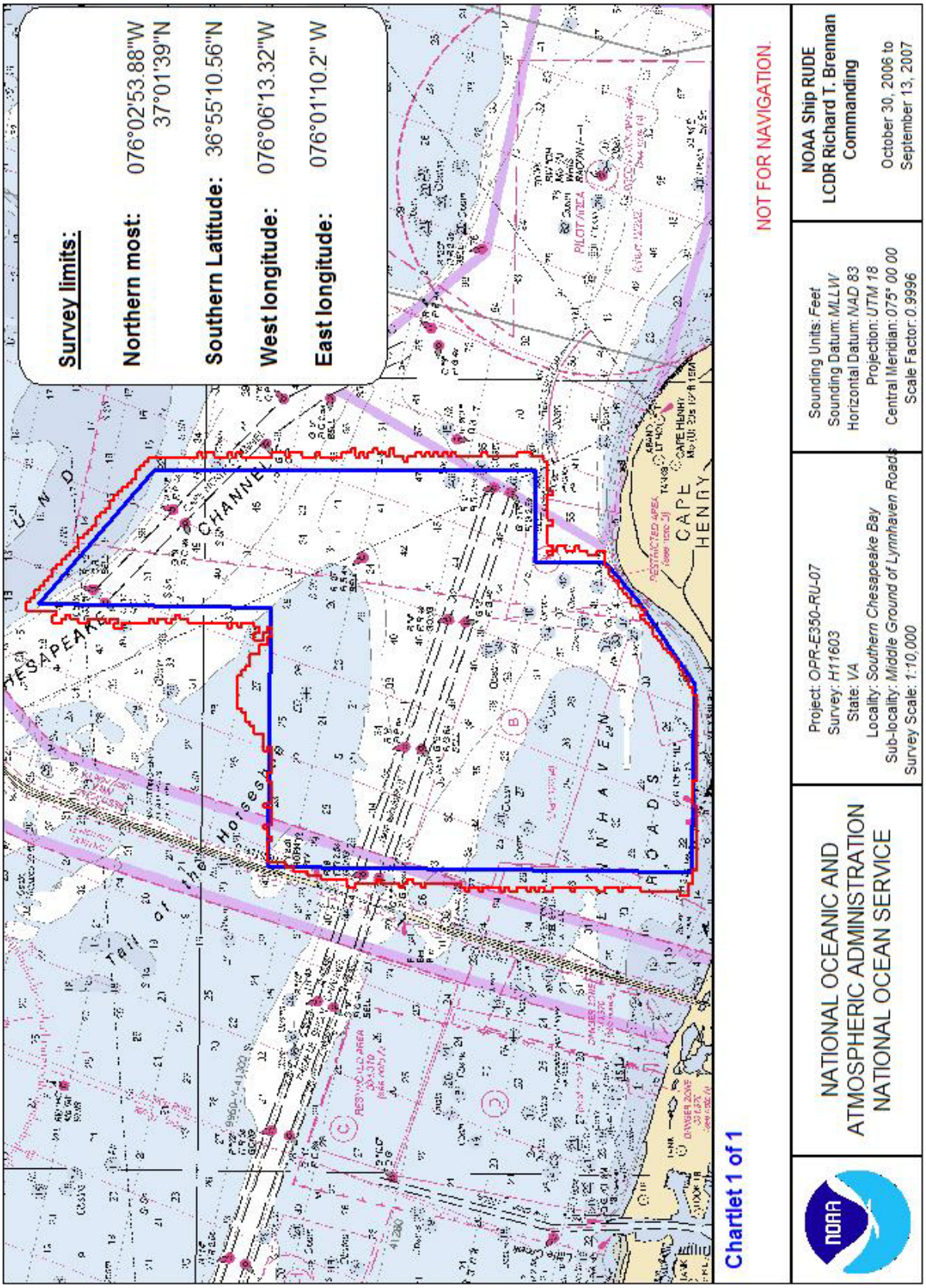


Figure 1. H11603 Survey Limits

B. DATA ACQUISTION AND PROCESSING

Refer to ***OPR-E350-RU-07 Data Acquisition and Processing Report (DAPR)***[1] for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR[1] are included in this descriptive report.

B 1. EQUIPMENT AND VESSELS

NOAA Ship RUDE (S590) was the only platform used for this survey. The ship is 90 feet in length, with a 22-foot beam and 7-foot draft.

Vertical-beam echo sounding (VBES) data were acquired on RUDE with an Odom Echotrac DF3200 MKII dual-frequency echo sounder (24 and 200 kHz). Vertical-beam data were used in conjunction with Side Scan SONAR to ensonify objects on the bottom not apparent at side scan nadir, and also for crossline checks with the mainscheme lines. No vertical-beam data is included while running multibeam developments. All data is included in the final data set.

VBES data are logged by HYPACK's software package, and paper records are acquired and retained for comparison with digitized depths during processing whenever the VBES is the primary sounding instrument.

RUDE acquired all side scan sonar (SSS) data using Klein 5500 & 5000 side scan sonar systems set to 50, 75 and 100 meter range scales. SSS data were recorded digitally using Triton ISIS software and archived in Extended Triton Format (xtf).

For developments, single frequency (455 kHz) multi-beam data on RUDE were acquired with a Reson SeaBat 8125 shallow water multibeam echo sounder (MBES) system. Positioning and attitude data were measured using an Applanix POS/MV with RTCM differential GPS corrections provided to the POS/MV by a Trimble DSM-212L DGPS receiver. An Odom Hydrographic Systems Digibar Pro was used for measuring the surface sound velocity at the MBES transducer face.

Full water column sound velocity data were acquired using a Sea-Bird SBE 19 SEACAT Conductivity, Temperature and Depth (CTD) Profiler. Processing of CTD was accomplished using Velocwin version 8.85.

Bottom samples were acquired using a Wildco Ponar-type sampler. Bottom sample locations were chosen to coincide with charted seafloor characteristics. Samples were taken, analyzed, logged and discarded. The position of each bottom sample and its associated characteristics were recorded using the HYPACK target tool.

The vessel configurations, equipment operation and data acquisition were consistent with those described in the DAPR[1] with the following exceptions:

[1]Filed with original field records

The Klein 5000 Side Scan Sonar was replaced June 11, 2007 because of poor data imagery. The failed Klein 5000 SSS system was replaced with a Lightweight Klein 5000 S/N 322.

Only one SEACAT was available for collection of data starting in July, 2007 till the end of the project. The Electronic Branch did not have a second SEACAT available until after all the data had been collected for the project. Therefore, weekly dual comparison casts where not conducted during that time.

Processing of all data in CARIS was also changed frequently in July due to re-wiring and troubleshooting. For this survey, settings for Ship Navigation and Attitude in conversion from XTF were changed to use the raw datagram. Also during this time when wiring and setting were being changed the vertical beam devices changed a number of times. Data flow was otherwise the same as expressed in the DAPR[1].

B 2. QUALITY CONTROL

B 2.1 System Certification and Calibration

Refer to NOAA Ship RUDE DAPR[1] and Hydrographic Systems Readiness Report (HSRR)[1] for a complete description of system integration and initial calibration results for equipment and sensors used for this survey.

B.2.2 Sounding Coverage

As per the Letter Instructions, this survey was conducted using set line spacing with 200% side scan sonar and MBES developments.

Side Scan Sonar coverage was monitored by creation of 100% and 200% coverage mosaics, each with 1m resolution. Daily confidence checks were made by observing the outer ranges of the side scan SONAR images. A good check consisted of distinguishing contacts, i.e. buoy blocks, drag scours, or sand waves across the entire range of the side scan trace. Under conditions of questionable data quality due to high refraction or surface noise, these confidence checks were conducted as often as possible. On this survey, it never became necessary to suspend Side Scan SONAR operations due to inability to resolve one cubic meter sized targets out to the edge of the range scale. A list of all side-scan sonar contacts is contained in Appendices II[2].

Vertical-beam echosounder soundings are the primary source of bathymetry for survey H11603. Soundings were acquired as both a digital trace and as a paper record. After collecting vertical beam data, a BASE surface was made in Caris. Using the statistical tool within Caris Surfaces, data that exceeded a 1-meter threshold were rejected and the lines were then re-acquired. Please refer to the project DAPR[1] for a detailed discussion of VBES acquisition and processing procedures. ***See Evaluation Report***

[1]Filed with original field records
[2]Appended to this report

Multibeam echosounder soundings were acquired for item developments & coverage of the Chesapeake and Thimble Shoal Channel in the survey area only. MBES data that exceeded the IHO Order 1 accuracy limit were rejected. The MBES data was used to create an uncertainty-weighted grid. This grid and all soundings extracted from the grid meets the IHO Order 1 accuracy specification and is adequate to supercede charted soundings in common areas.

B 2.3 Crosslines

The total distance of crosslines is 58.5 linear nautical miles, which is equal to 8% of total mainscheme lines. Crossline to mainscheme line comparison was conducted using MapInfo 9.0. Comparison is adequate, with the majority of differences being one to two feet.

B 2.4 Junctions and Prior Surveys

The following contemporary surveys junction with H11603: ***Concur.***

Registry #	Scale	Date	Field Party	Junction side
H11323	1:10,000	2006	THOMAS JEFFERSON	West
H11205	1:10,000	2006	RUDE	North
H11402	1:10,000	2005	RUDE	S-E corner
H11651	1:10,000	2007	THOMAS JEFFERSON	East

Basic hydrographic surveys H11323, H11205, H11402, and H11651 were conducted in the 2005-2007 seasons by the RUDE and the THOMAS JEFFERSON. Comparison is excellent as soundings agree to within one (1) to two (2) feet. The previous survey for this area was conducted in 1949, survey H07750. No prior survey comparisons were performed.

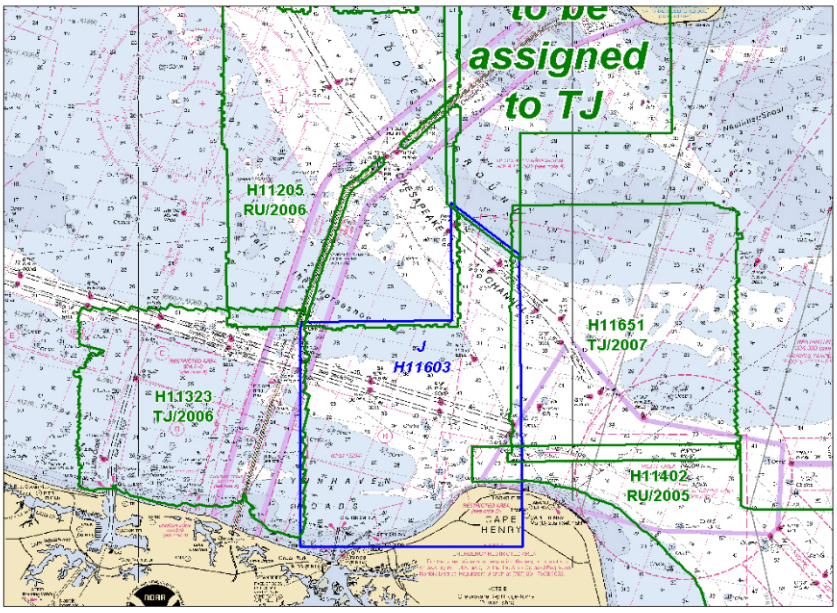


Figure 2. H11603 Junction Surveys.

B 2.5 Systematic Errors

All data acquired during H11603 met IHO S-44 Order 1 specifications. ***Concur with clarification. See Evaluation Report for a discussion about a motion artifact in the VBES data from certain days.*** However, a systematic error was observed in the Multibeam Echo Sounding data. An object observed on one line is observed in a slightly displaced location on an adjacent or parallel line (figure 3). This offset error was reviewed while collecting data on another project where the error was more prominent. It was determined that these offsets were caused by uncertainties in the GPS positioning.

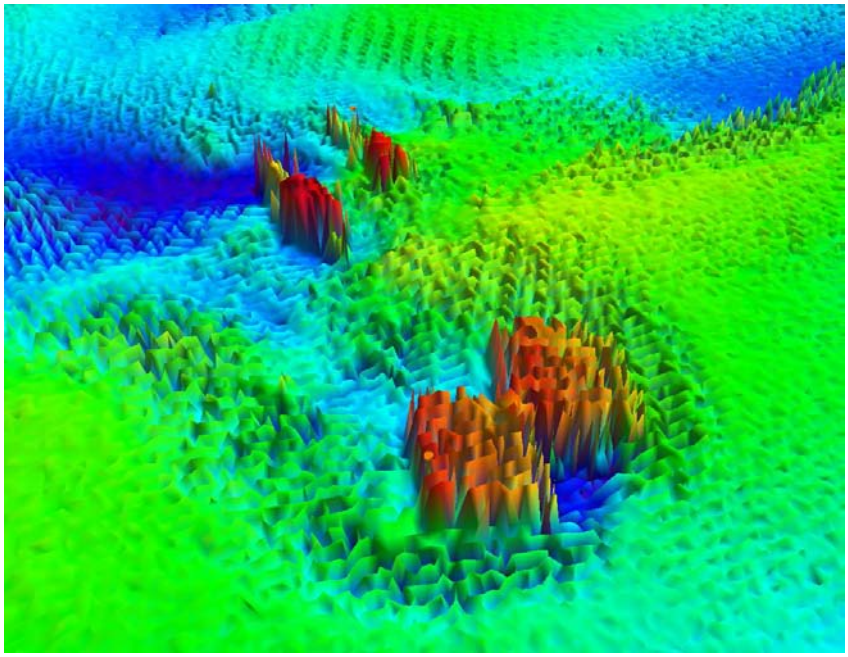


Figure 3. The same object on 2 different lines

B 3. CORRECTIONS TO ECHO SOUNDING

All methods and instruments used for sound velocity correction were as described in the ***DAPR***[1]. A table detailing all sound velocity casts is located in Separate II[1] of this Descriptive Report.

B 4. DATA PROCESSING

B 4.1 Total Propagated Error

For the 2007 field season, Total Propagated Error (TPE) parameters for sound speed and tides are calculated separately for each project. The project-specific parameters for OPR-E350-RU-07, Survey H11603 are as follows:

[1]Filed with original field records

Table 2: TPE Parameters

Vessel	Tide Values		Sound Speed Values	
	Measured	Zoning	Measured	Surface
RUDE	0	0.13	4	0.5

These values were calculated for all MBES & SBES data immediately following CARIS Merge.

B 4.2 BASE Surfaces and Mosaics

Table 3 describes all Mosaics and BASE Surfaces submitted as part of Survey H11603:

Table 2: All Mosaics and BASE Surfaces submitted as part of Survey H11603

Name of Fieldsheet	Resolution	Type	Purpose
H11603_Final_Mosaics			
H11603_1st100_1m	1 meter	SSS Mosaic	Verify 100% coverage
H11603_2nd100_1m	1 meter	SSS Mosaic	Verify 200% coverage
H11603_final_ENC	80 meter	Swath-Angle	Compare the ENC soundings to the survey soundings
H11603_final_SB&MB	2 meter	Uncertainty	Survey Uncertainty Base Surface
H11603_final_MB	.5 meter	CUBE	Development Cube Base Surface

C. VERTICAL AND HORIZONTAL CONTROL

A complete description of vertical and horizontal control for survey H11603 can be found in the ***OPR-E350-RU-07 Horizontal and Vertical Control Report***[1], submitted as an appendix to the ***DAPR***[1]. A summary of horizontal and vertical control for this survey follows.

C 1.1 Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83), zone 18. Differential GPS (DGPS) was the sole method of positioning. Differential corrections from the U.S.Coast Guard beacon at Driver, VA (289 kHz), was used during this survey.

No horizontal control stations were established by NOAA Ship RUDE for this survey.

[1]Filed with original field records

C 1.2 Vertical Control

The tidal datum for this project is Mean Lower Low Water (MLLW). All soundings are referenced to MLLW. The operating National Water Level Observation Network (NWLON) stations are located at Chesapeake Bay Bridge Tunnel, VA (863-8863), Kiptopeke, VA (863-2200), and Yorktown, VA (863-7689). These stations served as datum control for the survey area. All soundings were reduced to Mean Lower Low Water with verified tides. Opening and closing levels were performed by CO-OPS.

A Request for Smooth Tides letter was sent to N/OPS1 on October 5, 2007 (Appendix IV[1]). The acceptance letter for preliminary zoning as the final zoning was received on October 11, 2007. Verified tides from the N/OPS1 CO-OPS website were downloaded and applied to all soundings for this sheet. Tide corrections were applied to the soundings using CARIS HIPS and SIPS v6.1.

Zoning was provided on the project CD. No Changes to zoning, time correctors, or range ratios were made by field personnel.

D. RESULTS AND RECOMMENDATIONS

D.1 Chart Comparison

Charts Affected: ~~All or~~ part of the following NOAA nautical charts are contained within the limits of H11603:

Chart	Edition	Edition Date	NM	LNM	Scale	
12254	46th	Feb 2006	02/11/06	02/07/06	~~1:80,000~~	***1:20,000***
12222	47th	Nov 2005	11/05/06	11/01/06	~~1:25,000~~	***1:40,000***

D.1.1 Chart 12254

The agreement between the survey soundings and the charted depths found on NOAA chart 12254 was generally found to be within 2 feet or less. However, a general shoaling trend in the area just north of the Chesapeake Channel and the Middle Ground, an area south of the Tail of the Horseshoe and north of Thimble Shoal Channel as well as the area a little over ½ mile east of the first Chesapeake Bay Bridge Tunnel Island has sounding differences of 3-5 feet. This shoaling is discussed in detail in section D.3.2.

[1]Appended to this report

D.1.2 Chart 12222

The agreement between the survey soundings and the charted depths found on NOAA chart 12222 was generally found to be within 2 feet or less. However, the shoaling trend as stated in the previous comparison with chart 12254 is also observed on chart 12222. This shoaling is discussed in detail in section D.3.2.

D.1.3 ENC US5VA19M

Soundings are generally comparable with charted depths, with differences between survey soundings and charted depths 1 meter or less except in localized areas shown in section D.3.2.

D.2 Additional Results

D.2.1 Item Investigation

There were eight (8) uncharted items investigated along with 4 locations of fully intact pound nets. All items are listed below. Please refer to Appendix II[1] for the complete Pydro-generated item investigation reports, ***and for the final disposition of these items.***

Some item numbers have changed. The correct numbers are in red.

Table 3: Uncharted non-DTON's investigated

No.	*Feature Type*	*Survey Depth*	*Survey Latitude*	*Survey Longitude*
~~2.1~~ ***2.5***	Obstruction	11.13 m	36° 57' 18.850" N	076° 02' 58.497" W
2.2	Obstruction	11.10 m	36° 56' 04.881" N	076° 03' 04.452" W
~~2.4~~ ***2.3***	Obstruction	8.00 m	36° 55' 40.415" N	076° 03' 27.442" W
2.5***	Obstruction	5.27 m	36° 55' 16.753" N	076° 03' 50.784" W
~~2.8~~ ***2.7***	Obstruction	8.05 m	36° 57' 24.228" N	076° 06' 03.543" W
~~2.9~~ ***4.2***	Obstruction	6.35 m	37° 00' 26.035" N	076° 01' 28.433" W
~~2.10~~ ***2.4***	Obstruction	10.99 m	36° 59' 28.820" N	076° 01' 53.523" W
~~2.12~~ ***1.1***	Obstruction	11.43 m	36° 59' 53.304" N	076° 01' 04.146" W
~~2.3~~, ~~2.6~~, ~~2.7~~ & ~~2.11~~	Obstructions	Above surface	See figure 4 below	

1.2, 1.3, 1.4, 1.8

**** Item is insignificant, no longer considered an obstruction.***

Uncharted non-DtoN's that were addressed by field unit for this survey not in the table above are:

2.1 40-ft Obstn (36°56'53.779", -076°02'34.929")

2.8 55-ft Obstn (36°56'44.132" , -076°01'27.282")

[1]***Appended to this report***

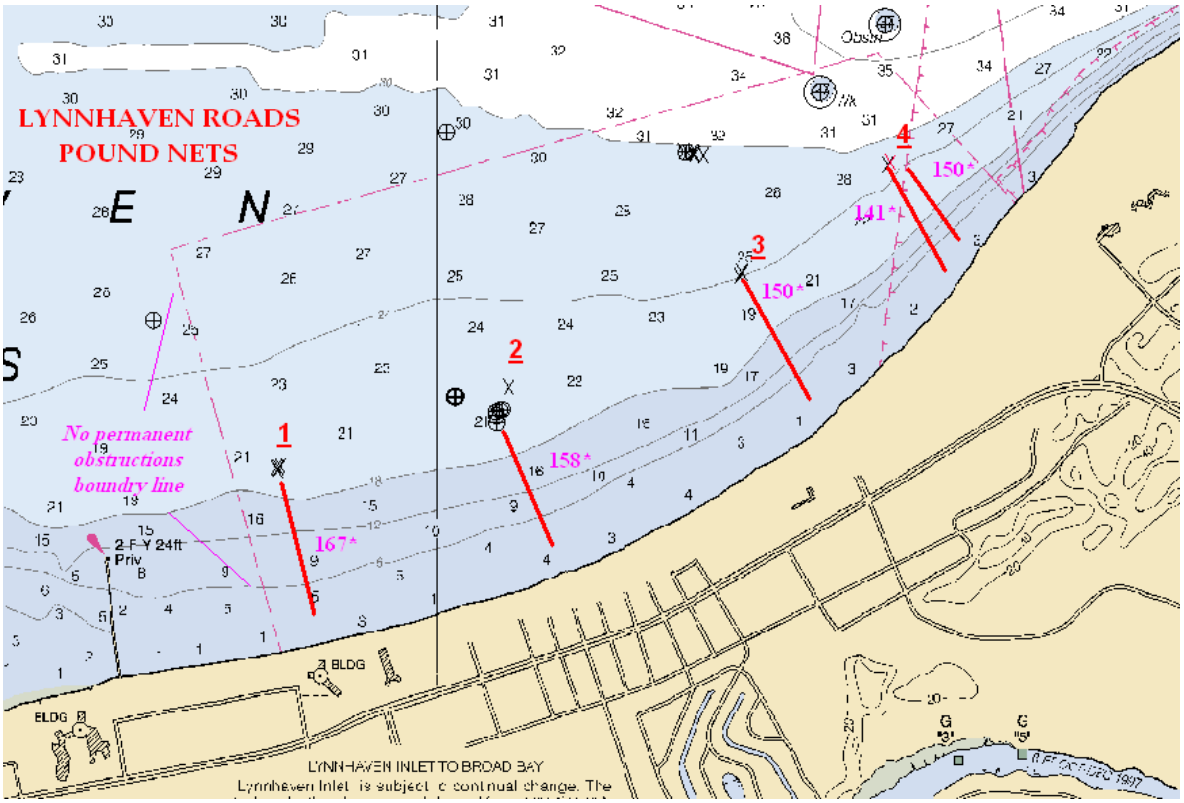


Figure 4. Pound nets located within the "No permanent obstructions" boundary line

D.2.2 Automated Wreck and Obstruction Information Service (AWOIS) Items

There were thirty-three (33) AWOIS items located within the survey limits of survey H11603. AWOIS items were investigated with 200% SSS over the specified search radius. The least depths of most of the AWOIS items were located with MBES. Detailed descriptions of the AWOIS investigations performed during this survey are provided in Appendix II[1] under the Pydro Survey Feature Report. The following is a list of the AWOIS items that required an investigation:

[1]Appended to this report

Table 4: Full Investigation AWOIS items

AWOIS Item	Search type	Search radius	Search Type	Description	Results
835	Full	50	200% SS & MB	Wreck	Confirmed
848	Full	50	200% SS & MB	Wreck	Confirmed
886	Full	1000	200% SS & MB	Wreck	Located
3748	Full	50	200% SS	Wreck	Confirmed
3758	Full	50	200% SS & MB	Obstruction	Confirmed
8259	Full	50	200% SS & MB	Obstruction	Confirmed
9542	Full	50	200% SS & MB	Old anchor buoy	Not detected
9543	Full	50	200% SS & MB	Two obstructions	Not detected
9544	Full	50	200% SS & MB	Wreck	Confirmed
9545	Full	50	200% SS & MB	Wreck	Confirmed
9546	Full	50	200% SS	Obstruction	Not detected
9547	Full	50	200% SS	Obstruction	Not detected
9548	Full	50	200% SS & MB	Obstruction	Confirmed
9550	Full	50	200% SS	Obstruction	Not detected
9551	Full	100	200% SS	Obstruction	Not detected
9552	Full	50	200% SS & MB	Obstruction	Confirmed
9553	Full	50	200% SS & MB	Obstruction	Confirmed
9554	Full	50	200% SS	Obstruction	Not detected
9555	Full	50	200% SS & MB	Obstruction	Confirmed
10792	Full	50	200% SS & MB	Obstruction	Not detected
10793	Full	50	200% SS & MB	Obstruction	Confirmed

D.2.3 Shoreline

The shoreline was not surveyed during survey H11603. ***Concur***

D.2.4 Charted Features

There are 26 charted features within the sheet limits of H11603. ***Concur.***

D.2.5 Charted Pipelines and Cables

No charted submarine cables were present on this survey. ***Concur***

D.2.6 Bridges, Ferry Routes, and Overhead Cables

There are no ferry routes, bridges, or overhead cable crossings within the limits of the survey. ***Concur***

D.3 Dangers to Navigation and Shoals

D 3.1 Dangers to Navigation

One (1) danger to navigation was found and reported to the NOAA's Office of Coast Survey, Marine Chart Division (MCD) for verification. A copy of the Danger to Navigation Report is included in Appendix I[1], and a copy of the DTON email to MCD is located in Appendix V[1] of this Descriptive Report.

Table 5: Dangers to Navigation

DtoN Number	*Description*	*Latitude*	*Longitude*	*Date Submitted*
1	Obstruction	37°00'34.854" N	076°01'50.519" W	January 22, 2008

Concur with clarification shown on chart 12254; 47th Ed., March 2008. Retain as charted.

D 3.2 Shoals

A general shoaling trend was observed in the area just north***east*** of the Chesapeake Channel and ***southwest of*** the Middle Ground, an area south of the Tail of the Horseshoe and north of Thimble Shoal Channel as well as the area a little over ½ mile east of the first Chesapeake Bay Bridge Tunnel Island. In all areas present survey depths is consistently 3-6 feet shoaler then the charted depths. The following figures show the shoaling areas. ***Concur***

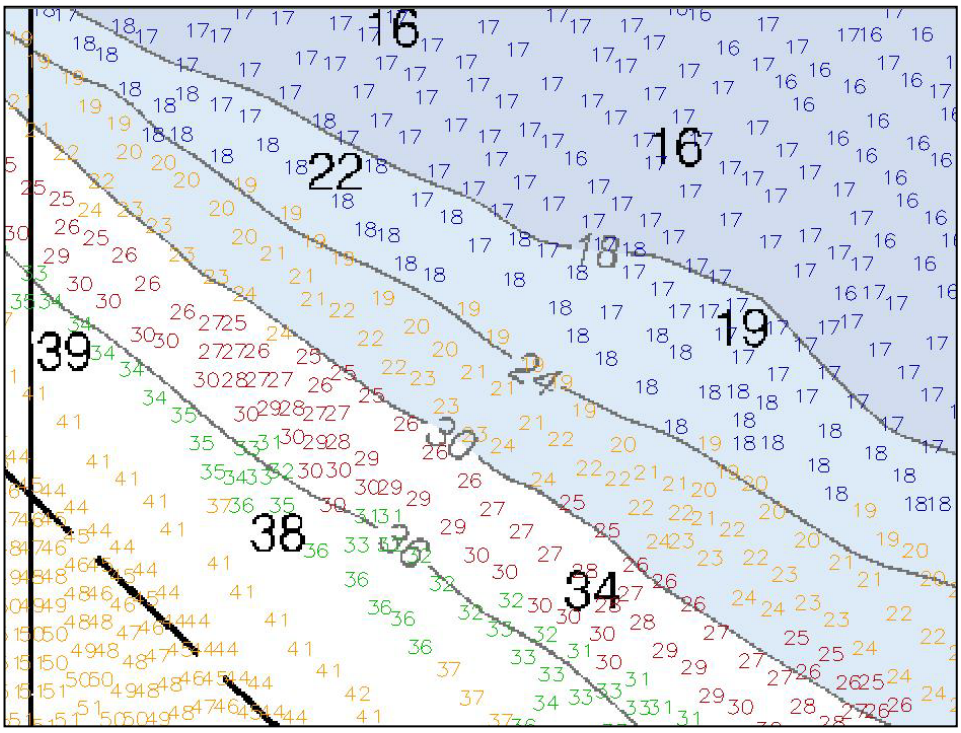


Figure 5. Shoaling area north of Chesapeake Channel and south of the Middle Ground

[1]Appended to this report

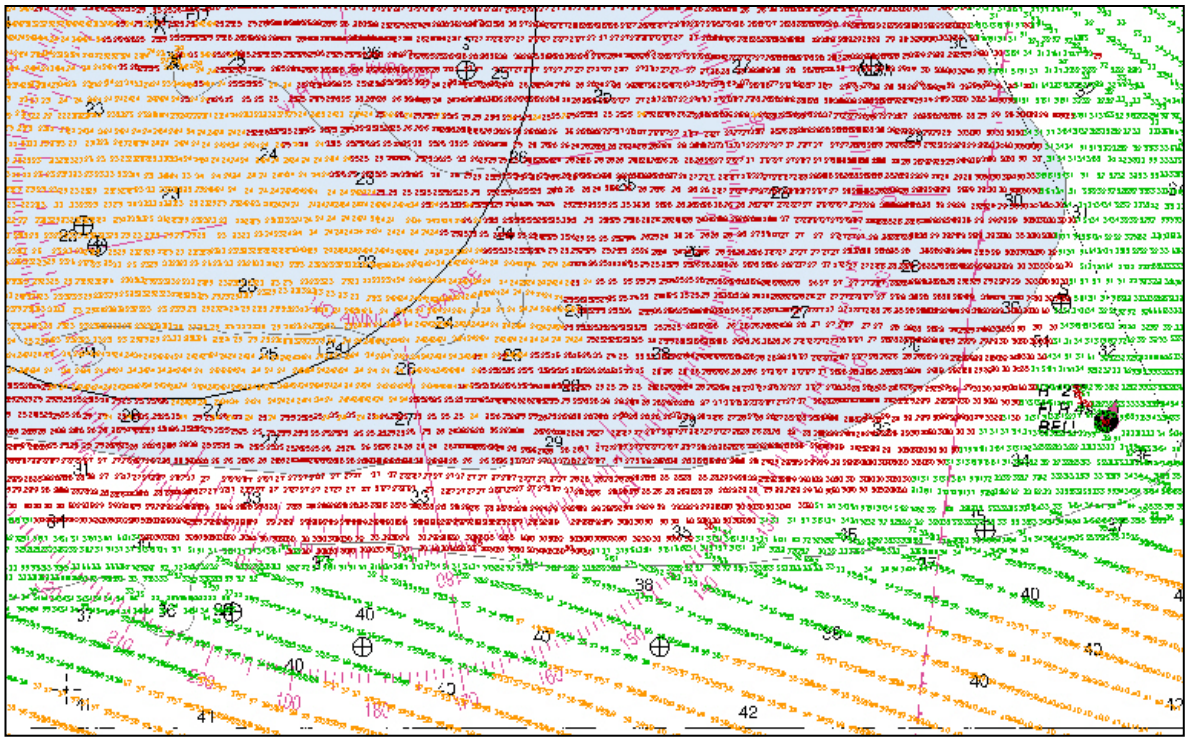


Figure 6. Shoaling area north of Thimble Shoal Channel and south of the Tail of the Horseshoe

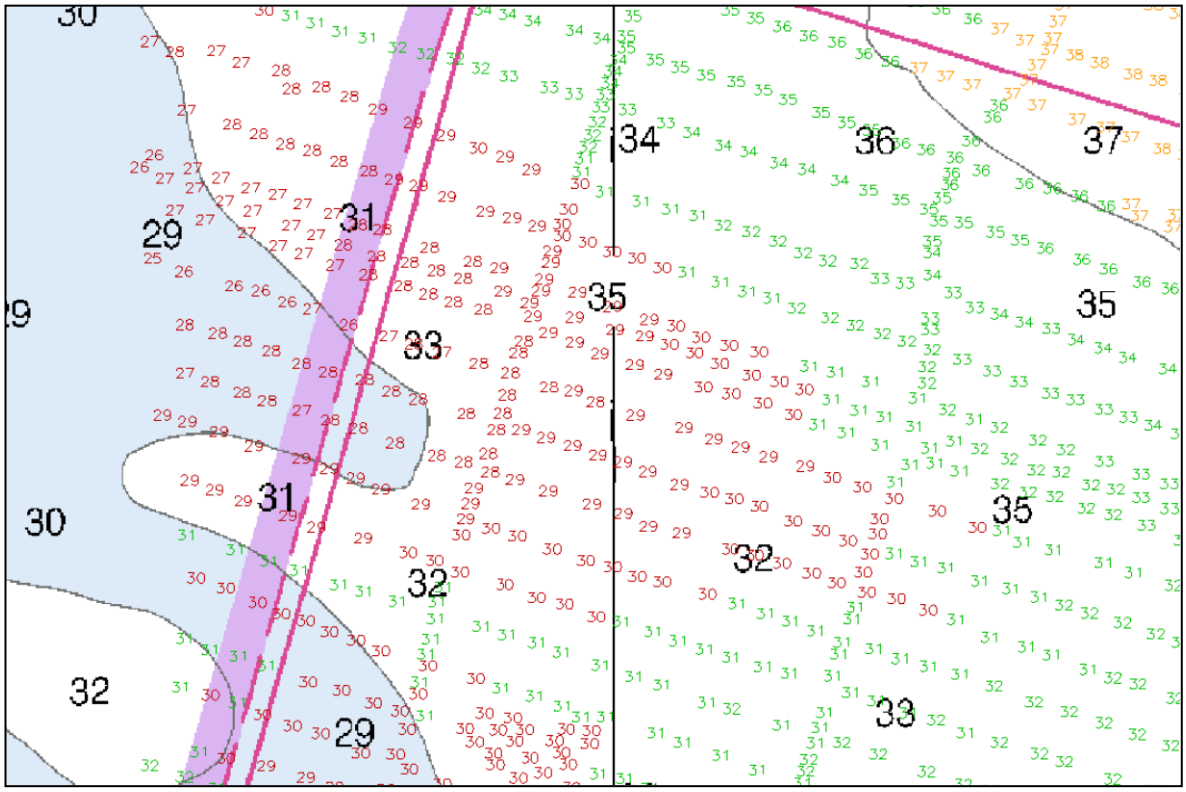


Figure7. Shoaling area approximately a half a mile east of the 1st Chesapeake Bay Bridge Tunnel Island

D.4 Aids to Navigation

There are thirteen (13) charted Aids to Navigation (ATON) within the survey limits of H11603.

All ATONs were found to be as charted. Hydrographer has no recommendations. ***Concur***

D.5 Coast Pilot Information

The Hydrographer has no recommendations for changes or addenda to the Coast Pilot.

D.6 Miscellaneous

Bottom Samples

Bottom sediment samples were collected in accordance with NOAA Hydrographic Survey Specifications and Deliverables. A complete description of all bottom samples acquired during Survey H11603 is contained in the Pydro PSS. A list of all bottom samples acquired during Survey H11603 is contained in Appendix V[1]. ***Concur***

D.7 Adequacy of Survey

This survey is considered complete and adequate to supersede charted depths within the common area as per requirements specified in the Project Letter Instructions[2].

[1]Appended to this report
[2]Filed with original field records

E. APPROVAL

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 Surveys 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 H11603 is adequate to supersede 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 Acquisition and Processing Report for OPR-E350-RU-07	*included*	N/CS33
Horizontal and Vertical Control Report for OPR-E350-RU-07	*included*	N/CS33
Final Tides Letter for OPR-E350-RU-07	*October 11, 2007*	N/OPS1

Approved and Forwarded:

Caryn M. Arnold

ENS Caryn M. Arnold
Field Operations Officer

Richard T. Brennan

LCDR Richard T. Brennan
Commanding Officer

Dangers to Navigation

Registry Number: H11603

State: Virginia

Locality: Southern Chesapeake Bay

Sub-locality: Middle Ground to Lynnhaven Roads

Project Number: OPR-E350-RU-07

Survey Date: 09/05/2007

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12254	47th	03/01/2008	1:20,000 (12254_1)	USCG LNM: 09/30/2008 (11/04/2008) NGA NTM: 06/09/2007 (11/15/2008)
12222	50th	09/01/2008	1:40,000 (12222_1)	USCG LNM: 10/28/2008 (11/04/2008) NGA NTM: 02/23/2008 (11/15/2008)
12208	11th	05/01/2005	1:50,000 (12208_1)	[L]NTM: ?
12221	77th	05/01/2005	1:80,000 (12221_1)	[L]NTM: ?
12280	6th	09/01/2005	1:200,000 (12280_2)	[L]NTM: ?
12200	48th	06/01/2004	1:419,706 (12200_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	charted 22-ft OBSTRN (DtoN)	Obstruction	6.91 m	37° 00' 34.9" N	076° 01' 50.5" W	---
1.2	uncharted 20-ft OBSTRN	Obstruction	6.05 m	37° 00' 26.1" N	076° 01' 28.4" W	---

1 - Danger To Navigation

1.1) Profile/Beam - 836/117 from h11603 / ru_mb / 2007-248 / 816_1652

DANGER TO NAVIGATION

Survey Summary

Survey Position: 37° 00' 34.9" N, 076° 01' 50.5" W

Least Depth: 6.91 m (= 22.67 ft = 3.779 fm = 3 fm 4.67 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.854 m ; **TVU (TPEv)** ±0.181 m

Timestamp: 2007-248.16:53:44.423 (09/05/2007)

Survey Line: h11603 / ru_mb / 2007-248 / 816_1652

Profile/Beam: 836/117

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

Uncharted dangerous Obstruction located during H11603 survey operations. Item initially located with 200% SSS. Reson 8125 MBES development data determined a least depth of 22 feet with surrounding depth of 29 feet. This obstruction lies between the 36 and 30 foot contour lines north of the Chesapeake Channel. All soundings were adjusted to MLLW using approved water levels.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-248/816_1652	836/117	0.00	000.0	Primary
h11603/ru_ss/2007-164/206_1459	0001	8.69	313.5	Secondary
h11603/ru_ss/2007-163/106_1344	0001	10.67	147.0	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

22ft (12254_1, 12222_1, 12208_1, 12221_1, 12280_2)

3 ¾fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 6.911 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Shown on chart 12254; 47th Ed., March 2008. Retain as charted.

Feature Images

[Image file h:/compilation/h11603_e350-ru-07/ahb_h11603/pss/images/206_14590001_m.tif does not exist.]

[Image file h:/compilation/h11603_e350-ru-07/ahb_h11603/pss/images/206_14590001_s.tif does not exist.]

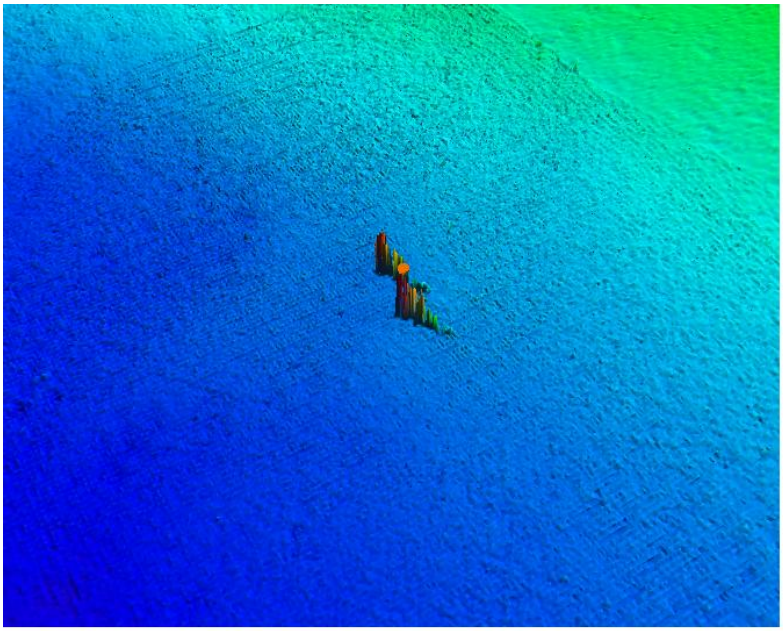


Figure 1.1.1

1.2) Profile/Beam - 706/45 from h11603 / ru_mb / 2007-248 / 821_1702

DANGER TO NAVIGATION

Survey Summary

Survey Position: 37° 00' 26.1" N, 076° 01' 28.4" W

Least Depth: 6.05 m (= 19.84 ft = 3.307 fm = 3 fm 1.84 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.857 m ; **TVU (TPEv)** ±0.181 m

Timestamp: 2007-248.17:03:26.334 (09/05/2007)

Survey Line: h11603 / ru_mb / 2007-248 / 821_1702

Profile/Beam: 706/45

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

Obstn found during 200% side scan coverage with least depth determined during MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-248/821_1702	706/45	0.00	000.0	Primary
h11603/ru_mb/2007-248/832_1706	690/98	1.10	063.2	Secondary
h11603/ru_ss/2007-163/105_1360	0001	4.46	110.1	Secondary
h11603/ru_ss/2007-164/204_1420	0001	8.06	312.8	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

20ft (12254_1, 12222_1, 12208_1, 12221_1, 12280_2)

3 ¼fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 6.047 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous Obstn, least depth 20-ft., as shown on the present survey.

Feature Images

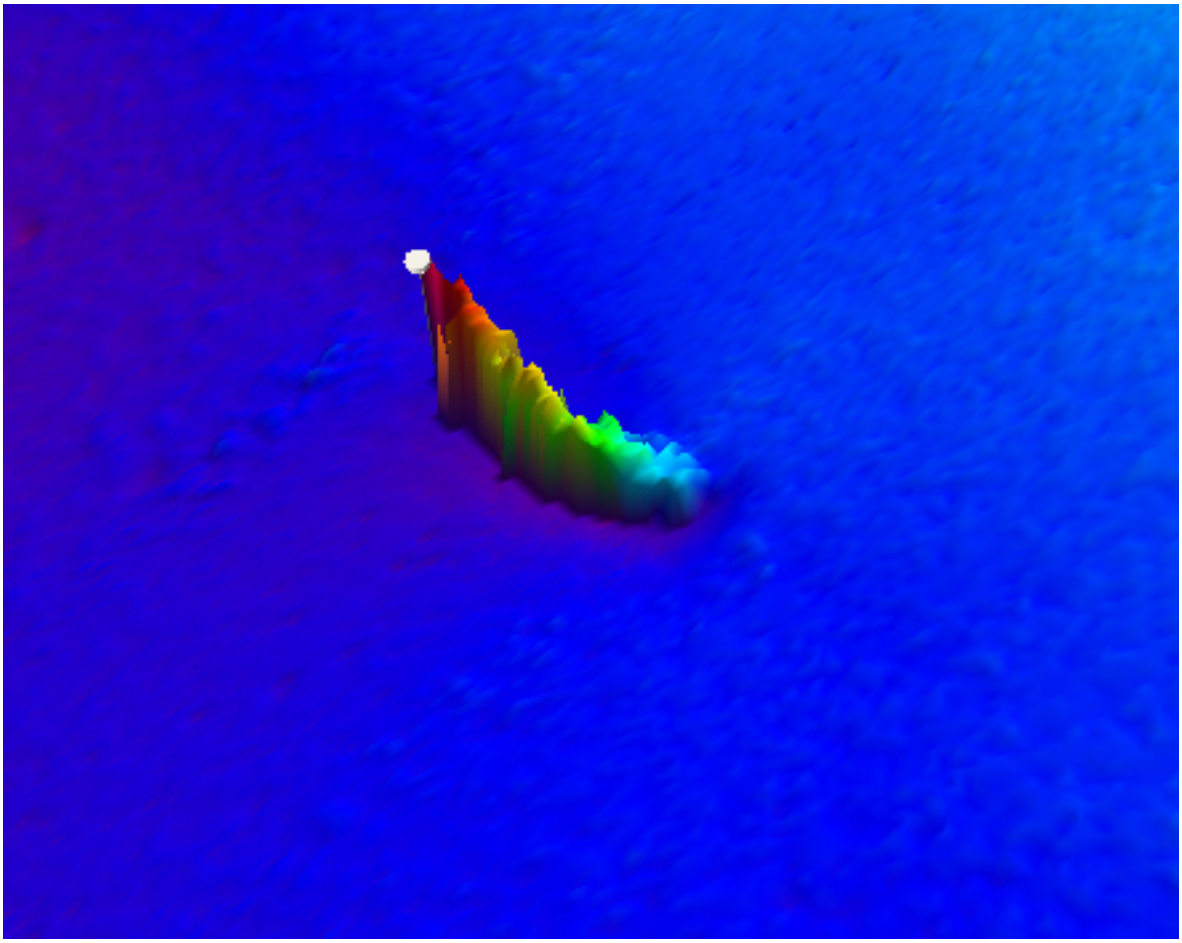


Figure 1.2.1

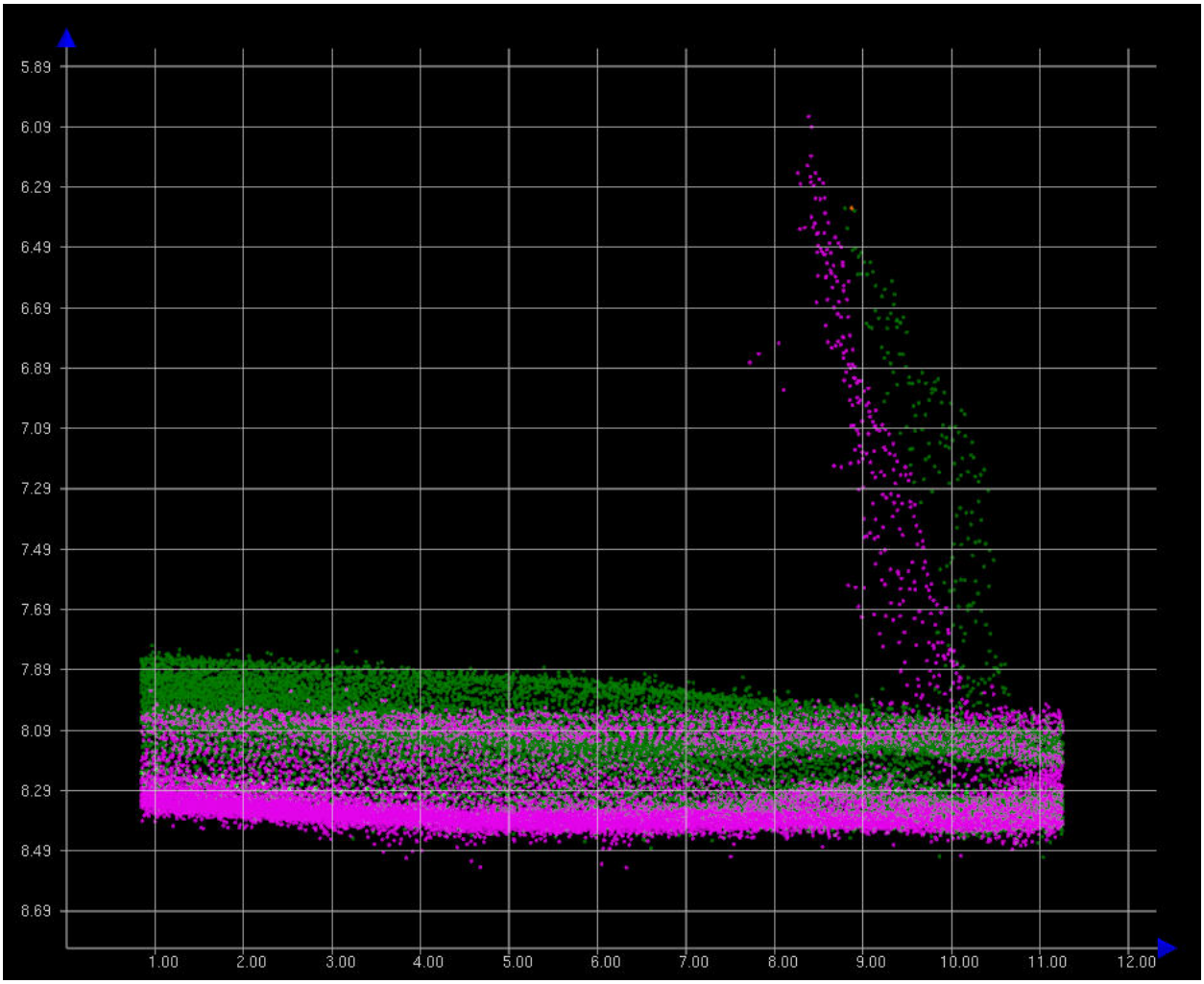

5.89
6.09
6.29
6.49
6.69
6.89
7.09
7.29
7.49
7.69
7.89
8.09
8.29
8.49
8.69
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00

Figure 1.2.2

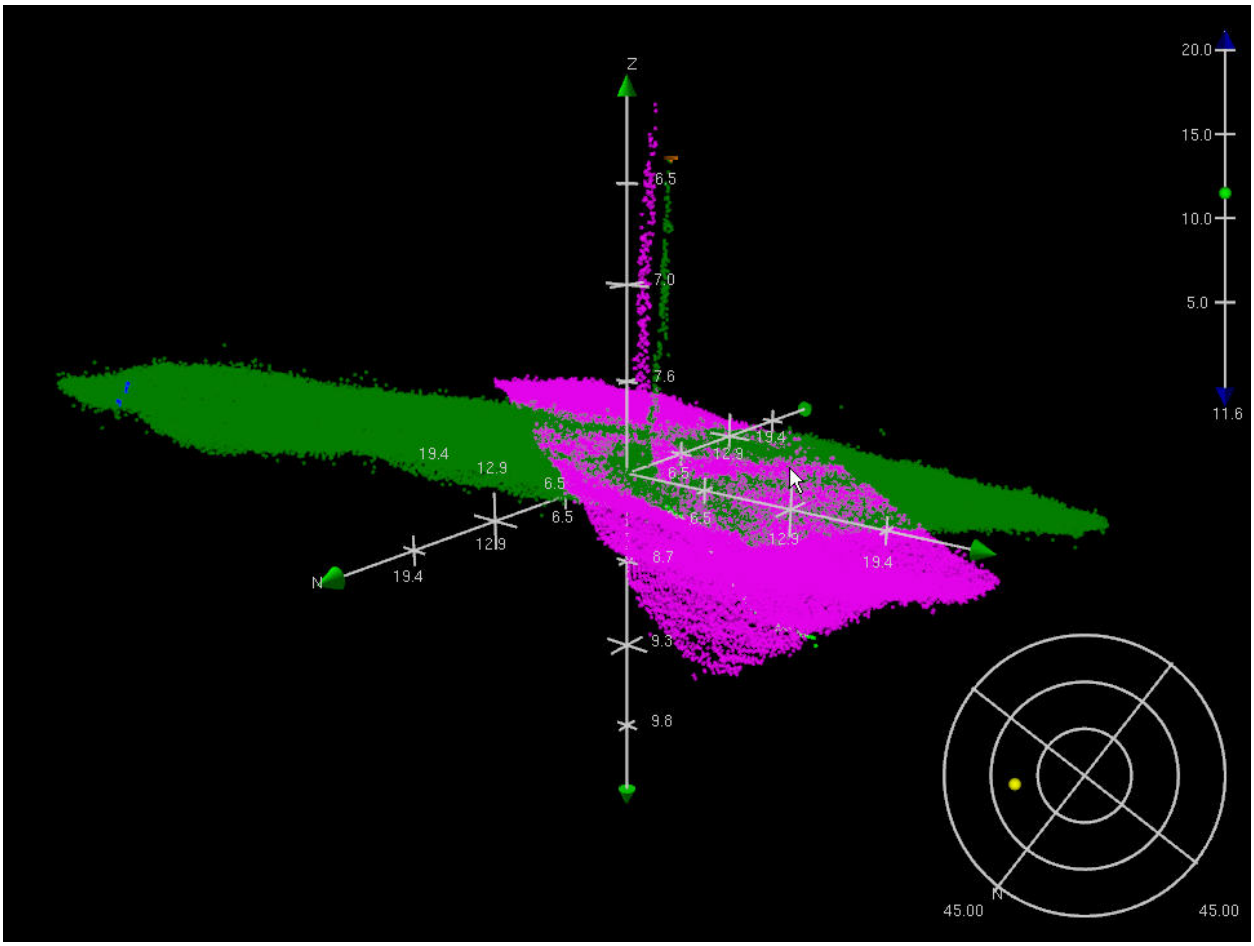

Z
6.5
7.0
7.6
19.4
12.9
6.5
6.5
12.9
19.4
N
19.4
12.9
6.5
6.5
8.7
12.9
19.4
9.3
9.8
20.0
15.0
10.0
5.0
11.6
N
45.00
45.00

Figure 1.2.3

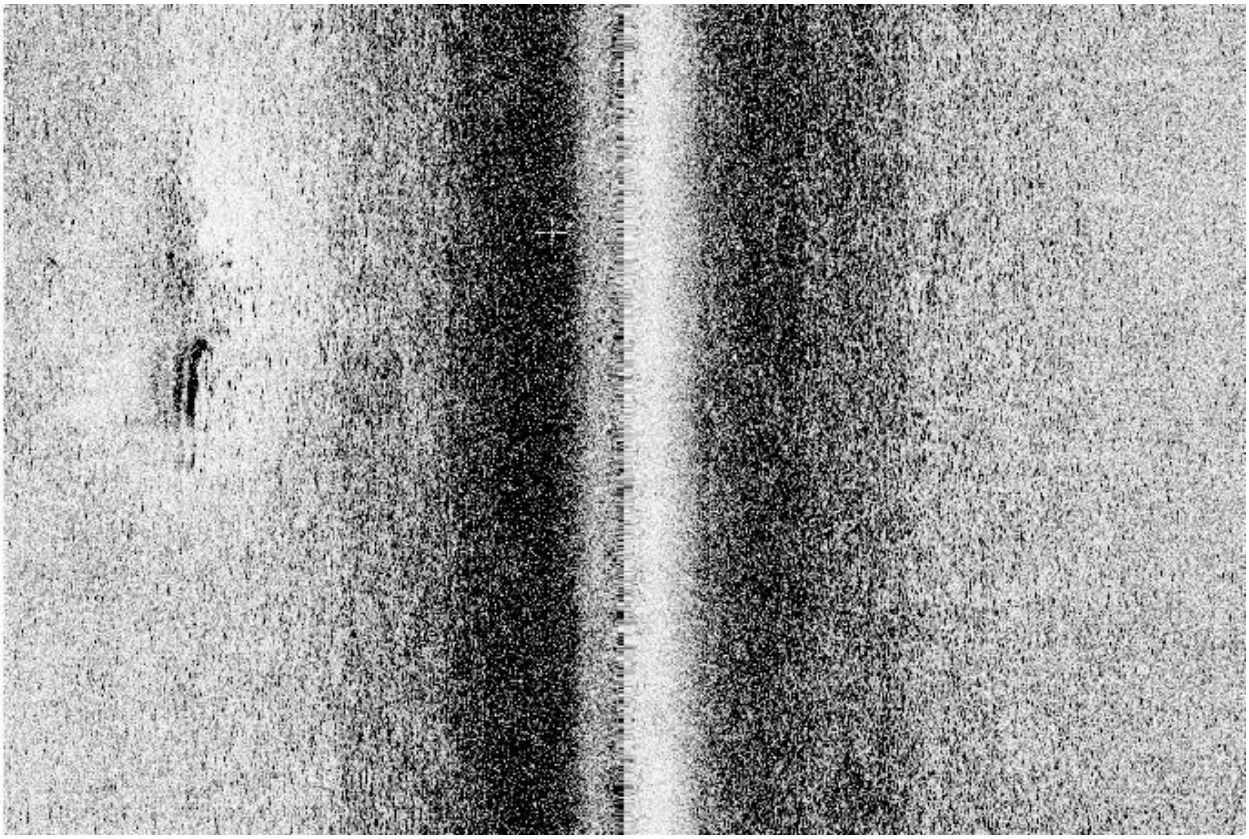


Figure 1.2.4

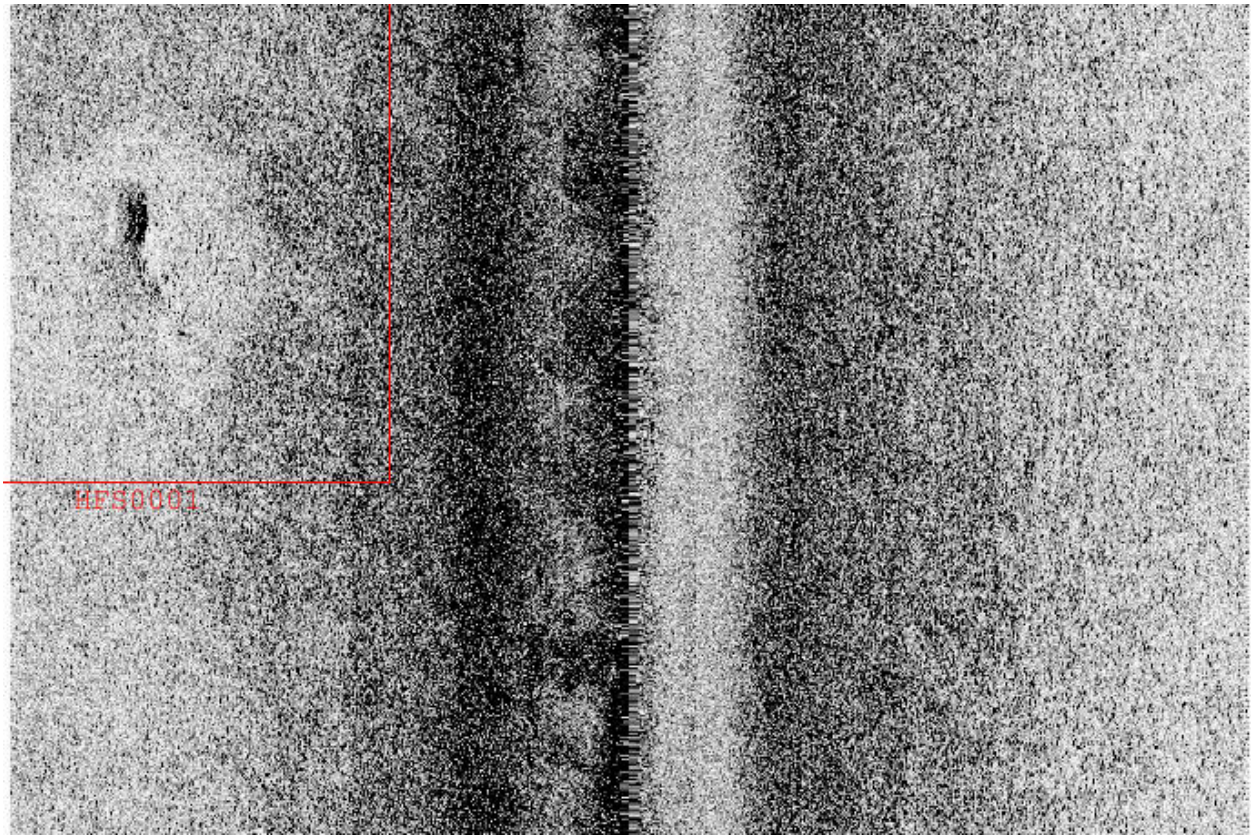


Figure 1.2.5

Survey Feature Report

Registry Number: H11603

State: Virginia

Locality: Southern Chesapeake Bay

Sub-locality: Middle Ground to Lynnhaven Roads

Project Number: OPR-E350-RU-07

Survey Dates: 03/14/2007 - 07/15/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12256	15th	07/01/2005	1:20,000 (12256_1)	[L]NTM: ?
12254	47th	03/01/2008	1:20,000 (12254_1)	USCG LNM: 09/30/2008 (11/04/2008) NGA NTM: 06/09/2007 (11/15/2008)
12222	50th	09/01/2008	1:40,000 (12222_1)	USCG LNM: 10/28/2008 (11/04/2008) NGA NTM: 02/23/2008 (11/15/2008)
12208	11th	05/01/2005	1:50,000 (12208_1)	[L]NTM: ?
12205	30th	11/01/2005	1:80,000 (12205_1)	[L]NTM: ?
12221	77th	05/01/2005	1:80,000 (12221_1)	[L]NTM: ?
12207	21st	03/01/2004	1:80,000 (12207_1)	[L]NTM: ?
12280	6th	09/01/2005	1:200,000 (12280_2)	[L]NTM: ?
12200	48th	06/01/2004	1:419,706 (12200_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	charted 37-ft OBSTRN	Obstruction	11.43 m	36° 59' 53.3" N	076° 01' 04.1" W	---
1.2	pound net	Obstruction	[None]	36° 55' 14.4" N	076° 03' 52.0" W	---
1.3	pound net	Pile	[None]	36° 55' 28.4" N	076° 03' 20.9" W	---
1.4	pound net	Pile	[None]	36° 55' 08.6" N	076° 04' 20.2" W	---
1.5	charted OBSTRN PA (Anchor) (AWOIS 3831)	Obstruction	[None]	36° 56' 19.6" N	076° 04' 33.0" W	---
1.6	charted 37-ft OBSTRN (unaddressed by field)	Obstruction	[None]	36° 58' 08.9" N	076° 06' 17.9" W	---

1.7	charted 60-ft OBSTRN	Obstruction	18.32 m	36° 57' 18.3" N	076° 01' 06.6" W	---
1.8	pound net	Obstruction	[None]	36° 55' 39.2" N	076° 03' 03.1" W	---
2.1	uncharted 40-ft OBSTRN	Obstruction	12.39 m	36° 56' 53.8" N	076° 02' 34.9" W	---
2.2	uncharted 36-ft OBSTRN	Obstruction	11.10 m	36° 56' 04.9" N	076° 03' 04.5" W	---
2.3	uncharted 26-ft OBSTRN	Obstruction	8.00 m	36° 55' 40.4" N	076° 03' 27.4" W	---
2.4	uncharted 36-ft OBSTRN	Obstruction	10.99 m	36° 59' 28.8" N	076° 01' 53.5" W	---
2.5	uncharted 36-ft OBSTRN	Obstruction	11.13 m	36° 57' 18.8" N	076° 02' 58.5" W	---
2.6	uncharted OBSTRN in channel	Obstruction	16.68 m	36° 57' 53.8" N	076° 04' 45.4" W	---
2.7	uncharted 26-ft OBSTRN	Obstruction	8.03 m	36° 57' 24.2" N	076° 06' 03.5" W	---
2.8	uncharted 55-ft OBSTRN	Obstruction	16.97 m	36° 56' 44.1" N	076° 01' 27.3" W	---
3.1	charted 39-ft OBSTRN (AWOIS 10596)	Obstruction	[None]	36° 58' 10.9" N	076° 06' 17.5" W	10596
3.2	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
3.3	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
3.4	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
3.5	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.6	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.7	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.8	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.9	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.10	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.11	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.12	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.13	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.14	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
3.15	charted 33-ft OBSTRN (AWOIS 9553)	Obstruction	11.14 m	36° 56' 16.3" N	076° 03' 02.5" W	9553
3.16	charted 40-ft OBSTRN (AWOIS 9555)	Obstruction	11.78 m	36° 56' 48.5" N	076° 02' 55.5" W	9555
3.17	charted 34-ft OBSTRN (AWOIS 9548)	Obstruction	10.50 m	36° 56' 37.1" N	076° 03' 11.1" W	9548
3.18	charted 58-ft OBSTRN (AWOIS 8259)	Obstruction	17.72 m	36° 56' 46.1" N	076° 01' 18.0" W	8259
3.19	charted 42-ft Obstns (AWOIS 3758)	Obstruction	12.61 m	36° 56' 27.2" N	076° 02' 31.4" W	3758
3.20	charted 27-ft OBSTRN (AWOIS 9552)	Obstruction	7.92 m	36° 56' 39.2" N	076° 04' 20.1" W	9552
3.21	charted 32-ft WRECKS (AWOIS 9545)	Wreck	9.29 m	36° 56' 01.7" N	076° 03' 20.1" W	9545
3.22	charted 33-ft WRECKS (AWOIS 9544)	Wreck	10.10 m	36° 55' 56.8" N	076° 03' 17.4" W	9544
3.23	charted 23-ft OBSTRN (AWOIS 9550)	Obstruction	7.50 m	36° 57' 04.3" N	076° 05' 36.5" W	3751
3.24	charted 46-ft WRECKS (AWOIS 848)	Wreck	14.25 m	36° 57' 34.7" N	076° 01' 16.7" W	848
3.25	charted 56-ft WRECKS (AWOIS 835)	Wreck	16.22 m	36° 56' 59.1" N	076° 01' 21.5" W	835
3.26	charted 27-ft WRECKS (AWOIS 3748)	Wreck	[None]	36° 55' 46.6" N	076° 03' 11.2" W	3748

3.27	charted 23-ft OBSTRN (AWOIS 9551)	Obstruction	7.57 m	36° 56' 50.2" N	076° 05' 39.8" W	9551
3.28	charted 40-ft WRECKS (AWOIS 10792)	Wreck	12.58 m	37° 00' 47.7" N	076° 03' 09.6" W	10792
3.29	charted dangerous wreck ED (AWOIS 886)	Wreck	7.15 m	36° 58' 57.4" N	076° 03' 57.0" W	886
4.1	charted 22-ft OBSTRN (DtoN)	Obstruction	6.91 m	37° 00' 34.9" N	076° 01' 50.5" W	---
4.2	uncharted 20-ft OBSTRN	Obstruction	6.05 m	37° 00' 26.1" N	076° 01' 28.4" W	---

1 - Charted Features

1.1) charted 37-ft OBSTRN

Survey Summary

Survey Position: 36° 59' 53.3" N, 076° 01' 04.1" W

Least Depth: 11.43 m (= 37.50 ft = 6.250 fm = 6 fm 1.50 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.858 m ; **TVU (TPEv)** ±0.190 m

Timestamp: 2007-248.17:23:35.553 (09/05/2007)

Survey Line: h11603 / ru_mb / 2007-248 / 831_1723

Profile/Beam: 260/26

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

Charted 37ft Obstn found during 200% side scan coverage with least depth determined during MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-248/831_1723	260/26	0.00	000.0	Primary
h11603/ru_mb/2007-248/831_1723	261/26	0.22	180.0	Secondary (grouped)
ChartGPs - Digitized	5	6.59	214.6	Secondary (grouped)
h11603/ru_ss/2006-318/228_1756	0001	12.65	145.1	Secondary

Hydrographer Recommendations

Retain as Charted.

Cartographically-Rounded Depth (Affected Charts):

37ft (12254_1, 12222_1, 12208_1, 12221_1, 12280_2)

6 ¼fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 11.430 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Revise dangerous obstruction least depth 37-ft to present survey position.

Feature Images

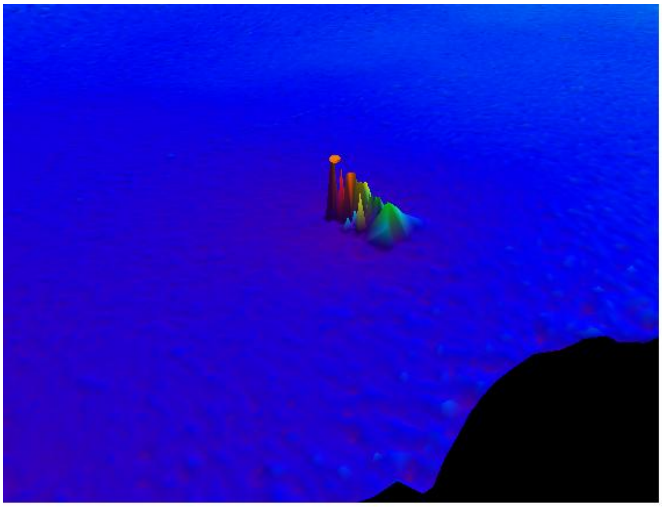


Figure 1.1.1

1.2) pound net

Survey Summary

Survey Position: 36° 55' 14.4" N, 076° 03' 52.0" W

Least Depth: [None]

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

Timestamp: 2007-212.04:54:37 (07/31/2007)

Survey Line: h11603 / ru_ss / 2007-212 / 149_1631

Contact/Point: 0002/1

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

These obstructions are located in a charted area which implys no permanent obstructions are located in this area. However, year after year these pound nets are put up and taken down but some are not removed entirely and remain just below the surface.

Second set of pound nets from the south located on the east side of Lynnhaven Roads. The remaining piles head toward shore at a bearing of 158 degrees.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_ss/2007-212/149_1631	0002	0.00	000.0	Primary
h11603/ru_mb/2007-242/967_1812	1445/1	3.22	335.0	Secondary
h11603/ru_ss/2007-212/149_1631	0001	11.51	245.7	Secondary (grouped)
h11603/ru_ss/2007-212/147_1731	0001	11.87	358.2	Secondary
h11603/ru_ss/2007-212/149_1631	0003	19.46	249.2	Secondary (grouped)
h11603/ru_ss/2007-212/150_1650	0001	34.63	356.9	Secondary

Hydrographer Recommendations

Change this charted area to dangerous or chart this Obstn based on the position, and S-57 attribution specified in this report.

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: SORDAT - 20070913

SORIND - US,US,survy,H11603

Office Notes

Do not concur. Do not chart individual piles. Retain the charted limits of fishing area.

1.3) pound net

Survey Summary

Survey Position: 36° 55' 28.4" N, 076° 03' 20.9" W

Least Depth: [None]

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

Timestamp: 2007-212.06:11:29 (07/31/2007)

Survey Line: h11603 / ru_ss / 2007-212 / 156_1415

Contact/Point: 0001/1

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

PilesThese piles are located within a charted area designated as "No Permanent Obstructions". While these piles are supposed to be temporary, it is obvious by their condition that they have been in place for many years.

This feature represents the third set of pound nets from the south located on the east side of Lynnhaven Roads. The remaining piles head toward shore at a bearing of 150 degrees.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_ss/2007-212/156_1415	0001	0.00	000.0	Primary
h11603/ru_mb/2007-242/888_1840	371/1	3.75	333.9	Secondary
h11603/ru_mb/2007-242/888_1840	499/1	13.74	030.9	Secondary

Hydrographer Recommendations

Remove the charted "No Permanent Obstruction" area and chart a row of piles based on the position, and S-57 attribution specified in this report

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: SORDAT - 20070913

SORIND - US,US,survy,H11603

Office Notes

Do not concur. Do not chart individual piles. Retain the charted limits of fishing area.

1.4) pound net

Survey Summary

Survey Position: 36° 55' 08.6" N, 076° 04' 20.2" W

Least Depth: [None]

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

Timestamp: 2007-235.08:12:00 (08/23/2007)

Survey Line: h11603 / ru_ss / 2007-227 / 300_1719

Contact/Point: 0001/1

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

These piles are located within a charted area designated as "No Permanent Obstructions". While these piles are supposed to be temporary, it is obvious by their condition that they have been in place for many years.

First southern set of pound nets located on the east side of Lynnhaven Roads. The remaining piles head toward shore at a bearing of 167 degrees. confirms with 148_1714

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_ss/2007-227/300_1719	0001	0.00	000.0	Primary
h11603/ru_mb/2007-242/968_1818	766/1	7.12	101.8	Secondary
h11603/ru_mb/2007-242/968_1818	642/1	7.62	228.9	Secondary
h11603/ru_ss/2007-212/148_1714	0001	8.06	029.7	Secondary

Hydrographer Recommendations

Remove the charted "No Permanent Obstruction" area and chart a row of piles based on the position, and S-57 attribution specified in this report

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: SORDAT - 20070913

SORIND - US,US,survy,H11603

Office Notes

Do not concur. Do not chart individual piles. Retain the charted limits of fishing area.

1.5) charted OBSTRN PA (Anchor) (AWOIS 3831)

Survey Summary

Survey Position: 36° 56' 19.6" N, 076° 04' 33.0" W

Least Depth: [None]

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

Timestamp: 2008-182.16:53:52 (06/30/2008)

GP Dataset: ChartGPs - Digitized

GP No.: 1

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 2:depth unknown

SORDAT - 20070913

SORIND - US,US,survy,H11603

TECSOU - 2:found by side scan sonar

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

The feature is a charted dangerous obstruction PA (Anchor) that was not addressed by the hydrographer. The feature was not included in the AWOIS feature set originally submitted with the project instructions. The ESAR reviewer contacted HSD Operations Branch to inquire about the required search technique and search radius. AHB then received information describing the feature as AWOIS 3831, with a search radius of 100 meters. The entire search radius has been covered with 200% SSS, and no feature was found by office personnel. Recommend deleting charted dangerous obstruction and text "Obstn (Anchor) PA" from the chart.

Feature Images

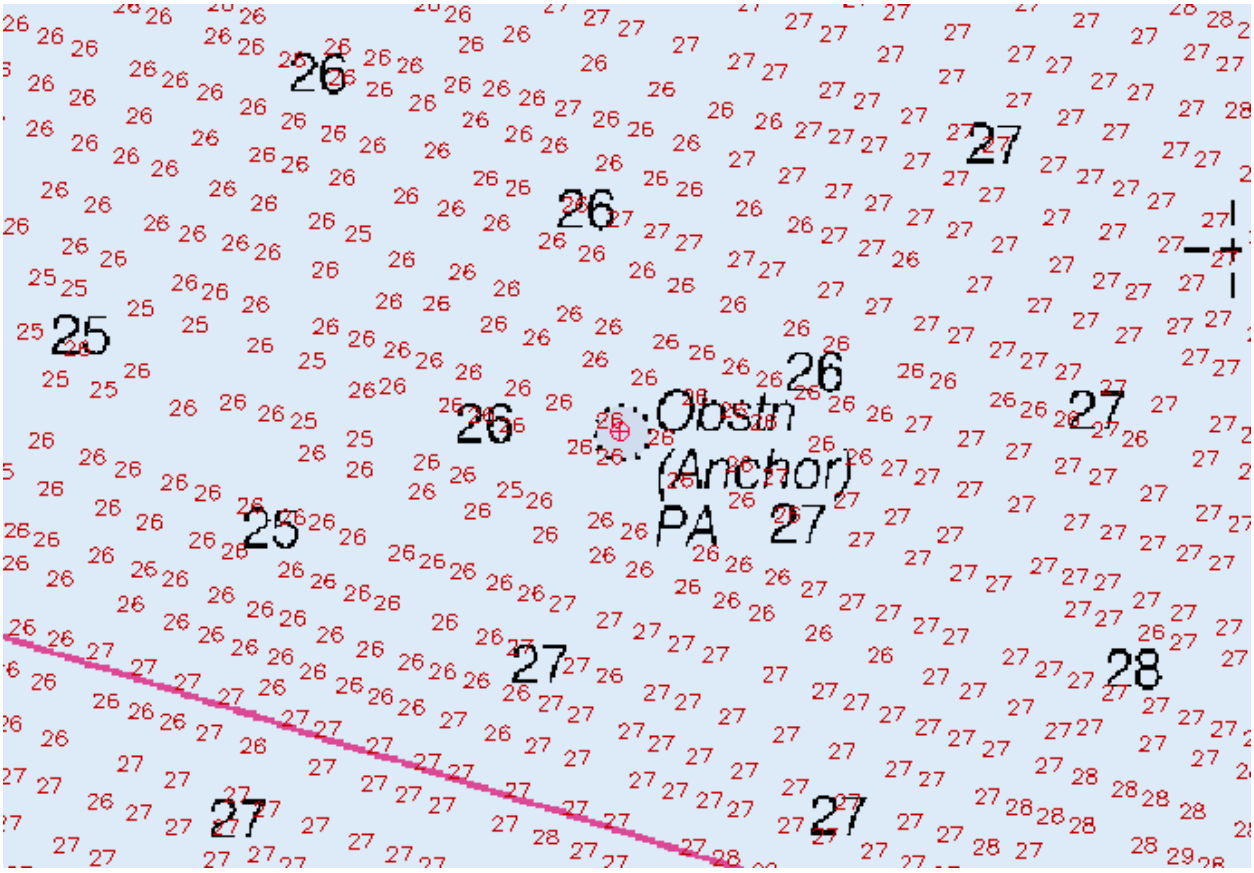


Figure 1.5.1

1.6) charted 37-ft OBSTRN (unaddressed by field)

Survey Summary

Survey Position: 36° 58' 08.9" N, 076° 06' 17.9" W

Least Depth: [None]

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

Timestamp: 2008-184.14:32:15 (07/02/2008)

GP Dataset: ChartGPs - Digitized

GP No.: 2

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	2	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: SORDAT - 20070913

SORIND - US,US,survy,H11603

WATLEV - 3:always under water/submerged

Office Notes

The hydrographer did not address this charted 37-ft dangerous non-AWOIS obstruction. Side scan sonar images were not conclusive enough to determine if the obstruction still exists. Retain as charted. See also the recommendation for AWOIS 10596.

Feature Images

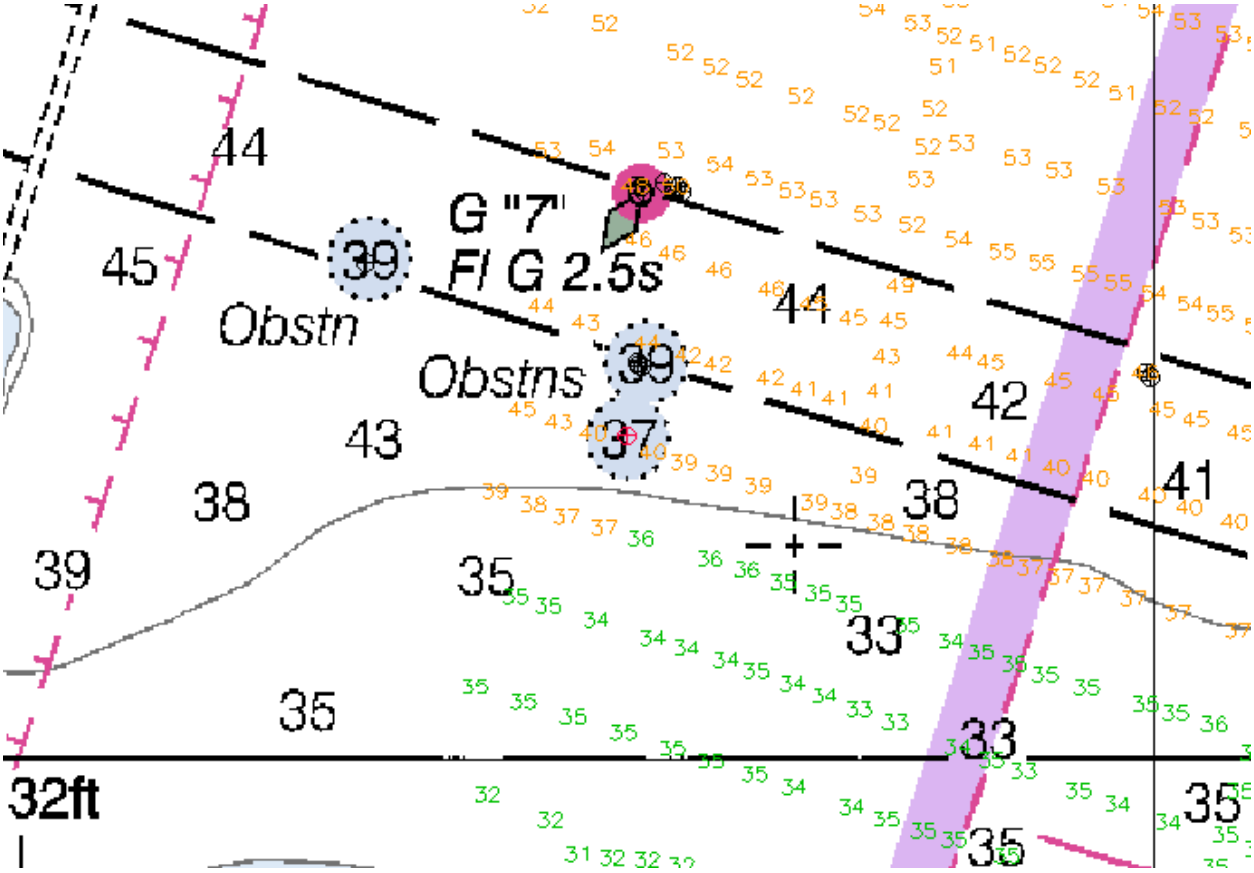


Figure 1.6.1

1.7) charted 60-ft OBSTRN

Survey Summary

Survey Position: 36° 57' 18.3" N, 076° 01' 06.6" W

Least Depth: 18.32 m (= 60.09 ft = 10.015 fm = 10 fm 0.09 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.867 m ; **TVU (TPEv)** ±0.206 m

Timestamp: 2007-249.16:10:05.831 (09/06/2007)

Survey Line: h11603 / ru_mb / 2007-249 / 902_1609

Profile/Beam: 348/213

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

60-FT charted obstruction found during 200% side scan coverage with least depth determined during MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-249/902_1609	348/213	0.00	000.0	Primary
h11603/ru_mb/2007-249/866_1605	374/173	2.43	292.5	Secondary
h11603/ru_ss/2006-319/212_1937	0001	10.55	098.1	Secondary
h11603/ru_ss/2006-304/116_1909	0001	17.95	112.3	Secondary

Hydrographer Recommendations

Retain as charted

Cartographically-Rounded Depth (Affected Charts):

60ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

10fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 18.315 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Object is not significant. Delete 60 ft Obstn and notation Obstn from the chart.

Feature Images

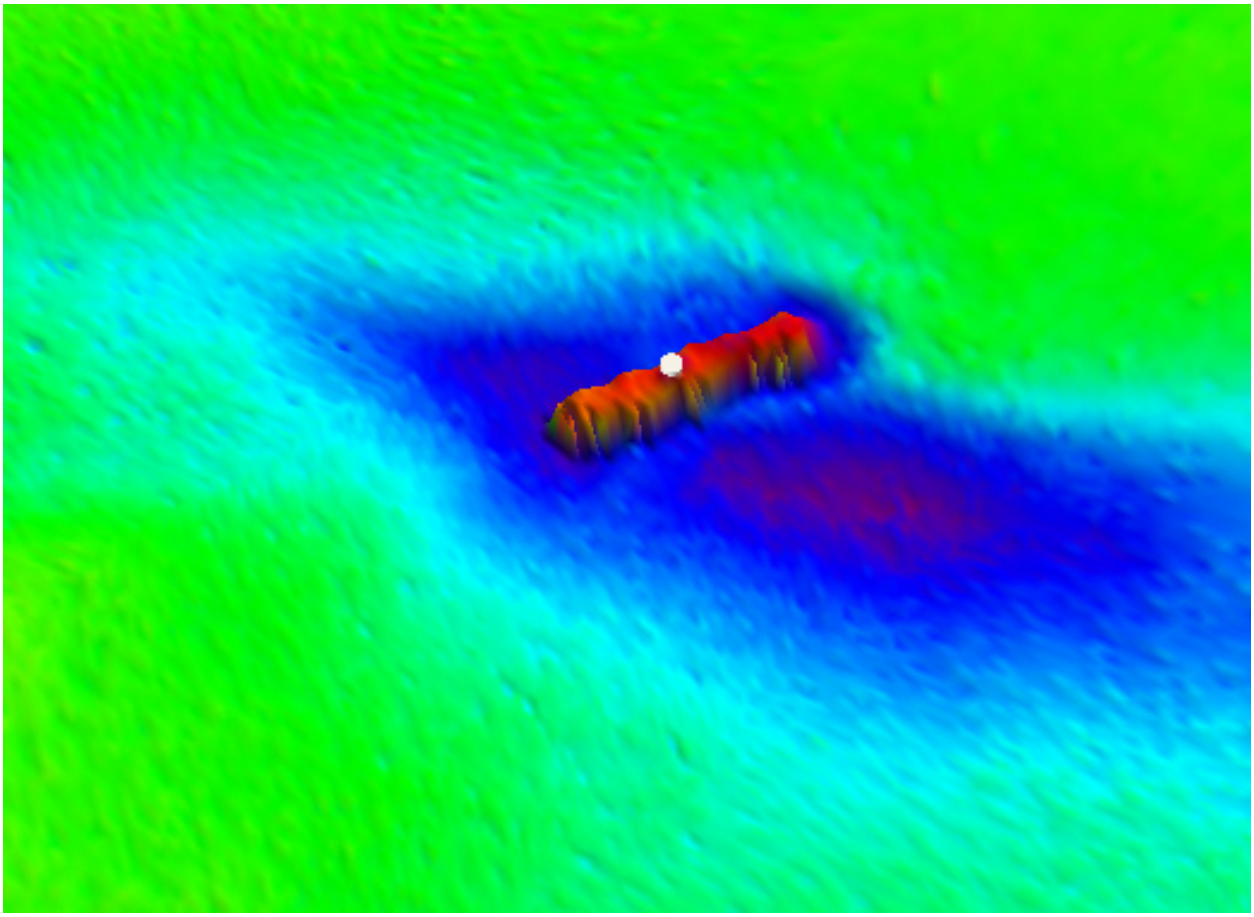


Figure 1.7.1

1.8) pound net

Survey Summary

Survey Position: 36° 55' 39.2" N, 076° 03' 03.1" W

Least Depth: [None]

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

Timestamp: 2008-197.07:51:53 (07/15/2008)

Survey Line: h11603 / ru_ss / 2007-227 / 302_1700

Contact/Point: 0001/1

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

These piles are located within a charted area designated as "No Permanent Obstructions". While these piles are supposed to be temporary, it is obvious by their condition that they have been in place for many years.

These Obstructions are the last set of pound nets (1 group of pound nets still fully intact with nets attached the other lays to the north which is the remaining piles from last years pound nets. The ruins piles bear towards shore at 150* and the piles from the main group bear 141* to shore.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_ss/2007-227/302_1700	0001	0.00	000.0	Primary
h11603/ru_mb/2007-242/969_1833	3276/1	3.47	249.1	Secondary
h11603/ru_mb/2007-242/969_1833	3147/1	15.03	234.9	Secondary

Hydrographer Recommendations

Remove the charted "No Permanent Obstruction" area and chart a row of piles based on the position, and S-57 attribution specified in this report.

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: SORDAT - 20070913

SORIND - US,US,survy,H11603

Office Notes

Do not concur. Do not chart individual piles. Retain the charted limits of fishing area.

2 - New Features

2.1) uncharted 40-ft OBSTRN

Survey Summary

Survey Position: 36° 56' 53.8" N, 076° 02' 34.9" W

Least Depth: 12.39 m (= 40.65 ft = 6.774 fm = 6 fm 4.65 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.856 m ; **TVU (TPEv)** ±0.188 m

Timestamp: 2007-241.17:50:41.077 (08/29/2007)

Survey Line: h11603 / ru_mb / 2007-241 / 899_1750

Profile/Beam: 513/185

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

Obstn found during 200% side scan coverage with least depth determined during MBES development. Feature rises approximately 1 meter off the seafloor.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-241/899_1750	513/185	0.00	000.0	Primary
h11603/ru_ss/2007-073/208_1324	0001	11.52	115.4	Secondary
h11603/ru_ss/2006-305/107_1518	0001	16.34	122.3	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

40ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

6 ¾fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 12.389 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous obstruction at the survey position with a least depth of 40-ft.

Feature Images

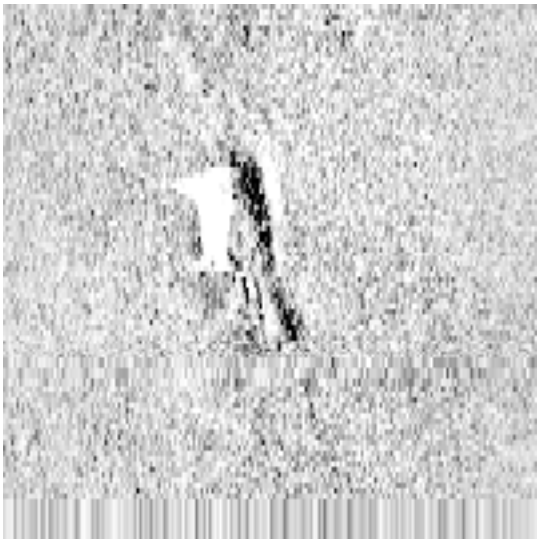


Figure 2.1.1

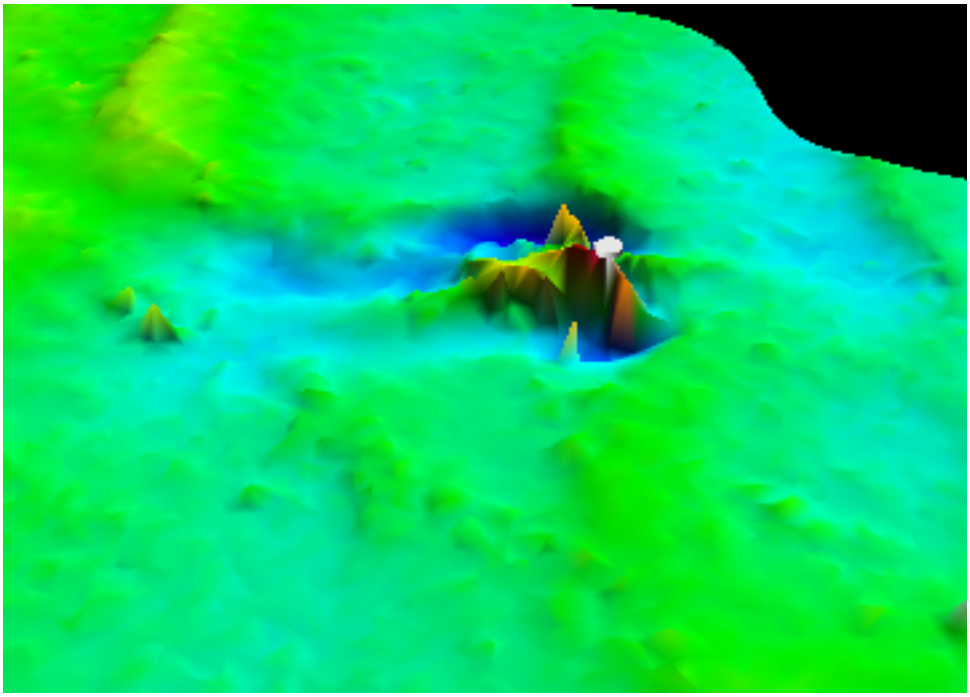


Figure 2.1.2

2.2) uncharted 36-ft OBSTRN

Survey Summary

Survey Position: 36° 56' 04.9" N, 076° 03' 04.5" W

Least Depth: 11.10 m (= 36.42 ft = 6.071 fm = 6 fm 0.42 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.871 m ; **TVU (TPEv)** ±0.191 m

Timestamp: 2007-242.16:45:12.658 (08/30/2007)

Survey Line: h11603 / ru_mb / 2007-242 / 883_1644

Profile/Beam: 376/20

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Obstn found during 200% side scan coverage with least depth determined during MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-242/883_1644	376/20	0.00	000.0	Primary
h11603/ru_ss/2007-211/126_1630	0002	3.69	000.1	Secondary
h11603/ru_ss/2007-219/224_1624	0001	4.48	090.3	Secondary
h11603/ru_ss/2007-208/125_1541	0002	4.93	091.1	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

36ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

6fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 11.102 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart the dangerous obstruction at the survey position with a least depth of 36-ft.

Feature Images

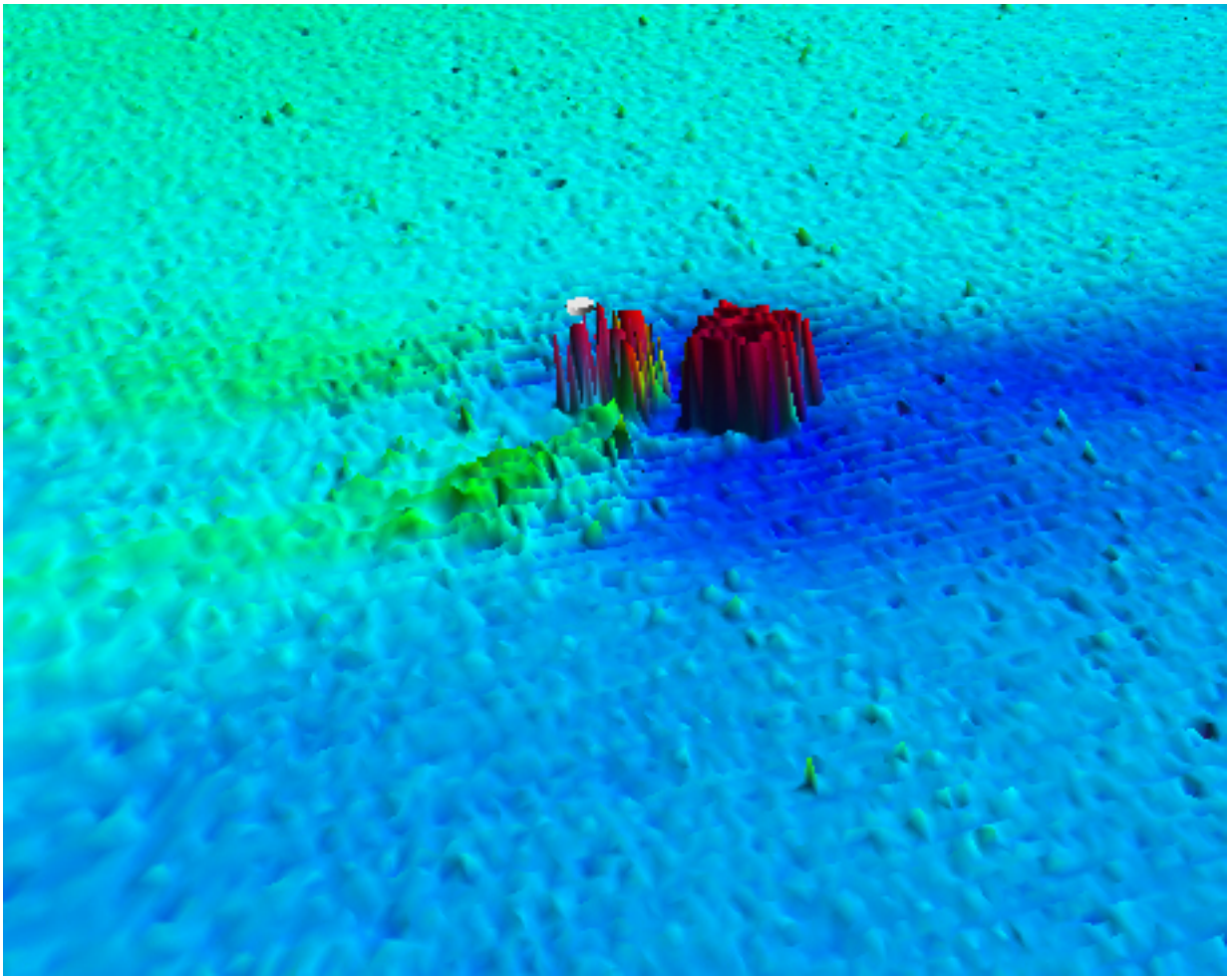


Figure 2.2.1

2.3) uncharted 26-ft OBSTRN

Survey Summary

Survey Position: 36° 55' 40.4" N, 076° 03' 27.4" W

Least Depth: 8.00 m (= 26.24 ft = 4.374 fm = 4 fm 2.24 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.866 m ; **TVU (TPEv)** ±0.183 m

Timestamp: 2007-242.17:44:51.695 (08/30/2007)

Survey Line: h11603 / ru_mb / 2007-242 / 961_1744

Profile/Beam: 467/210

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Obstn found during 200% side scan coverage with least depth determined during MBES development. This feature is the shoaler and more significant of two objects approximately 22 meters apart.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-242/961_1744	467/210	0.00	000.0	Primary
h11603/ru_ss/2007-207/160_1817	0002	4.15	325.8	Secondary
h11603/ru_ss/2007-207/161_1754	0002	4.86	106.8	Secondary
h11603/ru_ss/2007-207/160_1817	0001	19.87	097.2	Secondary
h11603/ru_mb/2007-242/1007	514/205	25.44	094.2	Secondary
h11603/ru_mb/2007-242/962_1739	451/239	26.22	100.7	Secondary
h11603/ru_ss/2007-207/160_1817	0003	30.92	284.5	Secondary
h11603/ru_ss/2007-207/161_1754	0001	32.42	097.4	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

26ft (12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2)

4 ¼fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 7.999 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart the current feature, with the annotation "Obstns".

Feature Images

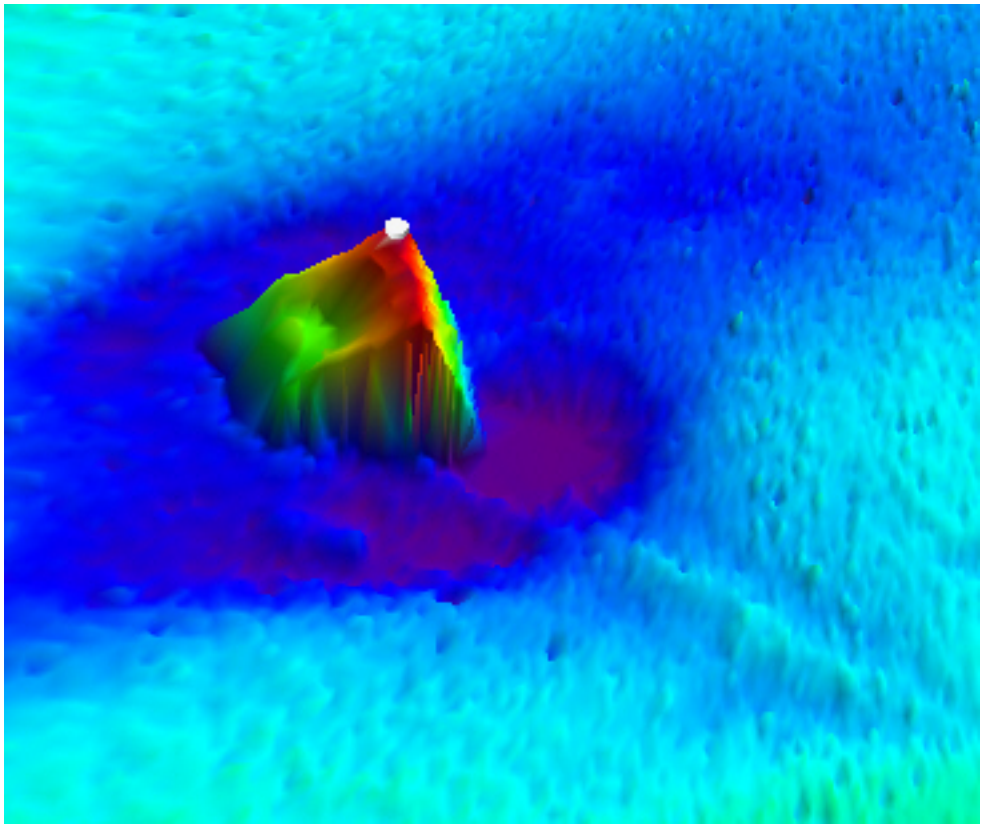


Figure 2.3.1

2.4) uncharted 36-ft OBSTRN

Survey Summary

Survey Position: 36° 59' 28.8" N, 076° 01' 53.5" W

Least Depth: 10.99 m (= 36.07 ft = 6.012 fm = 6 fm 0.07 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.865 m ; **TVU (TPEv)** ±0.186 m

Timestamp: 2007-248.17:56:50.675 (09/05/2007)

Survey Line: h11603 / ru_mb / 2007-248 / 847_1756

Profile/Beam: 377/149

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

Obstn found during 200% side scan coverage with least depth determined during MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-248/847_1756	377/149	0.00	000.0	Primary
h11603/ru_mb/2007-248/869_1801	365/48	2.09	174.8	Secondary
h11603/ru_ss/2006-319/237_1531	0001	4.39	304.5	Secondary
h11603/ru_ss/2006-305/137_2002	0001	14.30	293.1	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

36ft (12254_1, 12222_1, 12208_1, 12221_1, 12280_2)

6fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 10.995 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart 36-ft dangerous obstruction at the survey position.

Feature Images

Figure 2.4.1

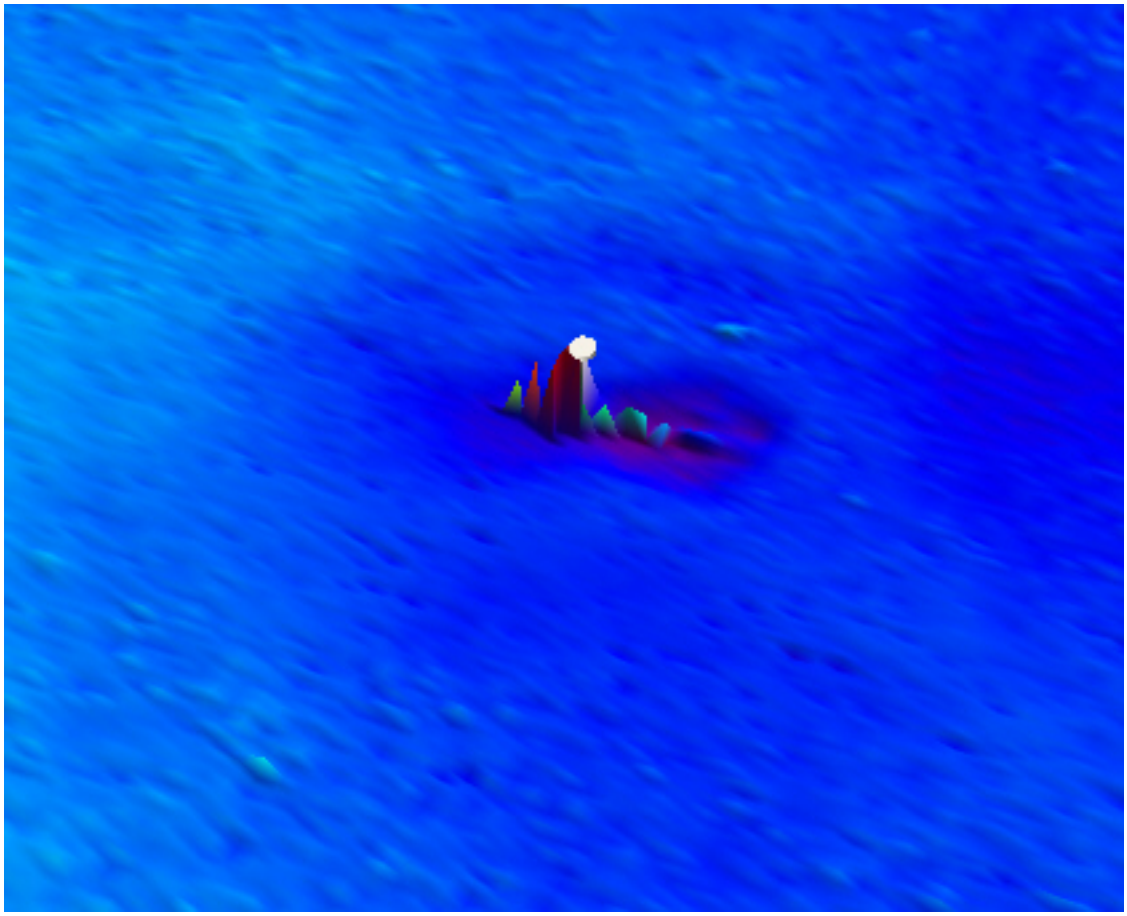


Figure 2.4.2

2.5) uncharted 36-ft OBSTRN

Survey Summary

Survey Position: 36° 57' 18.8" N, 076° 02' 58.5" W

Least Depth: 11.13 m (= 36.53 ft = 6.088 fm = 6 fm 0.53 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.854 m ; **TVU (TPEv)** ±0.190 m

Timestamp: 2007-073.15:45:01.733 (03/14/2007)

Survey Line: h11603 / ru_mb / 2007-073 / 800_1544

Profile/Beam: 825/220

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

Obstn found during 200% side scan coverage with least depth determined during MBES development. Item found to be over a meter in height, south of Thimble Shoal South Auxillary Channel.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-073/800_1544	825/220	0.00	000.0	Primary
h11603/ru_ss/2007-072/204_1503	0001	11.60	278.0	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

36ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

6fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 11.133 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous obstruction at the survey position with a least depth of 36-ft.

Feature Images

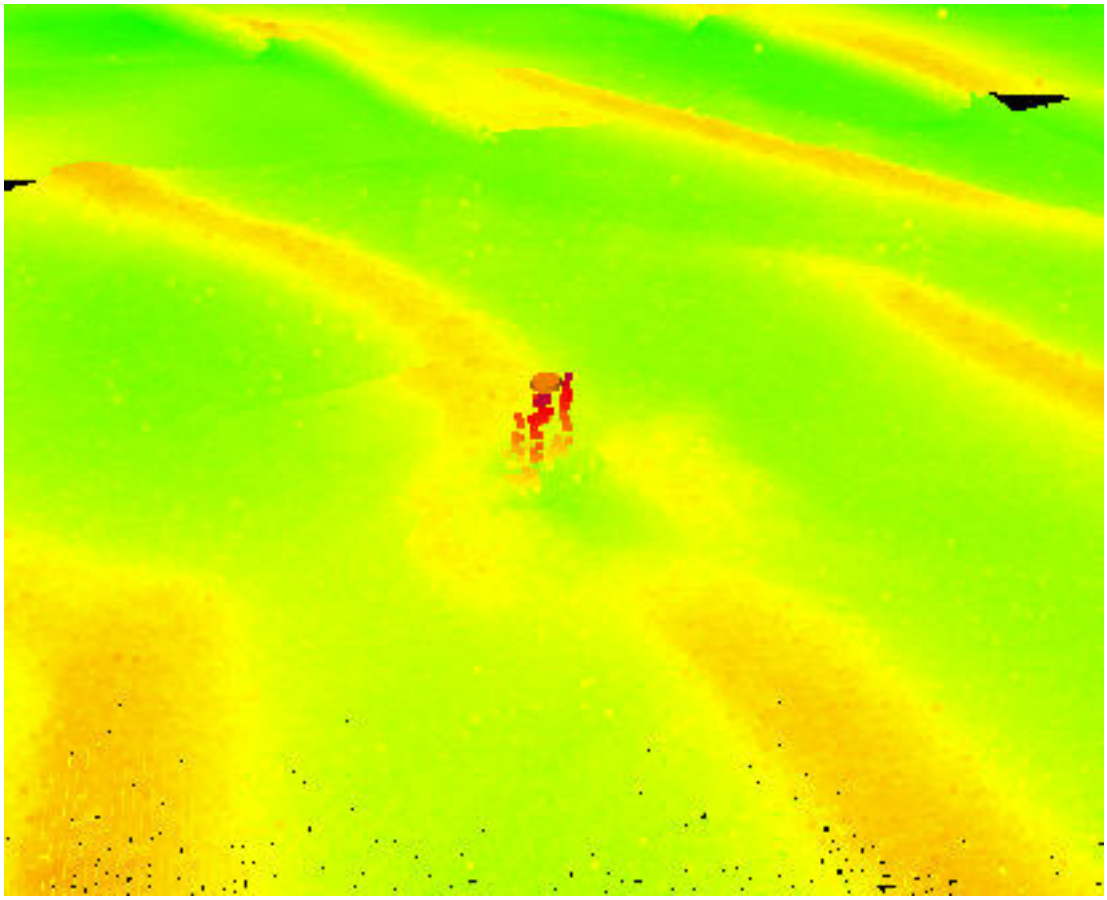


Figure 2.5.1

2.6) uncharted OBSTRN in channel

Survey Summary

Survey Position: 36° 57' 53.8" N, 076° 04' 45.4" W

Least Depth: 16.68 m (= 54.73 ft = 9.121 fm = 9 fm 0.73 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.873 m ; **TVU (TPEv)** ±0.209 m

Timestamp: 2007-250.14:05:57.228 (09/07/2007)

Survey Line: h11603 / ru_mb / 2007-250 / 406_1354

Profile/Beam: 6894/227

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-250/406_1354	6894/227	0.00	000.0	Primary
h11603/ru_ss/2007-072/203_1608	0002	2.05	192.9	Secondary
h11603/ru_ss/2006-304/102_1727	0002	3.29	254.5	Secondary
h11603/ru_mb/2007-253/407_1646	6853/21	3.55	284.7	Secondary
h11603/ru_mb/2007-253/407_1646	0001	8.30	307.7	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 16.681 m

Office Notes

The feature is marginally significant. The least depth is deeper than the controlling depth. Recommend do not chart feature.

Feature Images

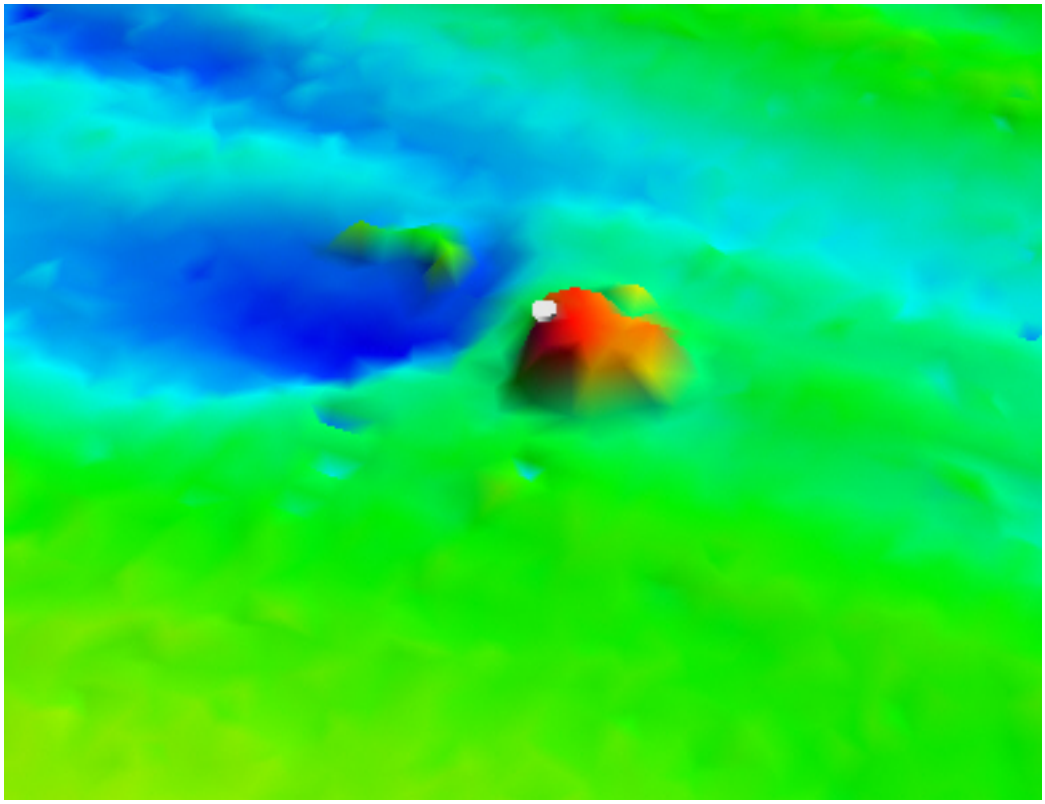


Figure 2.6.1

2.7) uncharted 26-ft OBSTRN

Survey Summary

Survey Position: 36° 57' 24.2" N, 076° 06' 03.5" W

Least Depth: 8.03 m (= 26.34 ft = 4.389 fm = 4 fm 2.34 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.862 m ; **TVU (TPEv)** ±0.191 m

Timestamp: 2007-247.18:24:48.687 (09/04/2007)

Survey Line: h11603 / ru_mb / 2007-247 / 985_1824

Profile/Beam: 660/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Obstn found during 200% side scan coverage with least depth determined during MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-247/985_1824	660/1	0.00	000.0	Primary
h11603/ru_mb/2007-247/986_1819	365/203	0.45	171.5	Secondary
h11603/ru_ss/2007-073/115_1648	0001	5.40	108.0	Secondary
h11603/ru_ss/2007-218/216_1632	0001	6.49	135.1	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

26ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2)

4 ¼fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 8.027 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous obstruction at the survey position with least depth of 26-ft.

Feature Images

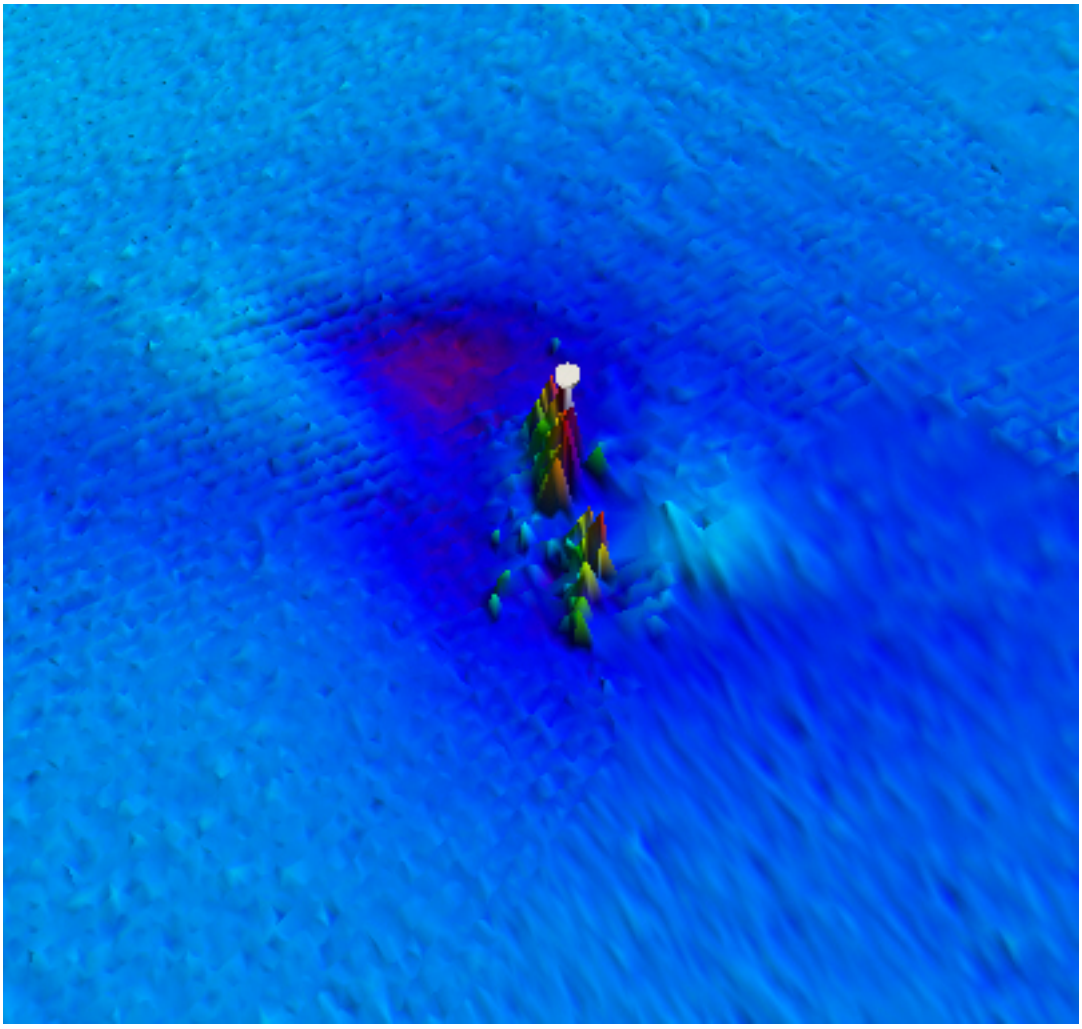


Figure 2.7.1

2.8) uncharted 55-ft OBSTRN

Survey Summary

Survey Position: 36° 56' 44.1" N, 076° 01' 27.3" W

Least Depth: 16.97 m (= 55.69 ft = 9.281 fm = 9 fm 1.69 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.865 m ; **TVU (TPEv)** ±0.198 m

Timestamp: 2007-242.15:33:33.715 (08/30/2007)

Survey Line: h11603 / ru_mb / 2007-242 / 910_1533

Profile/Beam: 305/77

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-242/910_1533	305/77	0.00	000.0	Primary
h11603/ru_mb/2007-242/898_1528	168/62	1.33	175.3	Secondary
h11603/ru_ss/2007-072/206_1747	0001	15.47	117.4	Secondary
h11603/ru_ss/2006-305/106_1447	0001	16.91	291.4	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

55ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

9 ¼fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

TECSOU - 3:found by multi-beam

VALSOU - 16.974 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

The hydrographer orginally selected a slightly deeper sounding as the least depth and classified the feature as insignificant. The current least depth renders the feature marginally significant.

Chart a dangerous obstruction at the present survey position with a least depth of 55-ft.

Feature Images

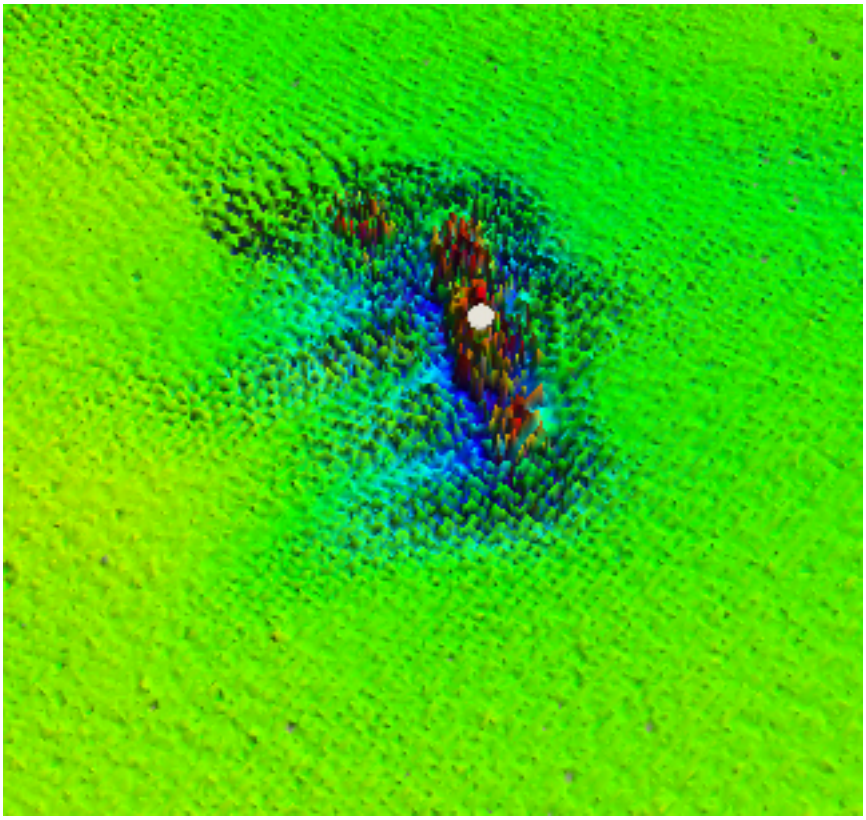


Figure 2.8.1

3 - AWOIS Features

3.1) charted 39-ft OBSTRN (AWOIS 10596)

Primary Feature for AWOIS Item #10596

Search Position: 36° 58' 10.7" N, 076° 06' 17.3" W

Historical Depth: 11.89 m

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

F00450/99-- OPR-E350-RU; UNCHARTED OBSTRUCTION LOCATED DURING OFFICE PROCESSING. LD DEPTH OF 39 FEET (11.9 METERS) LOCATED IN LAT. 36-58-10.74N, LONG. 76-06-17.35W. EVALUATOR RECOMMENDS CHARTING A 39 OBSTN AS SURVEYED. (ENT 4/27/00, SJV)

Survey Summary

Survey Position: 36° 58' 10.9" N, 076° 06' 17.5" W

Least Depth: [None]

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

Timestamp: 2007-199.11:38:26 (07/18/2007)

Survey Line: h11603 / ru_ss / 2007-072 / 204_1501

Contact/Point: 0001/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

AWOIS #10596, a Charted 39 Ft Obstn, was detected with 200% SSS. No MBES developments conducted on this feature.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_ss/2007-072/204_1501	0001	0.00	000.0	Primary
h11603/ru_ss/2006-304/104_1622	0001	2.75	349.9	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 10596	5.44	310.1	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 2:depth unknown

SORDAT - 20070913

SORIND - US,US,survy,H11603

TECSOU - 2:found by side scan sonar

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. A side scan contact with a calculated shadow height of 1.5 meters was found at the position of AWOIS 10596. No bathymetry data were acquired at the position of the current feature. Also, nothing conclusive was found at 36°58'08.852" N, 076°06'17.863" W, the position of an adjacent charted dangerous obstruction. These two adjacent charted dangerous obstructions have the annotation "Obstns". Retain the dangerous obstructions. Also refer to the recommendation for feature "charted 37-ft OBSTRN (unaddressed by field)".

3.2) AWOIS #818 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 55' 23.5" N, 076° 04' 35.8" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

DESCRIPTION■ 24 NO.1004; POSITION ACCURACY WITHIN 1 MILE; LOCATED 1945 (SOURCE UNK.);■ REPORTED THROUGH H.O. CHART RECORDS, DATED 1954

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

This item is not presently charted on 12221 and was not detected with 200% SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 818	0.00	000.0	Primary

Hydrographer Recommendations

S-57 Data

[None]

Office Notes

No feature is charted at the AWOIS position, and no feature was found at the AWOIS position. No charting action is required.

3.3) AWOIS #821 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 55' 42.5" N, 076° 03' 58.7" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

NM DATED 8/1/16■DESCRIPTION■ 24 NO.1326; BARGE; SUNK 1916; POSITION ACCURACY WITHIN 1 MILE

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

This item is not presently charted on 12221 and was not detected with 200% SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 821	0.00	000.0	Primary

Hydrographer Recommendations

S-57 Data

[None]

Office Notes

No feature is charted at the AWOIS position, and no feature was found at the AWOIS position. No charting action is required.

3.4) AWOIS #837 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 57' 00.5" N, 076° 02' 58.8" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

NM DATED 4/30/44■DESCRIPTION■ 24 NO.1309; SUNK 3/00/44; POSITION ACCURACY WITHIN 1 MILE; SUBSEQUENTLY■ FAILED TO LOCATE

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

This item is not presently charted on 12221 and was not detected with 200% SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 837	0.00	000.0	Primary

Hydrographer Recommendations

S-57 Data

[None]

Office Notes

No feature is charted at the AWOIS position, and no feature was found at the AWOIS position. No charting action is required.

3.5) AWOIS #841 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 57' 19.5" N, 076° 04' 53.8" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

NM DATED 6/13/47■DESCRIPTION■ 24 NO.1303; POSITION ACCURACY WITHIN 1 MILE, UNKNOWN AUTHORITY REPORTED■ FAILURE TO LOCATE.

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

This item is not presently charted on 12221 and was not detected with 200% SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 841	0.00	000.0	Primary

Hydrographer Recommendations

S-57 Data

[None]

Office Notes

No feature is charted at the AWOIS position, and no feature was found at the AWOIS position. No charting action is required.

3.6) AWOIS #853 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 57' 34.5" N, 076° 04' 29.8" W

Historical Depth: 9.45 m

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

NM DATED 6/13/47■DESCRIPTION■ 24 NO.1302; POSITION ACCURACY WITHIN 1 MILE; WD CLEARED TO 31 FT. (SOURCE■ UNK.)

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

This item is not presently charted on 12221 and was not detected with 200% SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 853	0.00	000.0	Primary

Hydrographer Recommendations

S-57 Data

[None]

Office Notes

No feature is charted at the AWOIS position, and no feature was found at the AWOIS position. No charting action is required.

3.7) AWOIS #890 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 59' 05.5" N, 076° 02' 58.8" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

NM DATED 1/31/45■■ DESCRIPTION■ 24 NO.1306; POSITION ACCURACY WITHIN 1 MILE, UNKNOWN AUTHORITY REPORTED■ WRECKAGE SCATTERED.

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

This item is not presently charted on 12221 and was not detected with 200% SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 890	0.00	000.0	Primary

Hydrographer Recommendations

S-57 Data

[None]

Office Notes

No feature is charted at the AWOIS position, and no feature was found at the AWOIS position. No charting action is required.

3.8) AWOIS #3767 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 57' 47.5" N, 076° 04' 40.3" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

H9255/71WD-- OPR-467-RH-71; ITEM NO. 19; 1:20,000-SCALE SURVEY; RAYDIST (HYPERBOLIC R/R) CONTROL; IRON PIPE, 1 FOOT IN DIA., EXTENDING 4 FEET OFF BOTTOM IN LAT. 36-57-47N, LONG. 76-04-41.5W; ESTIMATED 35-FOOT HANG; NOT CLEARED; EVALUATOR RECOMMENDED CHARTING AS SUBM. OBSTR.■ H9814/80-- OPR-D103-PE-80; 1:10,000-SCALE SURVEY; ARGO (R/R), DELNORTE (R/A) CONTROL; EVALUATOR CONCURRED WITH RECOMMENDATION IN H9255. (ENT 11/20/84, MSM)■ FE387SS/94-- OPR-E696-HE; 2 INSIGNIFICANT CONTACTS FOUND. EVALUATOR RECOMMENDS DELETING FROM CHART. (UP 9/12/95, SJV)

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

This item is not present on Chart 12254 or 12221 and was not detected with 200% SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 3767	0.00	000.0	Primary

Hydrographer Recommendations

S-57 Data

[None]

Office Notes

No feature is charted at the AWOIS position, and no feature was found at the AWOIS position. No charting action is required.

3.9) AWOIS #9542 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 57' 50.7" N, 076° 04' 41.2" W

Historical Depth: 14.02 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; INDICATION OF AN OBSTRUCTION ON FATHOGRAM 3 TIMES IN VICINITY OF CHARTED BUOY WHICH WAS REPORTED MISSING BY COAST GUARD. NEW BUOY ANCHOR WAS DROPPED IN CLOSE PROXIMITY. EVALUATOR RECOMMENDS CHARTING AN OBSTRUCTION SINCE NO DOCUMENTATION EXISTS OF REMOVAL OF OLD ANCHOR. FATHO. LD OF 13.7 METERS (45 FEET) LOCATED IN LAT. 36-57-50.61N, LONG. 76-04-41.01W. (ENT 9/12/95, SJV)■ F00439/98-- S-E900-RU; ITEM LOCATED IN LAT, 36-57-50.73N, LONG. 76-04-41.18W WITH A MULTIBEAM LD OF 46.0 FEET. ITEM BELIEVED TO BE AN OLD BUOY ANCHOR. EVALUATOR RECOMMENNDS DELETING CHARTED OBSTN 45 FT AND CHARTING AN OBSTN 46 FT AS SURVEYED. (UP 8/16/99, SJV)

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Buoy Block chain from G"5" was detected with 8125 RESON multibeam. No other items were detected with in the 50 meter radius of this AWOIS item.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 9542	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted 46 foot Obstn.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

TECSOU - 3:found by multi-beam

VALSOU - 14.0208 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Also, remove notation "Obstn".

3.10) AWOIS #9543 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 56' 09.0" N, 076° 02' 32.1" W

Historical Depth: 14.63 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; TWO OBSTRUCTIONS LOCATED IN CLOSE PROXIMITY OF EACH OTHER. ONE IN LAT. 36-56-09.98N, LONG. 76-02-32.08W WITH A FATHOMETER LD OF 14.6 METERS (48 FEET) AND THE OTHER IN LAT. 36-56-07.95N, LONG. 76-02-34.88W. EVALUATOR RECOMMENDS ENCLOSING BOTH OBSTRUCTIONS WITH A DANGER CURVE WITH LABEL 48-FOOT OBSTR. (ENT 9/12/95, SJV)

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

AWOIS #9543, a charted 48 ft Obstn, was not detected during 200% SSS coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 9543	0.00	000.0	Primary
ChartGPs - Digitized	3	98.47	066.3	Secondary (grouped)

Hydrographer Recommendations

Remove charted 48 foot Obstn.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

TECSOU - 2:found by side scan sonar

VALSOU - 14.6304 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. AWOIS 9543 refers to two obstructions. Although the AWOIS history includes a recommendation to enclose both obstructions with a single danger curve, two separate obstructions are currently charted, with the annotation "Obstns". Delete both obstructions and the annotation "Obstns".

3.11) AWOIS #9546 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 57' 05.7" N, 076° 03' 24.7" W

Historical Depth: 11.58 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. COMPUTED HEIGHT OFF BOTTOM 1.0 METERS IN 13.6 METERS. VISIBILITY 5-6 FEET. DIVERS DESCRIBE BADLY CORRODED METAL CONTAINERS. PNEUMO. LD OF 40 FEET IN LAT. 36-57-07.421N, LONG. 76-03-23.419W. LORAN-C RATES (9960 CHAIN): W=15939.1, X=27190.5, Y=41282.8, Z=58516.4. EVALUATOR RECOMMENDS CHARTING AN OBSTRUCTION WITH A FATHOMETER LD OF 11.6 METERS (38 FEET) IN LAT. 36-57-05.73N, LONG. 76-03-24.68W. SEVERAL SIDE SCAN SONAR CONTACTS LIE IN CLOSE PROXIMITY. DIVERS DESCRIBE 2 AREAS OF SCATTERED DEBRIS WHICH APPEAR TO BE STEEL CONTAINERS. PNEUMO. LD OF 12.2 METERS (40 FEET) IN LAT. 36-57-07.032N, LONG. 76-03-24.878W. LORAN-C RATES (9960 CHAIN): W=15939.1, X=27190.6, Y=41282.6, Z=58516.2. WOODEN TIMBERS ALSO LYING ON BOTTOM. EVALUATOR DOES NOT RECOMMEND CHARTING THESE ITEMS DUE TO THE 38-FOOT FATHOMETER DEPTH (ABOVE). (ENT 9/12/95,SJV)

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

AWOIS #9546 not detected with 200% SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 9546	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted 38 foot Obstn and charted 39 ft Obstn.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

TECSOU - 2:found by side scan sonar

VALSOU - 11.5824 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete AWOIS 9546 from the chart. See also AWOIS 9547.

3.12) AWOIS #9547 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 57' 10.6" N, 076° 03' 27.2" W

Historical Depth: 12.13 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SONAR CONTACT. COMPUTED HEIGHT OFF BOTTOM OF 0.9 METERS IN 12.9 METERS. DIVERS DESCRIBE A CYLINDRICAL PIPE 8 FEET 9 INCHES LONG AND 3 FEET IN DIA. PNEUMO. LD OF 12.1 METERS (39 FEET) IN LAT. 36-57-10.545N, LONG. 76-03-27.170W. EVALUATOR RECOMMENDS CHARTING A 12.1 METER OBSTR AS SURVEYED. LORAN-C RATES (9960 CHAIN): W-15939.2, X=27191.0, Y=41283.3, Z=58516.4. VISIBILITY 6-10 FEET. PIPE IS HEAVILY ENCRUSTED WITH MARINE GROWTH AND BADLY RUSTED. (ENT 9/12/95, SJV)

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

AWOIS #9547 not detected with 200% SSS

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 9547	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted 39 foot Obstn.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 12.13104 m

Office Notes

Concur with clarification. Delete AWOIS 9547 from the chart. See also AWOIS 9546.

3.13) AWOIS #9554 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 36° 55' 53.4" N, 076° 03' 03.4" W

Historical Depth: 11.28 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. COMPUTED HEIGHT OF 0.7 METERS IN 12.8 METERS. DIVERS DESCRIBE 25-FOOT LONG PIPE WITH WITH A CEMENT OR METAL BLOCK AT ONE END. PNEUMO. LD OF 11.5 METERS (37 FEET) IN LAT. 36-55-53.368N, LONG. 76-03-03.406W. VISIBILITY 1 FOOT. EVALUATOR RECOMMENDS CHARTING AS SURVEYED. LORAN-C RATES (9960 CHAIN): W=15937.2, X=27187.0, Y=41269.2, Z=58513.1. LD OBTAINED ON BLOCK. (ENT 9/12/95, SJV)

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

37 ft Obstn not detected with 200% SSS

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 9554	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted 37 foot Obstn.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

TECSOU - 2:found by side scan sonar

VALSOU - 11.2776 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Also, remove notation "Obstn".

3.14) AWOIS #10793 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 37° 01' 03.2" N, 076° 02' 46.2" W

Historical Depth: 15.24 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

H10952/00-- OPR-E350-RU; AN UNCHARTED SUBMERGED OBSTRUCTION WAS LOCATED BY SIDE SCAN SONAR SEARCH. DIVER LD OF 50 FEET IN LAT. 37-01-02,9N, LONG. 76-02-46.2W. DIVERS DESCRIBE A LARGE METAL BOX, 30 FEET LONG AND 6 FEET WIDE, OPEN ON TOP WITH 3 EVENLY SPACED COMPARTMENTS. THE NORTH SIDE OF THE BOX WAS BURIED IN SAND AND THE SOUTH SIDE STOOD 3 FEET OFF THE SEA FLOOR. THE HYDROGRAPHER RECOMMENDED CHARTING A 50 OBSTN AS SURVEYED. THE EVALUATOR DID NOT CONCUR. THIS FEATURE WAS FOUND TO BE IN ERROR. DURING OFFICE PROCESSING AN OBSTRUCTION WITH A LD OF 55 FEET (16.8 METERS) WAS LOCATED IN LAT. 37-01-03.22N, LONG. 76-02-45.21 AND IS SHOWN ON THE SMOOTH SHEET. THE EVALUATOR CONSIDERS THIS ITEM INSIGNIFICANT SINCE IT IS LOCATED IN DEPTHS OF 54-55 FEET. EVALUATOR RECOMMENDS NOT CHARTING. N/CS31 (OPERATIONS BRANCH, HYDROGRAPHIC SURVEYS DIVISON) DOES NOT CONCUR WITH EVALUATOR'S RECOMMENDATION. N/CS31 RECOMMENDS CHARTING THE OBSTRUCTION AS FOUND DURING OFFICE PROCESSING AND AS SHOWN ON THE SMOOTH SHEET. (ENT 11/7/00, SJV)

Survey Summary

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

AWOIS #10793, a Charted 55 foot Obstn, was not detected with 200% SS or 100% MBES in current surveyed position.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_OPR-E350-RU-07	AWOIS # 10793	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted 55 foot Obstn.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 15.24 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Also, remove notation "Obstn".

3.15) charted 33-ft OBSTRN (AWOIS 9553)

Primary Feature for AWOIS Item #9553

Search Position: 36° 56' 15.4" N, 076° 03' 02.6" W

Historical Depth: 10.06 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. COMPUTED HEIGHT OF 1.9 METERS IN 12.1 METERS. DIVERS DESCRIBE A BUOY BLOCK WITH CHAIN ATTACHED EXTENDING 5 FEET OFF THE BOTTOM. PNEUMO LD OF 10.3 METERS (33 FEET) IN LAT. 36-56-15.379N, LONG. 76-03-02.631W. VISIBILITY 3 FEET. LORAN-C RATES (9960 CHAIN): W=15937.4, X=27187.6, Y=41273.4, Z=58514.5. (ENT 9/12/95, SJV)

Survey Summary

Survey Position: 36° 56' 16.3" N, 076° 03' 02.5" W

Least Depth: 11.14 m (= 36.55 ft = 6.091 fm = 6 fm 0.55 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.853 m ; **TVU (TPEv)** ±0.186 m

Timestamp: 2007-241.18:19:15.901 (08/29/2007)

Survey Line: h11603 / ru_mb / 2007-241 / 884_1818

Profile/Beam: 476/47

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Current status of AWOIS #9553 shows a least depth deeper than the charted 33ft. Located with 200% SSS and developed with RESON 8125 MBES. Least depth 36 ft (11 meters).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-241/884_1818	476/47	0.00	000.0	Primary
AWOIS_OPR-E350-RU-07	AWOIS # 9553	27.94	005.2	Secondary
h11603/ru_mb/2007-241/886_1807	487/8	31.85	233.0	Secondary
h11603/ru_ss/2007-218/221_1904	0002	40.14	180.9	Secondary
h11603/ru_ss/2007-073/122_1806	0003	41.22	174.5	Secondary

Hydrographer Recommendations

Remove the currently charted 33 ft Obstn. Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

36ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

6fm (13003_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20070913
	SORIND - US,US,nsurf,H11603
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 11.139 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. The feature is insignificant. Remove the charted 33-ft dangerous obstruction. Chart present survey soundings.

Feature Images

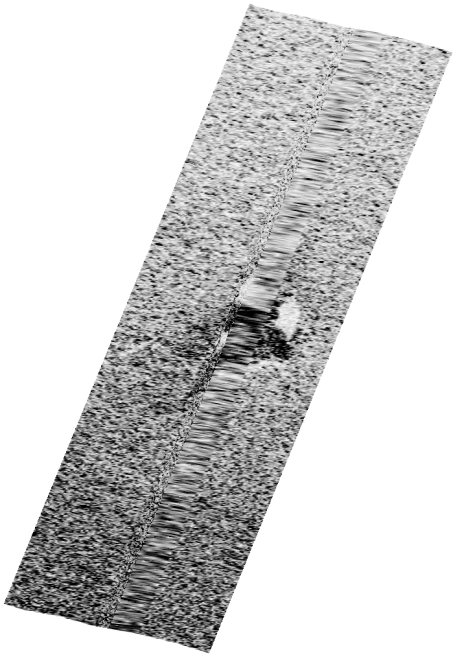


Figure 3.15.1

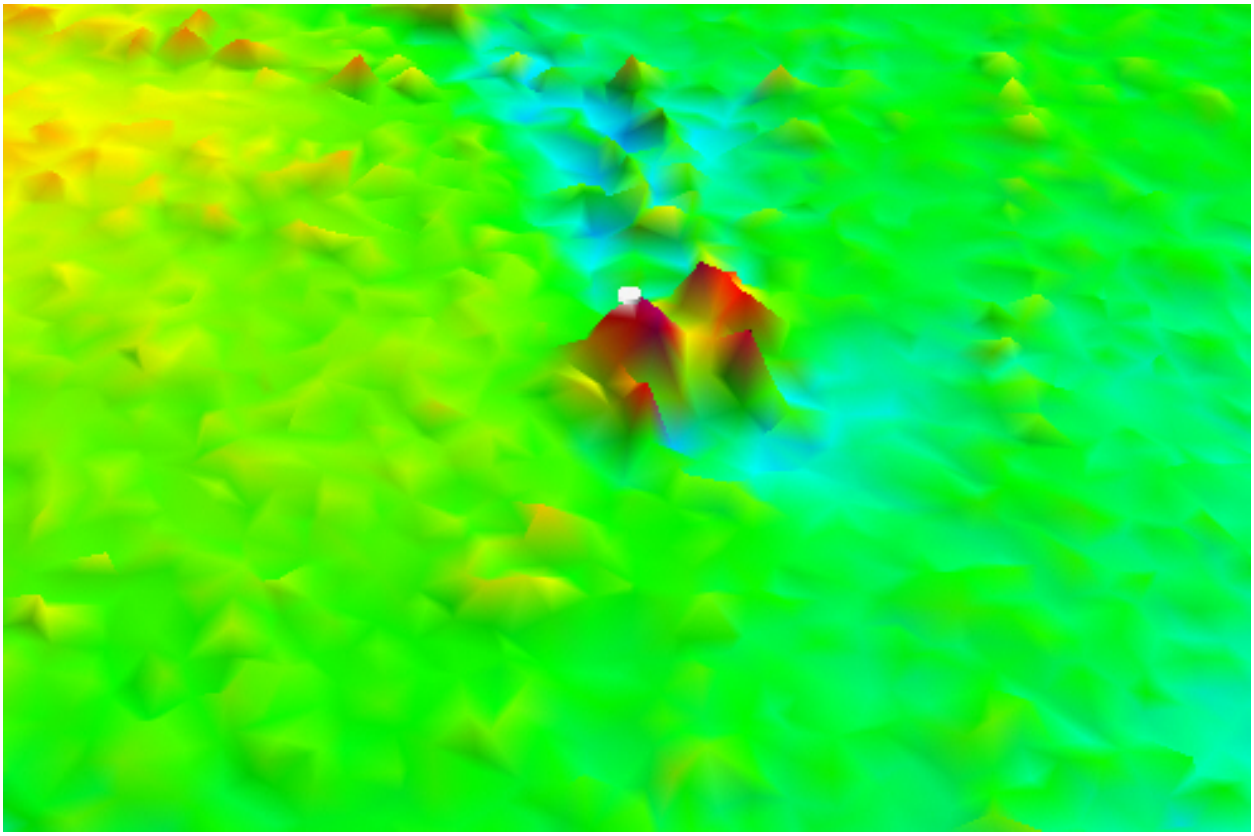


Figure 3.15.2

3.16) charted 40-ft OBSTRN (AWOIS 9555)

Primary Feature for AWOIS Item #9555

Search Position: 36° 56' 48.2" N, 076° 02' 55.7" W

Historical Depth: 12.80 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. COMPUTED HEIGHT OF 1.3 METERS IN 12.7 METERS. DIVERS DESCRIBE A SMALL BARGE OR PONTOON FLOAT LYING UPSIDE DOWN ON BOTTOM WITH A HEIGHT OF 5 FEET OFF BOTTOM. DIVERS PNEUMO. LD OF 12.9 METERS (42 FEET). FATHOMETER DEPTH OF 12.3 METERS (40 FEET) IN SAME LOCATION. EVALUATOR RECOMMENDS CHARTING AN OBSTRUCTION WITH THE FATHOMETER DEPTH AS SURVEYED IN LAT. 36-56-48.231N, LONG. 76-02-55.683W. VISIBILITY 6-10 FEET. ENCRUSTED WITH MARINE GROWTH. LORAN-C RATES (9960 CHAIN): W=15937.4, X=27188.1, Y=41279.9, Z=58517.1. DIMENSIONS OF ITEM ARE 22 X 12 FEET. (ENT 9/12/95, SJV)

Survey Summary

Survey Position: 36° 56' 48.5" N, 076° 02' 55.5" W

Least Depth: 11.78 m (= 38.64 ft = 6.440 fm = 6 fm 2.64 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.862 m ; **TVU (TPEv)** ±0.200 m

Timestamp: 2007-241.17:32:19.533 (08/29/2007)

Survey Line: h11603 / ru_mb / 2007-241 / 911_1731

Profile/Beam: 541/7

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

AWOIS item #9555, 40ft Obstn confirmed with with 200% SSS and RESON 8125 MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-241/911_1731	541/7	0.00	000.0	Primary
h11603/ru_ss/2006-305/113_1624	0001	4.85	087.1	Secondary (grouped)
AWOIS_OPR-E350-RU-07	AWOIS # 9555	8.80	036.5	Secondary
h11603/ru_ss/2006-303/113_1957	0001	9.77	284.7	Secondary

h11603/ru_ss/2007-073/210_1431	0001	12.05	302.2	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

38ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

6 ½fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 11.777 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Revise dangerous obstruction to a 38 ft dangerous obstruction at the present survey position.

Feature Images

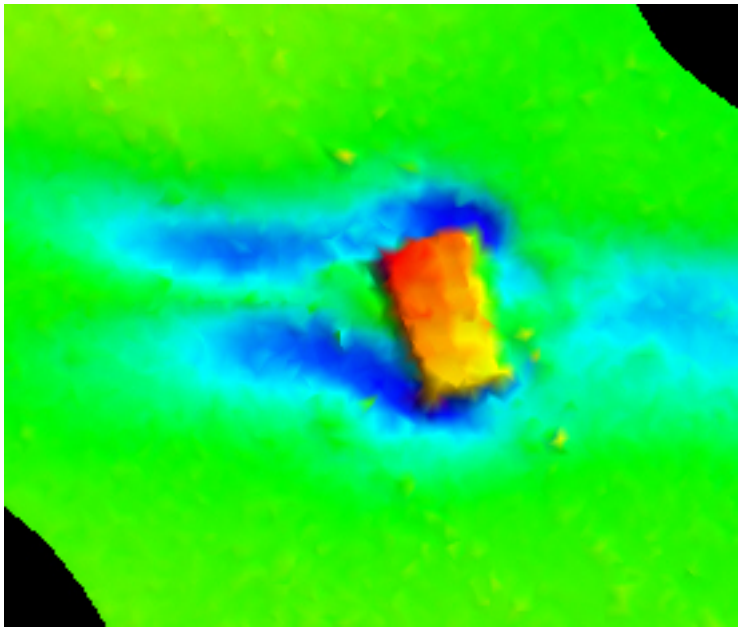


Figure 3.16.1

[Image file h:/compilation/h11603_e350-ru-07/ahb_h11603/pss/images/113_16240001_s.tif does not exist.]

3.17) charted 34-ft OBSTRN (AWOIS 9548)

Primary Feature for AWOIS Item #9548

Search Position: 36° 56' 37.0" N, 076° 03' 10.6" W

Historical Depth: 10.36 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. DIVERS DESCRIBE A 8 X 15-FOOT METAL CONTAINER ENCRUSTED WITH MARINE GROWTH WITH A LENGTH OF CHAIN ON THE TOP. PNEUMO. LD OF 10.6 METERS (34 FEET) IN LAT. 36-56-37.009N, LONG. 76-03-10.589W. FALLS WITHIN AWOIS CIRCLE FOR NOS. 3758, 3759, 3760, AND 3762. EVALUATOR RECOMMENDS CHARTING AN OBSTRUCTION WITH A LD OF 10.6 METERS AS SURVEYED. LORAN-C RATES (9960 CHAIN): W=15938.2, X=27188.8, Y=41277.3, Z=58515.4. (ENT 9/12/95, SJV)

Survey Summary

Survey Position: 36° 56' 37.1" N, 076° 03' 11.1" W

Least Depth: 10.50 m (= 34.44 ft = 5.740 fm = 5 fm 4.44 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.859 m ; **TVU (TPEv)** ±0.188 m

Timestamp: 2007-241.16:37:02.091 (08/29/2007)

Survey Line: h11603 / ru_mb / 2007-241 / 916_1636

Profile/Beam: 468/29

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

AWOIS #9548, 34 FT Obstn confirmed with 200% SSS and MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-241/916_1636	468/29	0.00	000.0	Primary
h11603/ru_ss/2007-073/240_1502	0001	3.17	002.3	Secondary
h11603/ru_ss/2007-218/217_1705	0001	3.71	037.0	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 9548	12.14	278.9	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

34ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

5 ¾fm (13003_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20070913
	SORIND - US,US,nsurf,H11603
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 10.497 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Object is not significant. Delete 34 ft Obstn and notation Obstn from the chart.

Feature Images

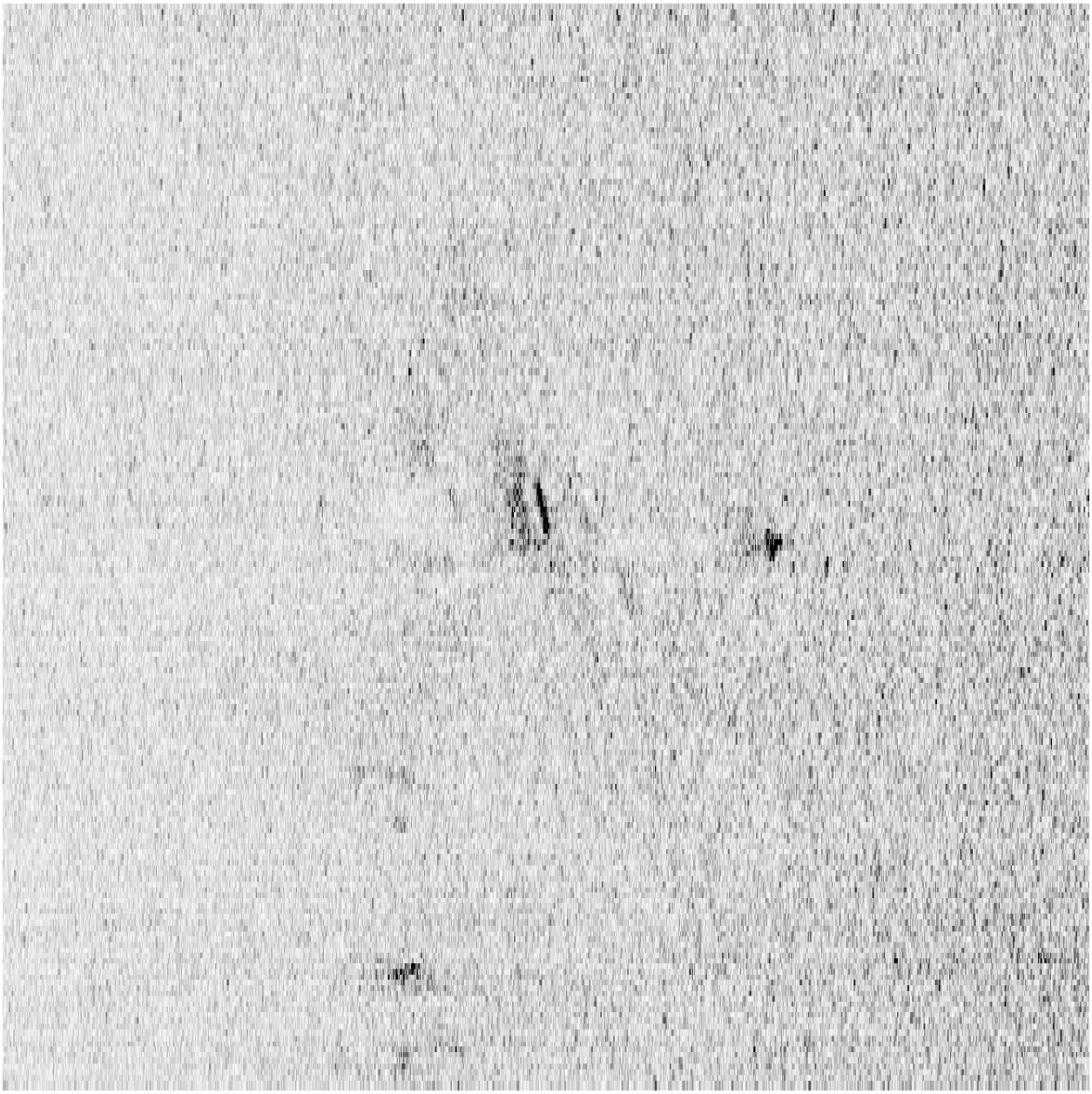


Figure 3.17.1

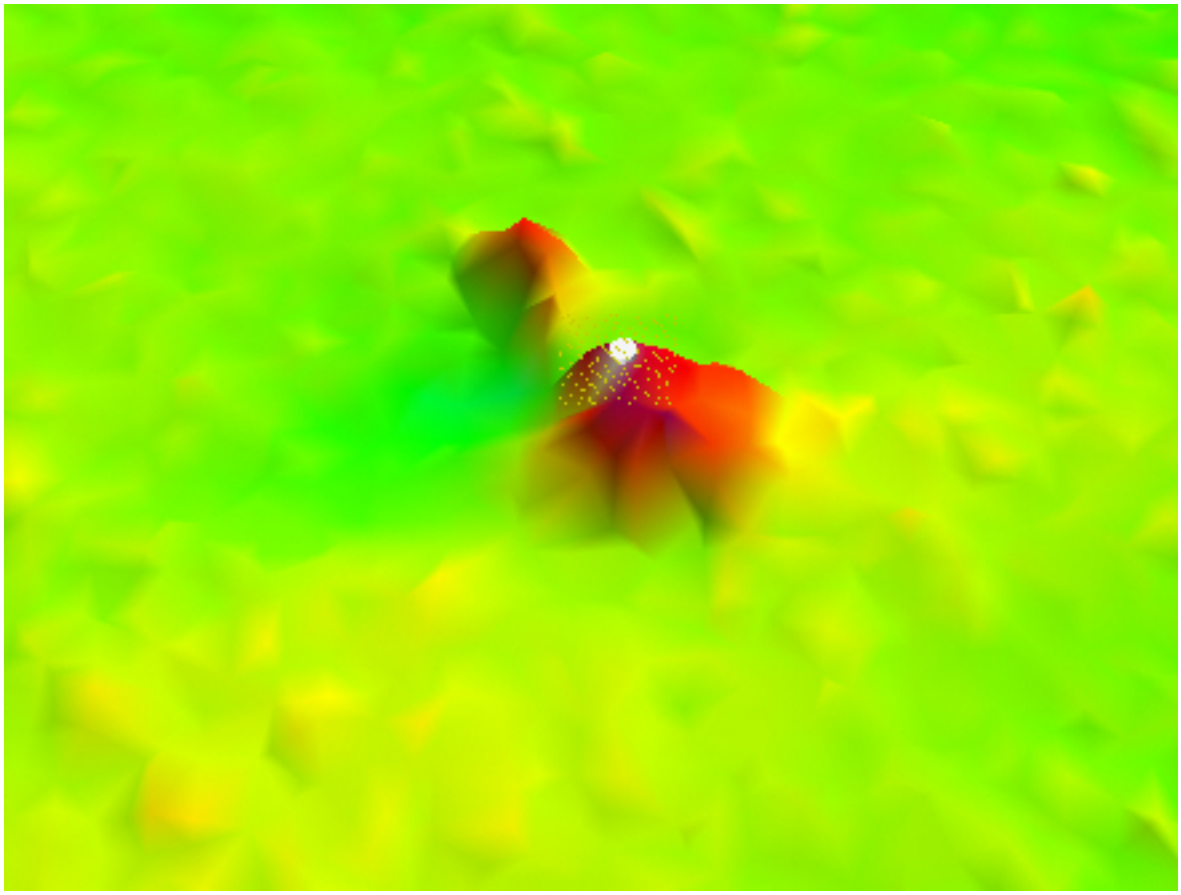


Figure 3.17.2

3.18) charted 58-ft OBSTRN (AWOIS 8259)

Primary Feature for AWOIS Item #8259

Search Position: 36° 56' 45.7" N, 076° 01' 16.5" W

Historical Depth: 17.68 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

H10372/90-- OPR-D111-HE (FORMERLY FE-356SS); OBSTRUCTION LOCATED IN LAT. 36-56-45.73N, LONG. 76-01-16.46W. FATHOMETER LD OF 17.8 METERS. EVALUATOR RECOMMENDS CHARTING AS SURVEYED. (ENT 4/20/92, SJV)

Survey Summary

Survey Position: 36° 56' 46.1" N, 076° 01' 18.0" W

Least Depth: 17.72 m (= 58.13 ft = 9.688 fm = 9 fm 4.13 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.862 m ; **TVU (TPEv)** ±0.234 m

Timestamp: 2007-242.15:36:15.355 (08/30/2007)

Survey Line: h11603 / ru_mb / 2007-242 / 895_1535

Profile/Beam: 206/239

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

AWOIS #8259, 58-FT Obstn located with 200% SSS and MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-242/895_1535	206/239	0.00	000.0	Primary
h11603/ru_ss/2007-072/205_1533	0001	39.20	288.2	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 8259	40.63	286.6	Secondary
h11603/ru_ss/2006-304/105_1653	0001	41.07	291.5	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

58ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

9 ¾fm (12200_1, 13003_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20070913
	SORIND - US,US,nsurf,H11603
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 17.718 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Do not concur. The feature is insignificant (~0.5 meters high). Delete AWOIS 8259 from the chart. Chart present survey soundingss.

Feature Images

[Image file h:/compilation/h11603_e350-ru-07/ahb_h11603/pss/images/205_15330001_s.tif does not exist.]

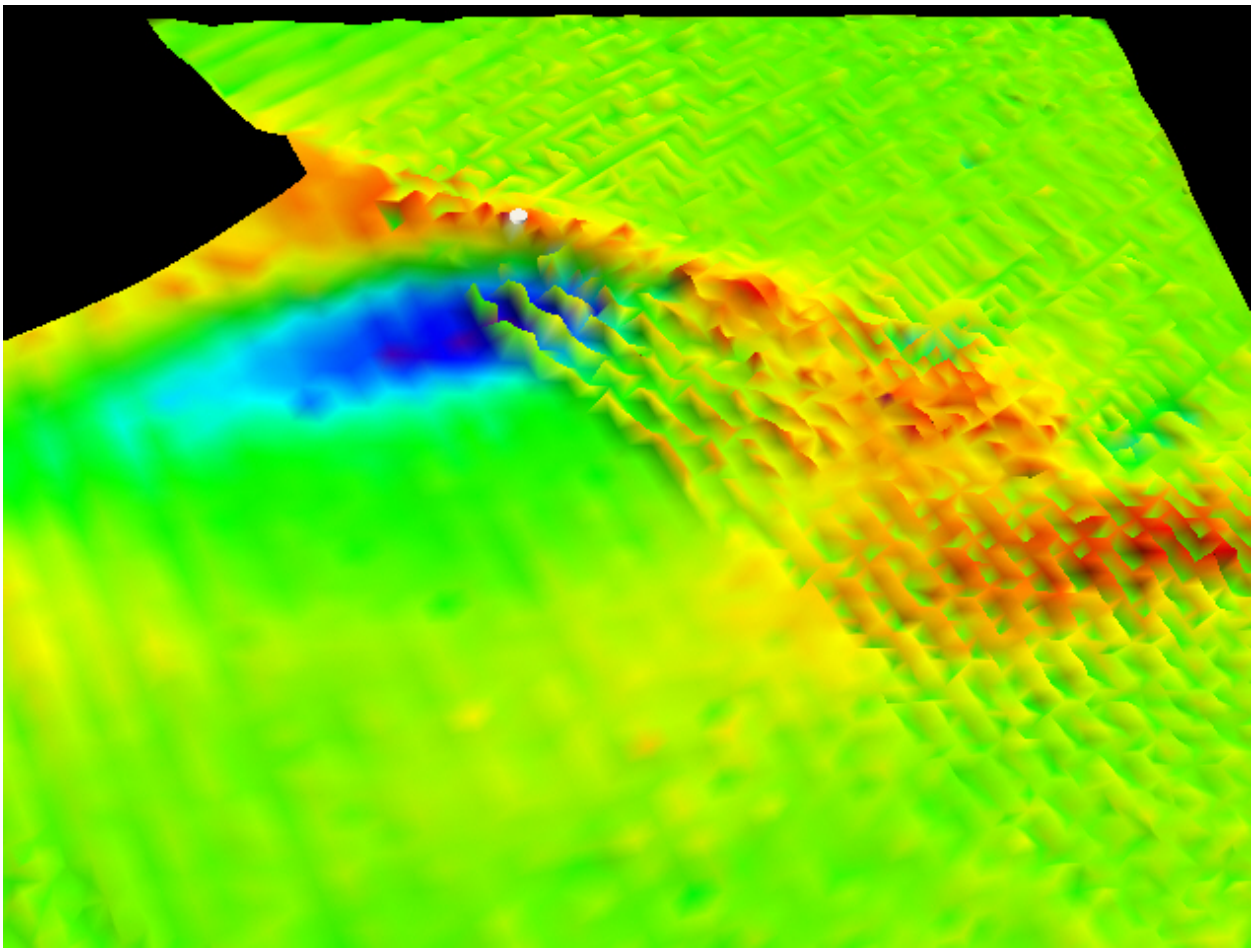


Figure 3.18.1

3.19) charted 42-ft Obstns (AWOIS 3758)

Primary Feature for AWOIS Item #3758

Search Position: 36° 56' 27.4" N, 076° 02' 31.3" W

Historical Depth: 12.80 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

H9255/71WD-- OPR-467-RH-71; ITEM NO. 9; 1:20,000-SCALE SURVEY; RAYDIST (HYPERBOLIC, R/R) CONTROL; UNINVESTIGATED HANG IN LAT. 36-56-34.3N, LONG. 76-03-19W; HUNG AT 34 FEET, CLEARED BY 34 FEET; EVALUATOR RECOMMENDED CHARTING A SUBM OBSTR WITH A WIRE DRAG CLEARANCE OF 34 FEET.■ H9814/80-- OPR-D103-PE-80; 1:10,000-SCALE SURVEY; ARGO (R/R), DELNORTE (R/A) CONTROL; EVALUATOR RECOMMENDED CHARTING AN OBSTR. (ENT11/27/84, MSM)■ FE367SS/94-- OPR-E696-HE; SIGNIFICANT CONTACT LOCATED IN LAT. 36-56-27.426N, LONG. 76-02-31.286W. DIVERS DESCRIBE METAL PLATES ON TOP OF A CONCRETE BLOCK WITH CHAIN. PNEUMO LD OF 12.9 METERS (42 FEET). EVALUATOR RECOMMENDS DELETING AWOIS ITEMS 3758, 3759, 3760, AND 3762 AND CHARTING AN OBSTRUCTION AS SURVEYED. (UP 9/12/95, SJV)

Survey Summary

Survey Position: 36° 56' 27.2" N, 076° 02' 31.4" W

Least Depth: 12.61 m (= 41.37 ft = 6.896 fm = 6 fm 5.37 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.868 m ; **TVU (TPEv)** ±0.189 m

Timestamp: 2007-242.15:59:12.594 (08/30/2007)

Survey Line: h11603 / ru_mb / 2007-242 / 922_1558

Profile/Beam: 290/147

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

AWOIS #3758 confirmed by SSS and MBES, height approximately 1 meter.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-242/922_1558	290/147	0.00	000.0	Primary
h11603/ru_mb/2007-242/922_1558	290/151	0.47	251.6	Secondary (grouped)
AWOIS_OPR-E350-RU-07	AWOIS # 3758	6.52	193.5	Secondary

h11603/ru_ss/2007-218/216_1635	0001	6.80	165.9	Secondary
h11603/ru_ss/2007-208/116_1434	0001	11.92	065.4	Secondary

Hydrographer Recommendations

Retain as charted

Cartographically-Rounded Depth (Affected Charts):

41ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

6 ¾fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 12.611 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete dangerous obstruction least depth 42-ft and text "Obstns". Chart dangerous obstruction least depth 41-ft and text "Obstn" at the survey position.

Feature Images

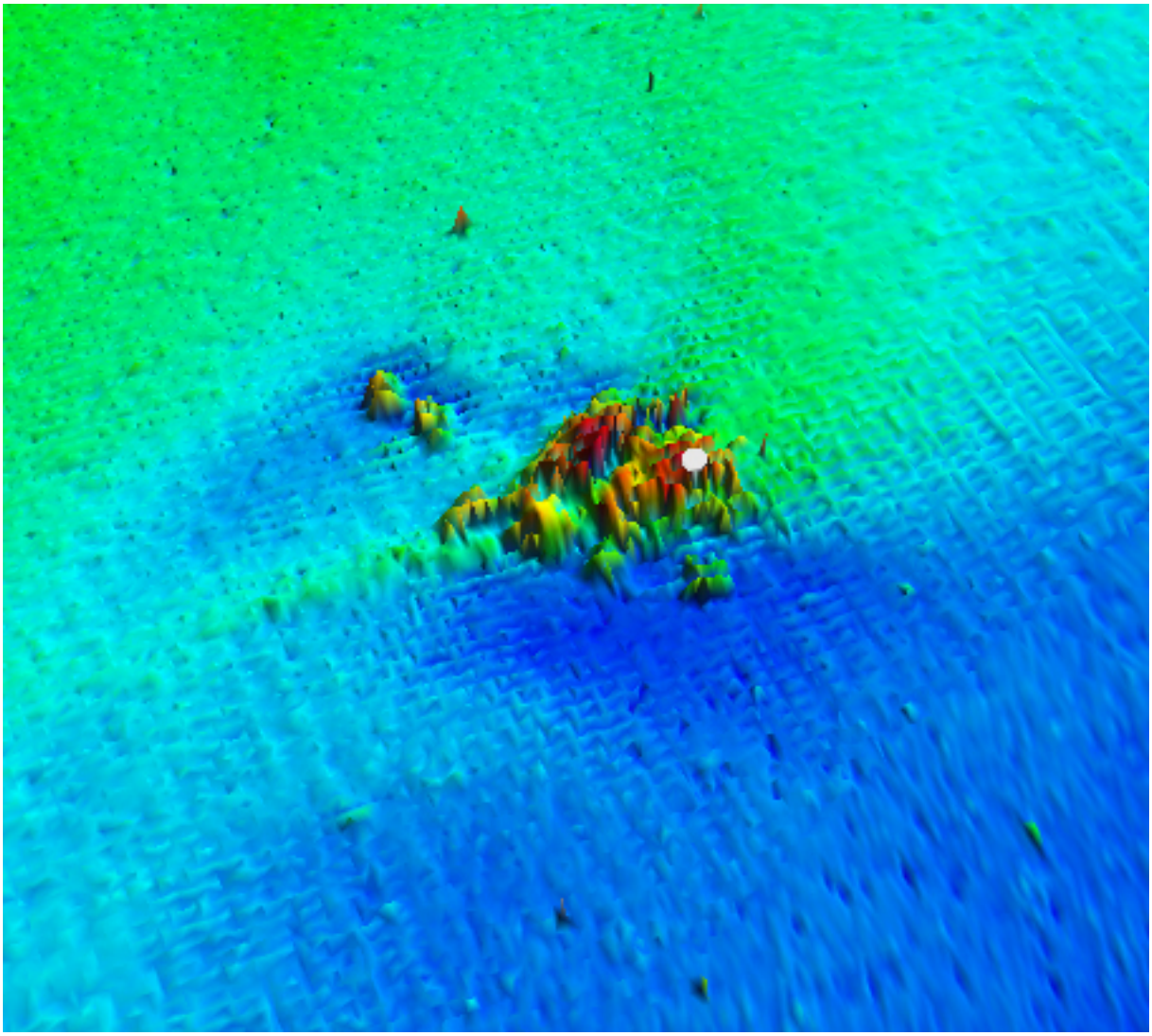


Figure 3.19.1

3.20) charted 27-ft OBSTRN (AWOIS 9552)

Primary Feature for AWOIS Item #9552

Search Position: 36° 56' 39.1" N, 076° 04' 19.6" W

Historical Depth: 8.23 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. COMPUTED HEIGHT 0.9 METERS IN 9.9 METERS. DIVERS DESCRIBE WHAT APPEARED TO BE THE BOTTOM SECTION OF A BUOY EXTENDING 3 FEET OFF THE BOTTOM. PNEUMO LD OF 8.2 METERS (27 FEET) IN LAT. 36-56-39.11N, LONG. 76-04-19.618W. EVALUATOR RECOMMENDS CHARTING AN OBSTRUCTION AS SURVEYED. LORAN-C RATES (9960 CHAIN): W=15941.6, X=27193.5, Y-47275.6, Z=58510.8. VISIBILITY 3 FEET. A SHACKLE WAS IN ONE END. (ENT 9/12/95, SJV)

Survey Summary

Survey Position: 36° 56' 39.2" N, 076° 04' 20.1" W

Least Depth: 7.92 m (= 26.00 ft = 4.333 fm = 4 fm 2.00 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.854 m ; **TVU (TPEv)** ±0.185 m

Timestamp: 2007-242.19:13:53.929 (08/30/2007)

Survey Line: h11603 / ru_mb / 2007-242 / 957_1913

Profile/Beam: 602/11

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Current status of AWOIS #9552 shows a least depth shallower than the charted 27ft obstn. Located with 200% SSS and developed with RESON 8125 MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-242/957_1913	602/11	0.00	000.0	Primary
h11603/ru_ss/2007-171/170_1632	0001	7.10	139.0	Secondary
h11603/ru_ss/2007-227/255_1812	0001	8.13	267.8	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 9552	12.09	287.1	Secondary

Hydrographer Recommendations

Remove currently charted 27 ft Obstn and chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

26ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

4 ¼fm (13003_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20070913
	SORIND - US,US,nsurf,H11603
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 7.925 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Object is not significant. Delete 27 ft Obstn and notation Obstn from the chart.

Feature Images

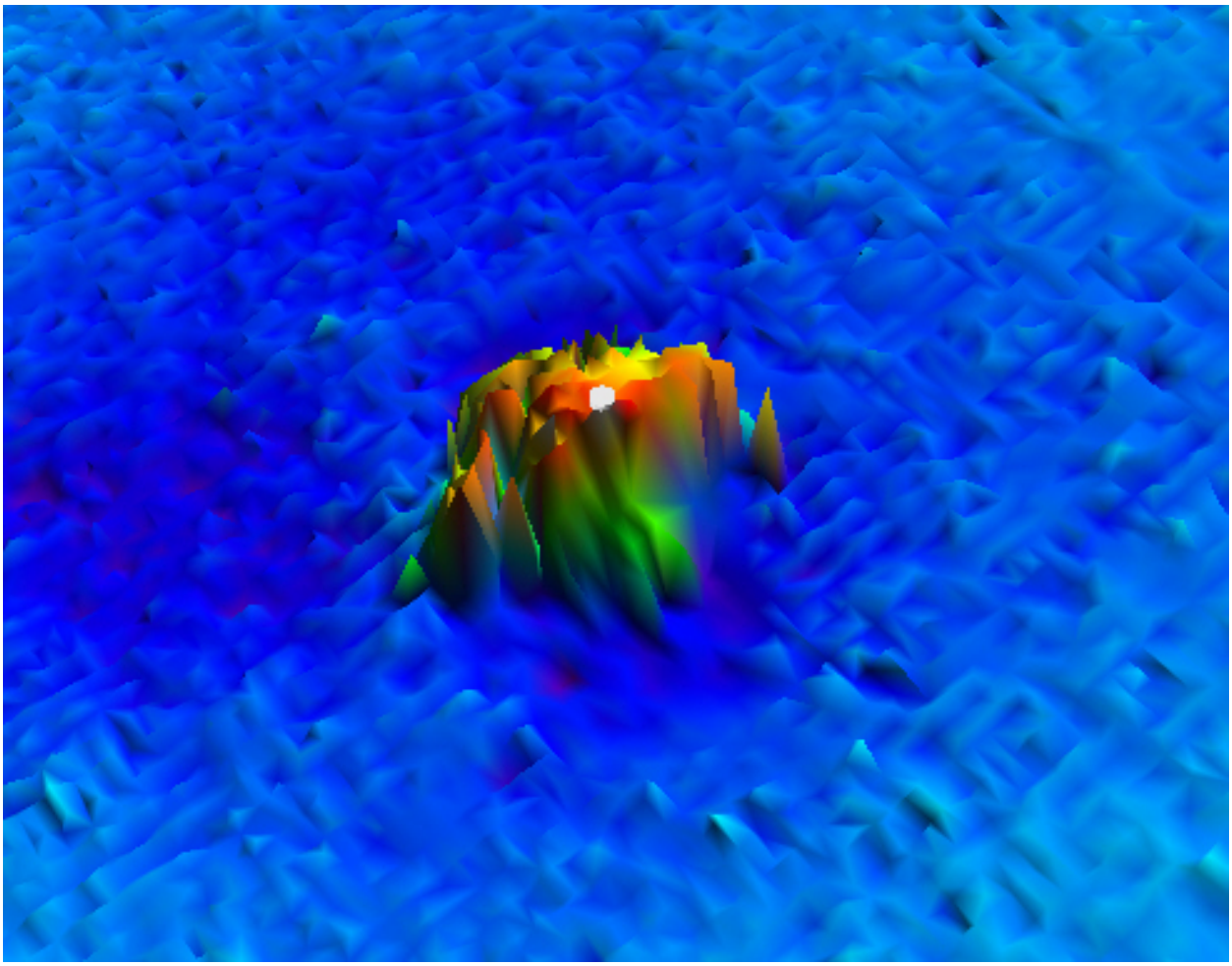


Figure 3.20.1

3.21) charted 32-ft WRECKS (AWOIS 9545)

Primary Feature for AWOIS Item #9545

Search Position: 36° 56' 02.7" N, 076° 03' 19.6" W

Historical Depth: 9.75 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. COMPUTED HEIGHT OF 1.3 METERS IN 11.7 METERS. DIVERS DESCRIBE A STEEL HULLED VESSEL WITH A WOODEN MAST IN LAT. 36-56-02.7N, LONG. 76-03-19.6W. PNEUMO. LD OF 9.8 METERS (32 FEET). MAST IS 15 FEET LONG. VISIBILITY 4 FEET. EVALUATOR RECOMMENDS CHARTING AS SURVEYED. LORAN-C RATES (9960 CHAIN): W=15939.8, X=27108.4, Y=41270.4, Z=58512.4. (ENT 9/12/95, SJV)

Survey Summary

Survey Position: 36° 56' 01.7" N, 076° 03' 20.1" W

Least Depth: 9.29 m (= 30.48 ft = 5.079 fm = 5 fm 0.48 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.871 m ; **TVU (TPEv)** ±0.185 m

Timestamp: 2007-242.17:24:21.574 (08/30/2007)

Survey Line: h11603 / ru_mb / 2007-242 / 1009a

Profile/Beam: 313/204

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Current status of AWOIS #9545 shows the least depth is shoaler than the 32-ft Wk. Shoalest of two items 30 meters apart.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-242/1009a	313/204	0.00	000.0	Primary
h11603/ru_ss/2007-211/127_1642	0001	2.12	299.8	Secondary
h11603/ru_ss/2007-219/226_1642	0001	2.52	356.3	Secondary
h11603/ru_ss/2007-219/226_1642	0002	26.62	176.6	Secondary
h11603/ru_ss/2007-211/127_1642	0002	28.65	176.8	Secondary

h11603/ru_mb/2007-242/1010	351/220	30.54	174.4	Secondary
h11603/ru_mb/2007-242/1011	364/180	31.43	170.6	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 9545	34.76	202.2	Secondary

Hydrographer Recommendations

Remove 32 ft Wk. Chart this Wk based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

30ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

5fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 2:dangerous wreck

HEIGHT - 1.55 m

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 9.289 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Two significant features were found 30 meters apart - the current feature and a 32-foot (least depth) wreck at 36/56/02.642, -076/03/20.253. Both features are within the 50-meter radius of AWOIS 9545, which is charted as a 32-foot dangerous wreck. Delete the charted 32-foot dangerous wreck, and add the current feature, a 30ft dangerous wreck at the present survey position, with the danger curve and blue tint modified to include the 2nd feature. Change notation Wk to Wks.

Feature Images

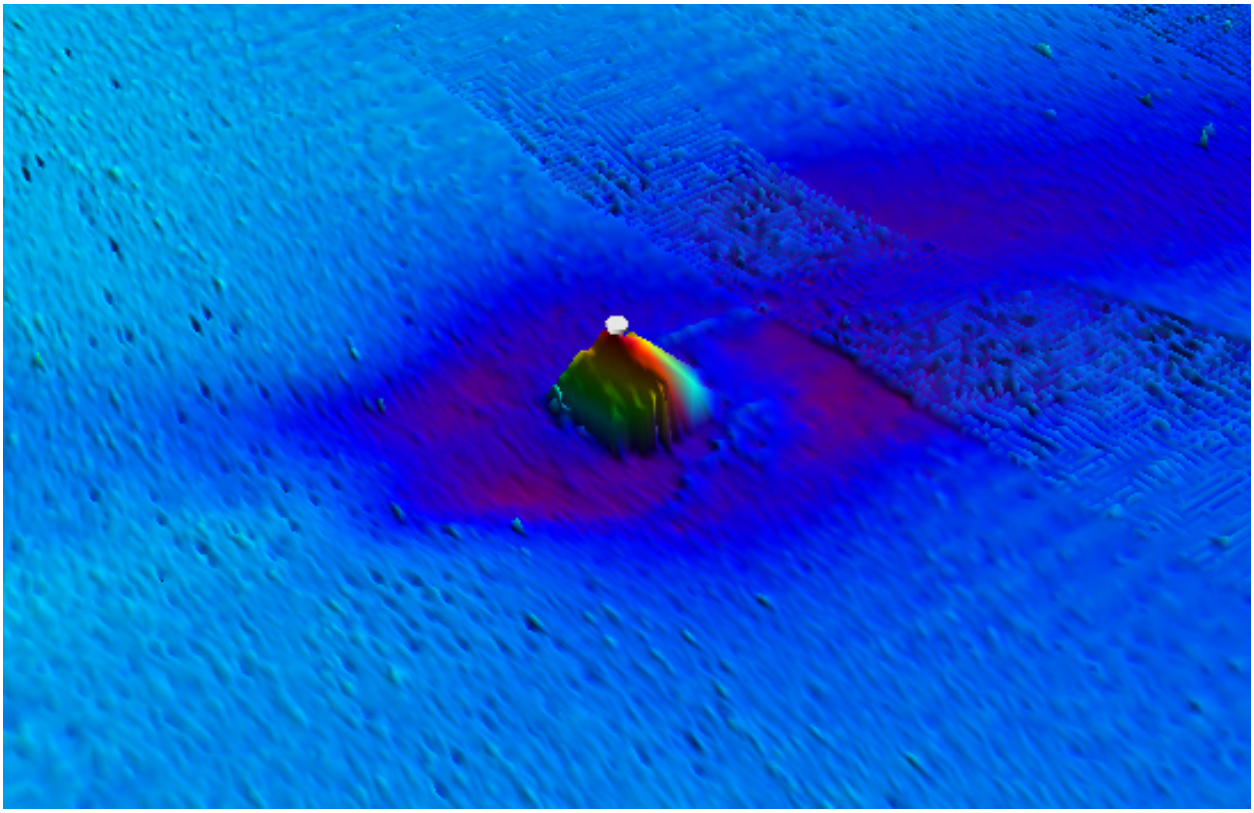


Figure 3.21.1

[Image file h:/compilation/h11603_e350-ru-07/ahb_h11603/pss/images/127_16420001_s.tif does not exist.]

3.22) charted 33-ft WRECKS (AWOIS 9544)

Primary Feature for AWOIS Item #9544

Search Position: 36° 55' 56.9" N, 076° 03' 17.1" W

Historical Depth: 10.06 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. COMPUTED HEIGHT OF 0.9 METERS IN 12.1 METERS.DIVERS DESCRIBE A STEEL HULLED VESSEL MOSTLY BURIED WITH A WOODEN MAST AND BEAMS. ALSO SCATTERED WRECKAGE. PNEUMO LD OF 10.1 METERS (33 FEET) IN LAT. 36-55-56.868N, LONG. 76-03-17.065W. EVALUATOR RECOMMENDS CHARTING AS SURVEYED. LORAN-C RATES (9960 CHAIN): W=15937.4, X=27187.7, Y=41269.4, Z=58512.5. VISIBILITY WAS 4 FEET. (ENT 9/12/95, SJV)

Survey Summary

Survey Position: 36° 55' 56.8" N, 076° 03' 17.4" W

Least Depth: 10.10 m (= 33.12 ft = 5.521 fm = 5 fm 3.12 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.870 m ; **TVU (TPEv)** ±0.185 m

Timestamp: 2007-242.17:35:42.400 (08/30/2007)

Survey Line: h11603 / ru_mb / 2007-242 / 1014

Profile/Beam: 353/65

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

AWOIS #9544 confirmed, 33-FT Wk located with 200% SSS and MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-242/1014	353/65	0.00	000.0	Primary
AWOIS_OPR-E350-RU-07	AWOIS # 9544	8.07	258.2	Secondary
h11603/ru_ss/2007-219/227_1651	0001	8.27	145.7	Secondary
h11603/ru_ss/2007-211/128_1652	0001	14.95	150.6	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

33ft (12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2)

5 ½fm (13003_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 2:dangerous wreck
	HEIGHT - .94 m
	QUASOU - 6:least depth known
	SORDAT - 20070913
	SORIND - US,US,nsurf,H11603
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 10.096 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Revise dangerous wreck least depth 33-ft to present survey position.

Feature Images

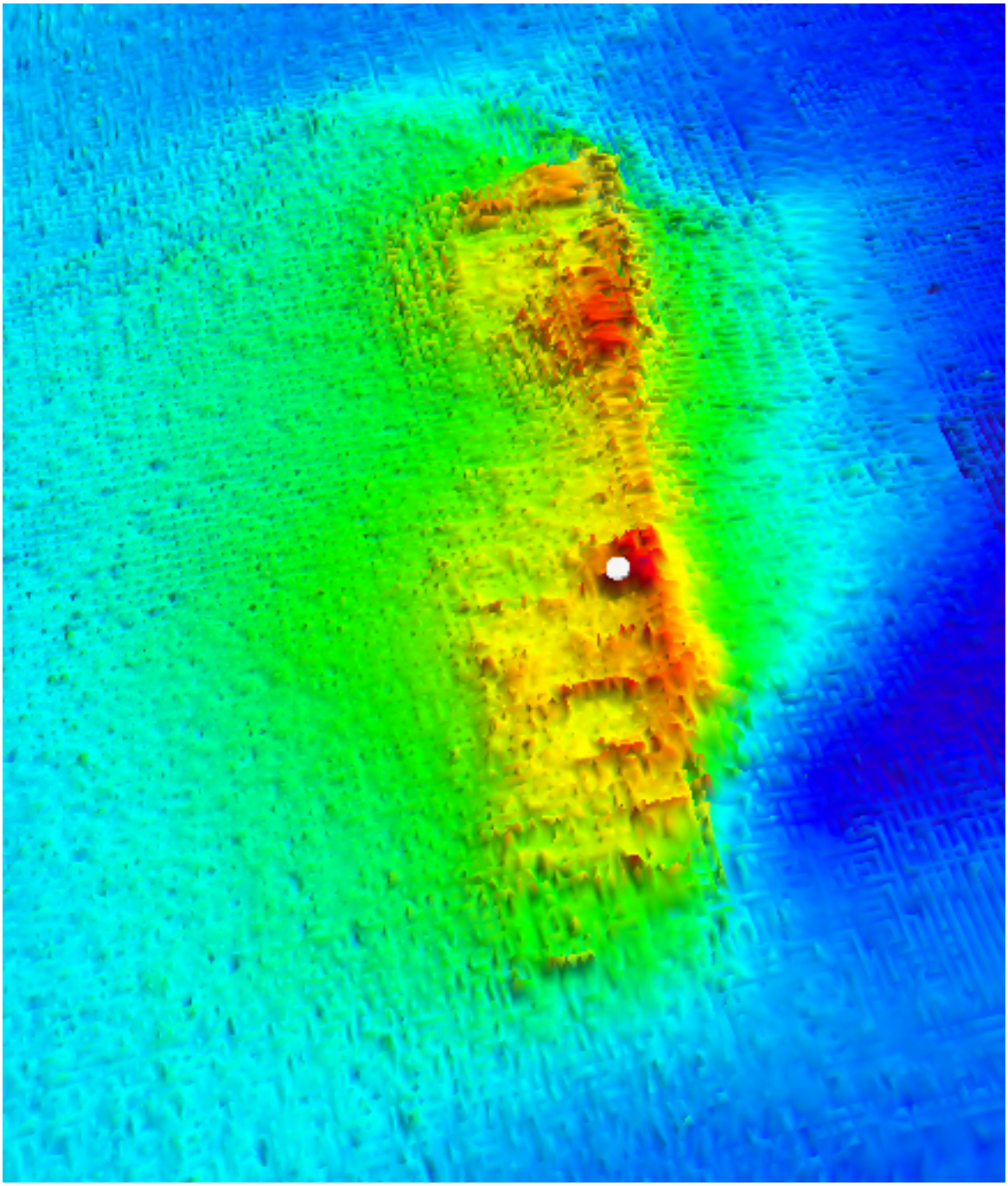


Figure 3.22.1

[Image file h:/compilation/h11603_e350-ru-07/ahb_h11603/pss/images/128_16520001_s.tif does not exist.]

3.23) charted 23-ft OBSTRN (AWOIS 9550)

Primary Feature for AWOIS Item #3751

Search Position: 36° 57' 04.2" N, 076° 05' 37.7" W

Historical Depth: 5.79 m

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

H9255/71WD-- OPR-467-RH-71; ITEM NO. 25; 1:20,000-SCALE SURVEY; RADIST (HYPERBOLIC, R/R) CONTROL; PIPE, 1 FOOT IN DIAMETER, EXTENDING 4 INCHES OFF THE BOTTOM; HUNG AT 36 FEET IN LAT. 36-57-03.7N, LONG. 76-05-38.9W; CLEARED IN ONE DIRECTION TO 19 FEET; EVALUATOR RECOMMENDED CHARTING AS A SUBM OBSTR WITH A CLEARANCE OF 19 FEET.■ H9814/80-- OPR-D103-PE-80; 1:10,000-SCALE SURVEY; ARGO (R/R), DELNORTE (R/A) CONTROL; EVALUATOR RECOMMENDED CHARTING AS AN OBSTR THRU H9255WD. (ENT 11/20/84, MSM)■ FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR SEARCH NEGATIVE FOR ITEM. ONE CONTACT FOUND IN AREA OF SEARCH. EVALUATOR RECOMMENDS DELETING FROM CHART. (UP 9/12/95, SJV)

Survey Summary

Survey Position: 36° 57' 04.3" N, 076° 05' 36.5" W

Least Depth: 7.50 m (= 24.60 ft = 4.099 fm = 4 fm 0.60 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.860 m ; **TVU (TPEv)** ±0.182 m

Timestamp: 2007-247.17:05:29.653 (09/04/2007)

Survey Line: h11603 / ru_mb / 2007-247 / 993_1704

Profile/Beam: 718/64

Charts Affected: 12254_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Detected with 200% SSS and 8125 RESON MDES. Least depth 24 ft (7.5 meters), insignificant. The feature is located 40 meters outside the 50-meter radius of AWOIS 9550. No features were found within the 50-meter radius of AWOIS 9550.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-247/993_1704	718/64	0.00	000.0	Primary
h11603/ru_ss/2007-171/168_1552	0001	7.19	114.9	Secondary
h11603/ru_ss/2007-227/253_1854	0001	8.62	127.4	Secondary

AWOIS_OPR-E350-RU-07	AWOIS # 3751	28.84	085.3	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 9550	93.36	284.7	Secondary (grouped)

Hydrographer Recommendations

do not chart. insignificant.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 7.497 m

Office Notes

Concur with clarifiation. The insignificant feature is 0.6 meters high. Delete AWOIS 9550 from the chart.

Feature Images

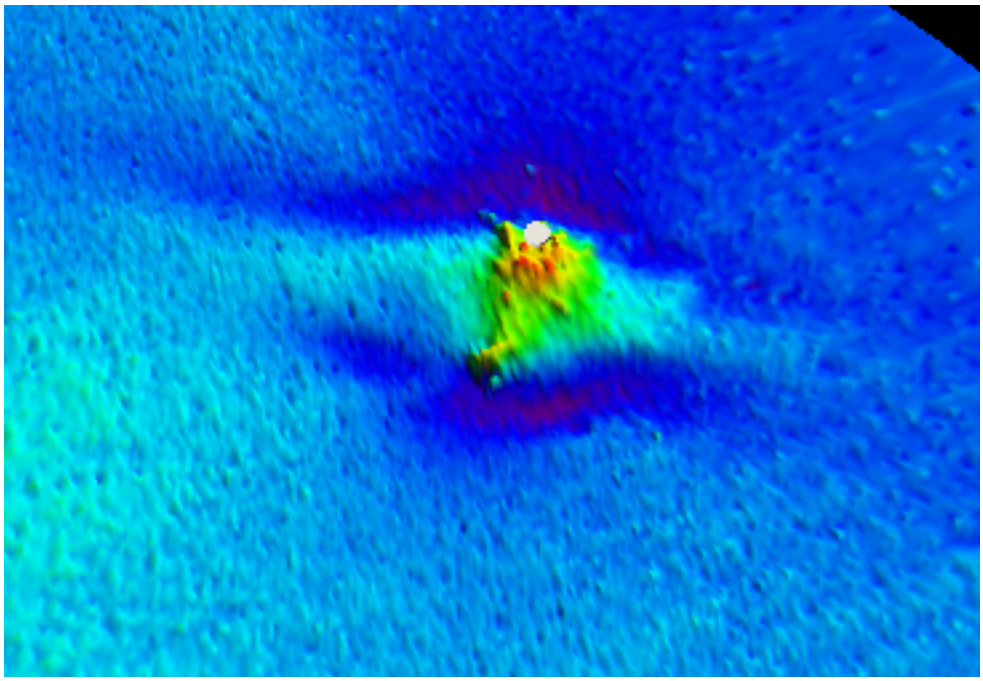


Figure 3.23.1

3.24) charted 46-ft WRECKS (AWOIS 848)

Primary Feature for AWOIS Item #848

Search Position:	36° 57' 35.0" N, 076° 01' 16.9" W
Historical Depth:	14.02 m
Search Radius:	50
Search Technique:	S2, MB, DI, SD
Technique Notes:	[None]

History Notes:

SOURCE UNKNOWN-- REPORTED SUNK IN 1938.■ CL792/44-- ADVANCE SURVEY REPORT; OBSTRUCTION HUNG AT 39.5 FEET, CLEARED TO 37 FEET (PREDICTED) AT POS. LAT. 36-57-32.6N, LONG. 76-01-17.0W.■ NM9/45-- REPORTED DEMOLISHED, WD CLEARED TO 37 FEET (MLW) BY C ■ H7028/45WD-- ITEM 20; NAVY DIVERS IDENTIFY AS PILOT BOAT AND BLOW HOUSE OFF AFTER FIRST HANG, SUBSEQUENTLY HUNG AT 42 FEET, CLEAR TO 40 FEET (MLW) AT POS. LAT. 36-57-36N, LONG. 76-01-18W.■ H9901/80-- OPR-D103-PE-80; 1:10,000-SCALE SURVEY; ARGO R/R CONTROL; ECHO SOUNDER; SURVEY DEPTHS OF 55-57 FEET IN AREA; ITEM NOT INVESTIGATED; EVALUATOR RECOMMENDED RETAIN AS CHARTED. (ENT 10/17/84, MSM)■ H10343/90-- OPR-D111-WH; WRECK LOCATED IN LAT. 36-57-34.63N, LONG. 76-01-16.53W, COVERED 15 METERS. EVALUATOR RECOMMENDS NO CHANGE IN CHARTING STATUS PENDING FINAL DISPOSITION ON H-10372/90. (UP 1/3/92, SJV)■ H10372/90-- OPR-D111-HE (FORMERLY FE-356SS); WRECK LOCATED IN LAT. 36-57-35.01N, LONG. 76-01-16.90W. DIVER LD OF 46 FEET. EVALUATOR RECOMMENDS CHARTING AS SURVEYED. (UP 4/20/92, SJV)■■ DESCRIPTION■ 24 NO.435; SUNK 7/24/44, REPORTED DEMOLISHED, WD CLEARED TO 37FT (MLW)■ BY CGS; POSITION ACCURACY 1 MILE.■ 27 NO.811; WD CLEAR TO DEPTH OF 37FT AT MLW. WK DEMOLISHED, BUOY DISC.

Survey Summary

Survey Position:	36° 57' 34.7" N, 076° 01' 16.7" W
Least Depth:	14.25 m (= 46.74 ft = 7.790 fm = 7 fm 4.74 ft)
TPU (±1.96σ):	**THU (TPEh)** ±7.857 m ; **TVU (TPEv)** ±0.216 m
Timestamp:	2007-249.16:18:51.978 (09/06/2007)
Survey Line:	h11603 / ru_mb / 2007-249 / 908_1618
Profile/Beam:	369/2
Charts Affected:	12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

AWOIS #848, 46-FT Wk confirmed with 200% SSS and MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-249/908_1618	369/2	0.00	000.0	Primary
AWOIS_OPR-E350-RU-07	AWOIS # 848	10.05	148.2	Secondary
h11603/ru_ss/2006-304/118_1949	0002	11.10	318.8	Secondary
h11603/ru_ss/2006-319/215_1833	0001	19.91	198.2	Secondary
h11603/ru_ss/2006-304/118_1949	0001	27.93	142.7	Secondary

Hydrographer Recommendations

Retain as charted

Cartographically-Rounded Depth (Affected Charts):

46ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

7 ¾fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 2:dangerous wreck

HEIGHT - 2.32 m

QUASOU - 6:least depth known

RECDAT - 20071008

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 14.246 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Revise dangerous wreck least depth 46-ft to present survey position.

Feature Images

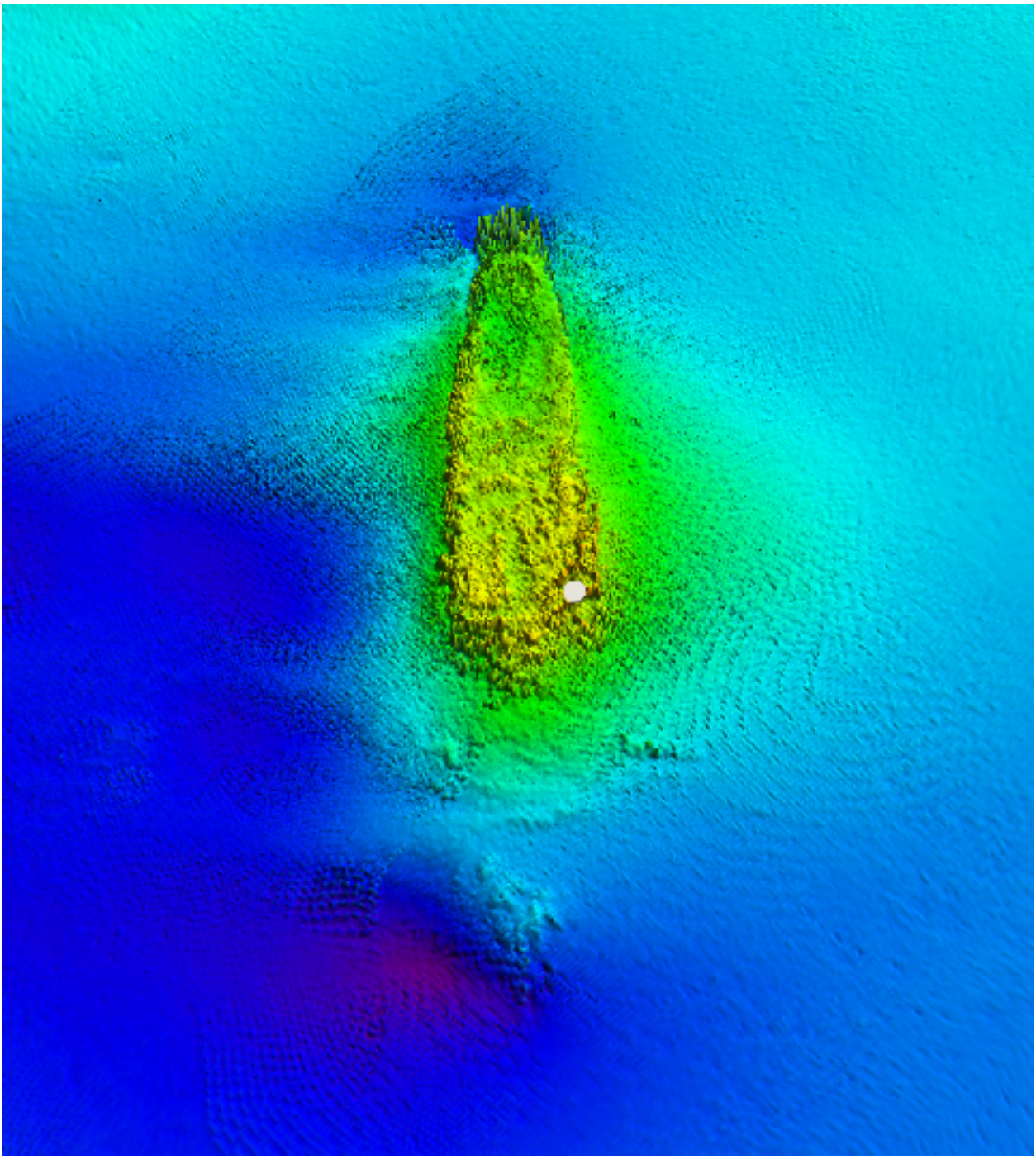


Figure 3.24.1

3.25) charted 56-ft WRECKS (AWOIS 835)

Primary Feature for AWOIS Item #835

Search Position:	36° 56' 58.8" N, 076° 01' 20.2" W
Historical Depth:	17.07 m
Search Radius:	50
Search Technique:	S2, MB, DI, SD
Technique Notes:	INVESTIGATION MAY BE CONSTRAINED BY VESSEL TRAFFIC. SURVEY AT COMMANDING OFFICER'S DISCRETION

History Notes:

NM31/44(2883)-- EXAMINATION VESSEL SUNK AT POSITION 36-57N, 76-01-20W.■ NM36/44(3376)-- WRECK DISPERSED TO A 45-FOOT DEPTH.■ H7028/45-50WD-- CS 326; CLEARED TO 49 FEET WITHOUT HANG, CONSIDERED DISPROVED.■ CL347/58-- NO. 1308, H.O. WRECK LIST; WRECK SUNK 1944 AT POS. 36-57N, 76-01-18W, SUBS. REPORTED SILTED OVER.■ H9901/80-- OPR-D103-PE-80; 1:10,000-SCALE SURVEY; ARGO R/R CONTROL; ECHO SOUNDER; THREE SMALL SCOURS ON FATHOGRAM WHICH MAY OR MAY NOT BE THE REMAINS OF WRECK. NOT DEFINITE ENOUGH TO SAFELY SAY FOR SURE. 62-65-FOOT SURVEY DEPTHS.■ H10343/90-- OPR-D111-WH; WRECK LOCATED BY SIDE SCAN SONAR IN LAT. 36-56-58.97N, LONG. 76-01-20.87W APPROX. 25 METERS EAST OF NAVIGATION BUOY "ITS". DEPTH OF 16.8 METERS IN 19.2 METERS. RADIO MEMO TO 5CGD ON 6/6/90. HYDROGRAPHER RECOMMENDS DIVER INVESTIGATION AND LD TO FULLY RESOLVE ITEM.■ H10372/90-- OPR-D111-HE (FORMERLY FE-356SS); FATHOMETER DEPTH OF 17.2 METERS OBTAINED. WRECK BROUGHT FORWARD SINCE DEPTH FROM H-10343/90 IS SHOALER (16.8 METERS). EVALUATOR RECOMMENDS CHARTING WRECK WITH A DEPTH OF 16.8 METERS (55 FEET) AS SHOWN ON THE PRESENT SURVEY (UP 4/20/92, SJV)■ FE412SS/95-- OPR-E696-HE; WRECK LOCATED BY SIDE SCAN SONAR. DIVER LD OF 17.1 METERS (56 FEET) IN LAT. 36-56-58.755N, LONG. 76-01-20.203W. DIVERS DESCRIBE A PARTIALLY DECOMPOSED WRECK. EVALUATOR RECOMMENDS DELETING THE CHARTED WRECK AND CHARTING A 56 WK AS SURVEYED. (UP 2/15/95, SJV)■■ DESCRIPTION■ 24 NO. 1308; SUNK 1944; REPORTED SILTED OVER; POSITION■ ACCURACY WITHIN ONE MILE.

Survey Summary

Survey Position:	36° 56' 59.1" N, 076° 01' 21.5" W
Least Depth:	16.22 m (= 53.23 ft = 8.871 fm = 8 fm 5.23 ft)
TPU (±1.96σ):	**THU (TPEh)** ±7.869 m ; **TVU (TPEv)** ±0.215 m
Timestamp:	2007-253.18:58:42.703 (09/10/2007)
Survey Line:	h11603 / ru_mb / 2007-253 / 408_1826
Profile/Beam:	5968/234
Charts Affected:	12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-253/408_1826	5968/234	0.00	000.0	Primary
h11603/ru_mb/2007-253/408_1826	5971/233	1.11	294.1	Secondary (grouped)
h11603/ru_mb/2007-253/409_1960	0001	22.57	307.9	Secondary
h11603/ru_ss/2006-304/103_1518	0001	30.69	292.0	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 835	34.29	290.0	Secondary
h11603/ru_ss/2007-072/203_1611	0001	37.84	290.1	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

53ft (12254_1, 12222_1, 12208_1, 12205_1, 12221_1, 12280_2)

8 ¾fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 2:dangerous wreck

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

TECSOU - 3:found by multi-beam

VALSOU - 16.223 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

The hydrographer originally selected a deeper sounding as the least depth (~0.3 meter deeper). The updated least depth changes the cartographically rounded depth. The hydrographer recommendation was to retain the feature as charted. Concur with clarification. Delete dangerous wreck least depth 56-ft and text "WK". Chart dangerous wreck least depth 53-ft and text "WK" at the survey position.

Feature Images

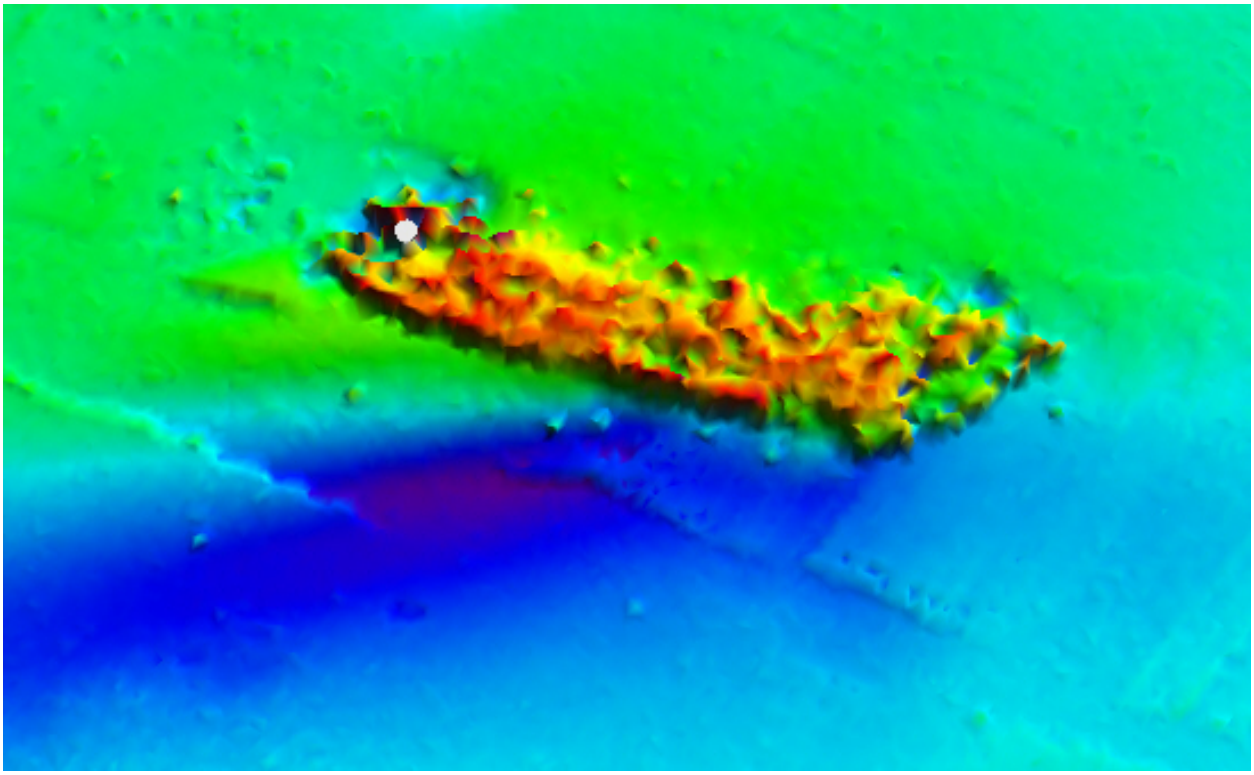


Figure 3.25.1

3.26) charted 27-ft WRECKS (AWOIS 3748)

Primary Feature for AWOIS Item #3748

Search Position: 36° 55' 46.6" N, 076° 03' 11.6" W

Historical Depth: 8.23 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

LNM47/73-- 11/20/73; CGD5; 35-FOOT AMPHIBIOUS CRAFT SUNK IN 40 FEET IN APPROX. POS. LAT. 36-56-00N, LONG. 76-02-30W.■ H9814/80-- OPR-D103-PE-80; ITEM NO. 88; 1:10,000-SCALE SURVEY; ARGO (R/R), DELNORTE (R/A); ECHO SOUNDER; 45 METER LINE SPACING; WRECK NOT LOCATED; EVALUATOR RECOMMENDED RETAINING AS CHARTED. (RNT 11/13/84, MSM)■ FE387SS/94-- OPR-E696-HE; ONE CONTACT, NOT CONSIDERED THIS ITEM, WAS FOUND WITHIN SEARCH AREA. A WRECK MATCHING THE AWOIS DESCRIPTION WAS LOCATED 100 METERS OUTSIDE THE ASSIGNED SEARCH RADIUS IN LAT. 36-55-46.556N, LONG. 76-03-11.609W. DIVER (PNEUMATIC DEPTH GAUGE) LD OF 8.4 METERS (27 FEET). WRECK IS APPROX. 30 FEET LONG, 10 FEET WIDE, AND EXTENDS 5 FEET OFF THE BOTTOM. ENCRUSTED WITH HEAVY MARINE GROWTH AS WELL AS BEING HEAVILY CORRODED. LORAN-C RATES (9960 CHAIN): W=15937.6, X=27187.3, Y=41267.6, Z=58511.9. EVALUATOR RECOMMENDS DELETING CHARTED SUBM DANGEROUS WRECK, PA AND CHARTING A WRECK WITH A LD OF 8.4 METERS AS SURVEYED. (UP 9/12/95, SJV)

Survey Summary

Survey Position: 36° 55' 46.6" N, 076° 03' 11.2" W

Least Depth: [None]

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

Timestamp: 2007-340.03:42:46 (12/06/2007)

Survey Line: h11603 / ru_ss / 2007-207 / 163_1660

Contact/Point: 0001/1

Charts Affected: 12254_1, 12222_1, 12208_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Location of AWOIS #3748 confirmed during 200% SSS coverage. No MBES least depth, however height from side scan is consistent with charted depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_ss/2007-207/163_1660	0001	0.00	000.0	Primary

AWOIS_OPR-E350-RU-07	AWOIS # 3748	10.74	081.4	Secondary
h11603/ru_ss/2007-226/286_1537	0001	17.23	075.2	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 1:non-dangerous wreck

QUASOU - 2:depth unknown

SORDAT - 20070913

SORIND - US,US,survy,H11603

TECSOU - 2:found by side scan sonar

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Retain 27-ft dangerous wreck as charted.

Feature Images

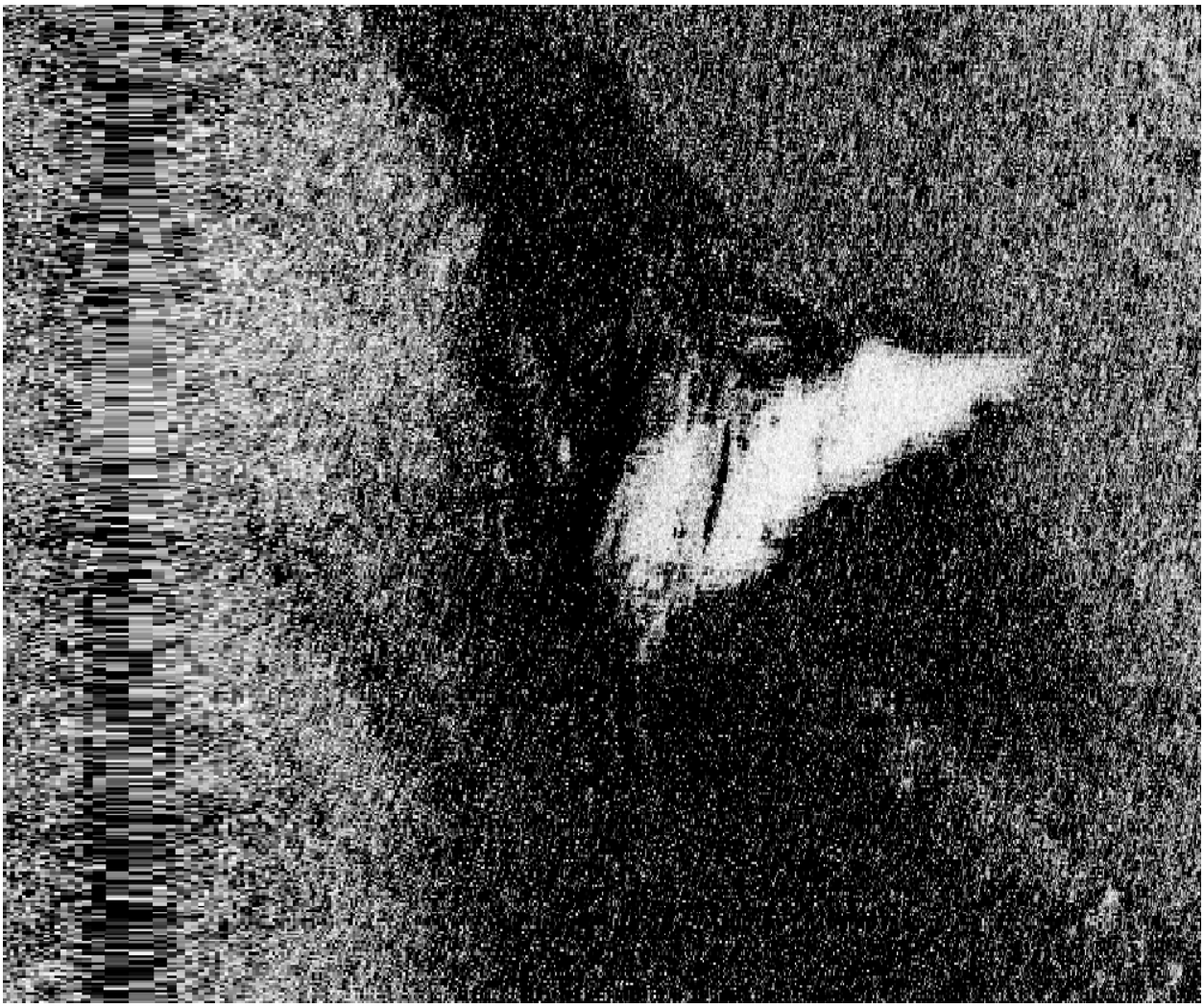


Figure 3.26.1

3.27) charted 23-ft OBSTRN (AWOIS 9551)

Primary Feature for AWOIS Item #9551

Search Position: 36° 56' 47.8" N, 076° 05' 37.2" W

Historical Depth: 7.01 m

Search Radius: 100

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE387SS/94-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. COMPUTED HEIGHT OFF BOTTOM OF 1.1 METERS IN 8.3 METERS OF WATER. DIVERS DESCRIBE DERELICT NET HUNG ON UNIDENTIFIABLE OBSTRUCTION 3 FEET OFF THE BOTTOM. PNEUMO. LD OF 7.0 METERS (23 FEET) IN LAT. 36-56-47.832N, LONG. 76-05-37.241W. EVALUATOR RECOMMENDS CHARTING AN OBSTRUCTION AS SURVEYED. LORAN-C RATES (9960 CHAIN): W=15943.2, X=27199.0, Y=41274.8, Z=58505.9. (ENT 9/12/95, SJV)

Survey Summary

Survey Position: 36° 56' 50.2" N, 076° 05' 39.8" W

Least Depth: 7.57 m (= 24.84 ft = 4.140 fm = 4 fm 0.84 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.862 m ; **TVU (TPEv)** ±0.182 m

Timestamp: 2007-247.16:52:33.082 (09/04/2007)

Survey Line: h11603 / ru_mb / 2007-247 / 997_1652

Profile/Beam: 534/123

Charts Affected: 12254_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

A feature was found within the search radius for AWOIS #9551. The least depth was consistent with the currently charted depth. However, it was not possible to confirm this feature consisted of derelict nets.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-247/997_1652	534/123	0.00	000.0	Primary
h11603/ru_ss/2007-171/173_1734	0001	3.50	283.4	Secondary
h11603/ru_ss/2007-225/259_1809	0001	6.86	098.5	Secondary
h11603/ru_ss/2007-171/174_1754	0001	45.71	333.9	Secondary
h11603/ru_ss/2007-225/259_1809	0002	47.87	331.2	Secondary

AWOIS_OPR-E350-RU-07	AWOIS # 9551	96.46	319.2	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

TECSOU - 3:found by multi-beam

VALSOU - 7.571 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Recommend removing Obstn from chart. Obstn is in insignificant based on surrounding depths.

Feature Images

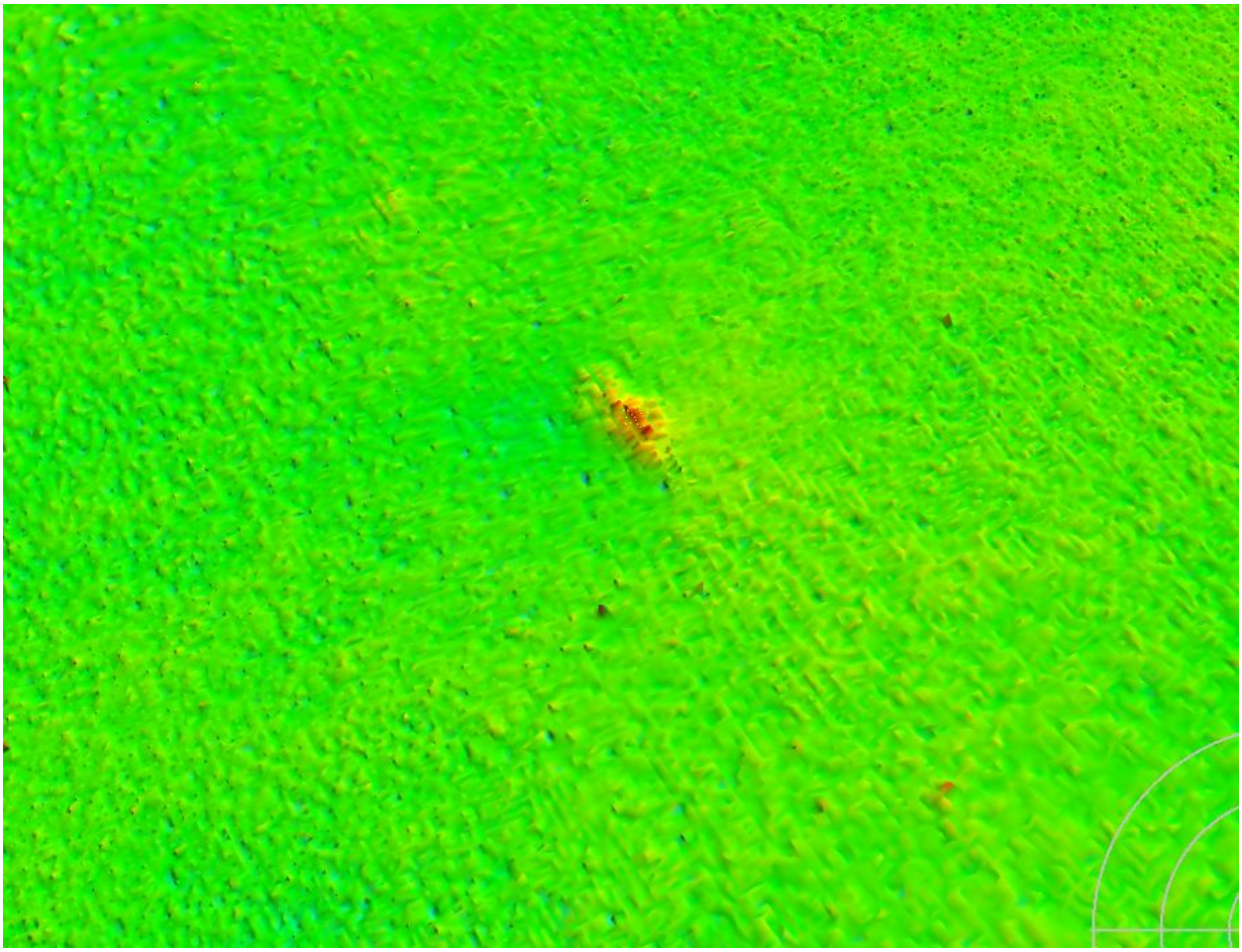


Figure 3.27.1

3.28) charted 40-ft WRECKS (AWOIS 10792)

Primary Feature for AWOIS Item #10792

Search Position:	37° 00' 47.4" N, 076° 03' 09.2" W
Historical Depth:	12.19 m
Search Radius:	50
Search Technique:	S2, MB, DI, SD
Technique Notes:	[None]

History Notes:

LNM36/70-- VIRGINIA-CHESAPEAKE BAY-CHESAPEAKE CHANNEL-BUOY RELOCATED TO MARK WRECK; CHESAPEAKE CHANNEL LIGHT BUOY 7 (LLNO 2681) HAS BEEN TEMPORARILY CHANGED TO CHESAPEAKE CHANNEL LIGHT BUOY WR7 (LLNO 2681) SHOWING A QUICK FLASHING GREEN LIGHT AND RELOCATED TO LATITUDE 37-01-00N, LONG. 76-03-17W TO MARK THE 100-FOOT DERELICT VESSEL REPORTED SUNK IN POSITION LATITUDE 37-01-00N, LONGITUDE 76-03-18W WITH APPROXIMATELY 32 FEET OF WATER OVER THE WRECK AT MEAN LOW WATER.■■ LNM40/70-- VIRGINIA-CHESAPEAKE BAY-CHESAPEAKE CHANNEL-WRECK INFORMATION-BUOY RELOCATED; THE 100-FOOT DERELICT VESSEL PREVIOUSLY REPORTED SUNK AT POSITION LATITUDE 37-01-00N, LONGITUDE 76-03-18W HAS BEEN DETERMINED TO BE AT POSITION LATITUDE 37-00-46N, LONGITUDE 76-03-12W. CHESAPEAKE CHANNEL LIGHT BUOY 7 (LLNO 2681) PREVIOUSLY TEMPORARILY CHANGED TO CHESAPEAKE CHANNEL LIGHT BUOY WR7 (LLNR 2681) AND RELOCATED TO MARK THE WRECK HAS BEEN RELOCATED AT POSITION LATITUDE 37-00-48N, LONGITUDE 76-03-08W.■■ H09255WD/71-72-- OPR-467-R/H-71; ITEM NO. 55; CHARTED DANGEROUS SUNKEN WRECK (31 FEET REP) SOURCE IS LNM36/70, ABOVE. EVALUATOR RECOMMENDS REMOVING WRECK FROM CHART. CITES LNM6/73 (SEE BELOW) AS SOURCE FOR REMOVAL. DATA FOR THIS ITEM NOT PROCESSED.■■LNM6/73-- VIRGINIA-CHESAPEAKE BAY-CHESAPEAKE BAY CHANNEL-AID CHANGED; A. CHESAPEAKE CHANNEL LIGHTED BUOY WR7 (LLNO 2681) HAS BEEN RENAMED CHESAPEAKE CHANNEL LIGHTED BUOY 7 (LLNO 2681) . CHANGED TO SHOW A FLASHING WHITE LIGHT EVERY 4 SECONDS WITH A NOMINAL RANGE OF 6 NM AND RELOCATED IN 51 FEET OF WATER AT LATITUDE 37-01-12.6N, LONGITUDE 76-03-07.2W. THE WRECK CHARTED AT 37-00-48 (46)N, 76-03-10.5(12)W HAS BEEN REMOVED.■ ■ H10952/00-- OPR-E350-RU; UNCHARTED SUBMERGED WRECK LOCATED BY SIDE SCAN SONAR. TWO DIVES CONDUCTED. WRECKAGE CONSISTED OF TWO LARGE METAL BOXES, WOODEN REMAINS OF A SHIP, AND A METAL 3-4 INCH DIA. POLE PROTRUDING OUT OF A SAND BOTTOM. LD OBTAINED ON POLE OF 40 FEET IN LAT. 37-00-47.4N, LONG. 76-03-09.2W. EVALUATOR RECOMMENDS CHARTING A 40 WK AS SURVEYED. SEE AWOIS NO. 909. (ENT 11/7/00, SJV)

Survey Summary

Survey Position:	37° 00' 47.7" N, 076° 03' 09.6" W
Least Depth:	12.58 m (= 41.27 ft = 6.878 fm = 6 fm 5.27 ft)
TPU (±1.96σ):	**THU (TPEh)** ±7.856 m ; **TVU (TPEv)** ±0.188 m
Timestamp:	2007-248.16:01:55.211 (09/05/2007)
Survey Line:	h11603 / ru_mb / 2007-248 / 800_1601

Profile/Beam: 486/80

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 13003_1

Remarks:

Current status of AWOIS #10792 shows a least depth deeper then the charted 40-FT Wk. Located with 200% SSS and developed with RESON 8125 MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-248/800_1601	486/80	0.00	000.0	Primary
h11603/ru_mb/2007-248/800_1556	182/193	2.53	235.7	Secondary
h11603/ru_mb/2007-248/800_1601	444/59	10.56	337.6	Secondary (grouped)
h11603/ru_ss/2006-318/134_1456	0001	11.51	319.0	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 10792	13.56	314.4	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

41ft (12254_1, 12222_1, 12208_1, 12221_1, 12280_2)

6 ¾fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 2:dangerous wreck

QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 12.579 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Revise dangerous wreck least depth 40-ft to present survey position and depth of 41-ft.

Feature Images

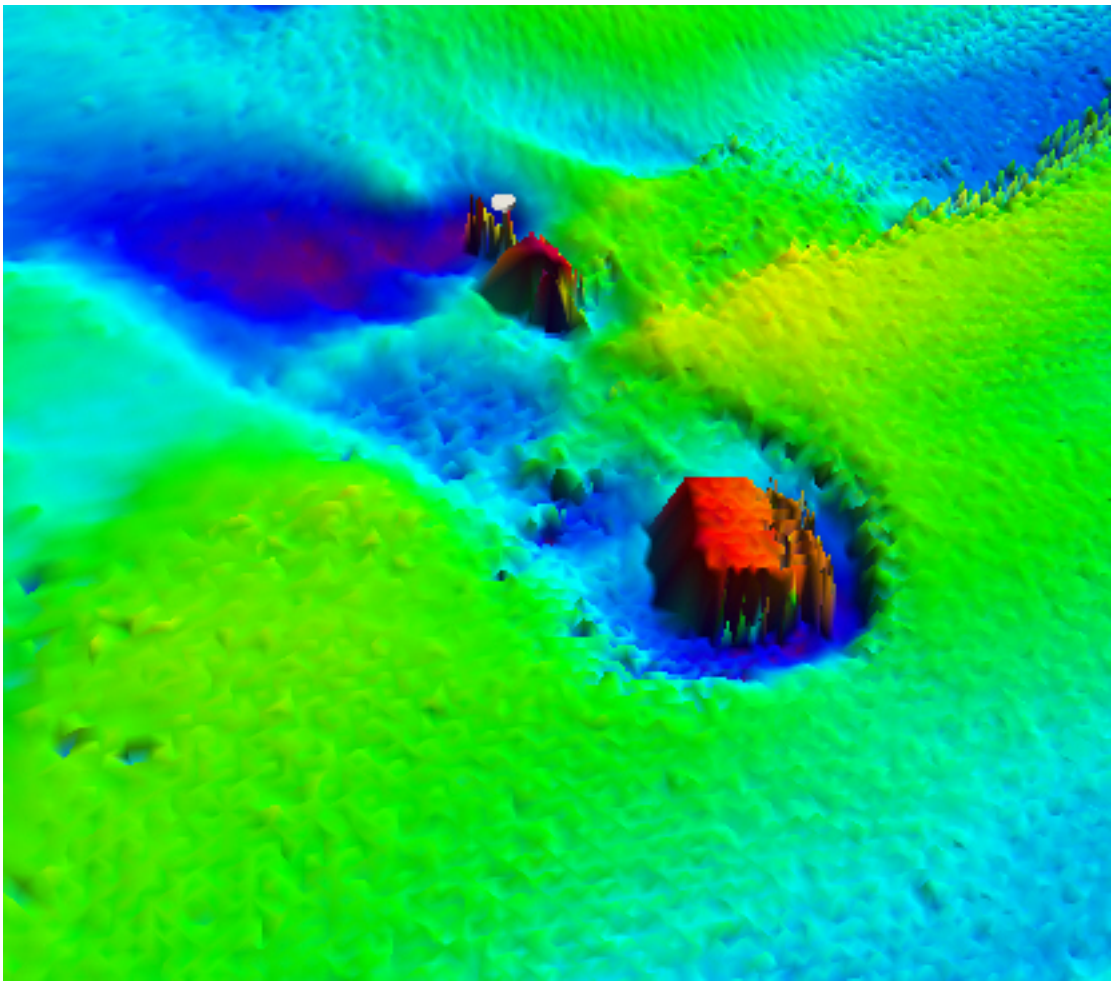


Figure 3.28.1

3.29) charted dangerous wreck ED (AWOIS 886)

Primary Feature for AWOIS Item #886

Search Position: 36° 59' 00.5" N, 076° 03' 58.7" W

Historical Depth: [None]

Search Radius: 1000

Search Technique: S2, MB, SD, DI

Technique Notes: [None]

History Notes:

LNM50/73-- DANGEROUS SUBMERGED WRECK PA; BURNED HULK OF 20-FOOT INBOARD/OUTBOARD BOAT.■ H9880/80-- OPR-D103-PE-80; UNABLE TO LOCATE WRECK THROUGH ECHO SOUNDER INVESTIGATION, 45 METER LINE SPACING, 1000 METER RADIUS. ARGO CONTROL IN R/R MODE.

Survey Summary

Survey Position: 36° 58' 57.4" N, 076° 03' 57.0" W

Least Depth: 7.15 m (= 23.46 ft = 3.910 fm = 3 fm 5.46 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.862 m ; **TVU (TPEv)** ±0.182 m

Timestamp: 2007-249.19:14:52.425 (09/06/2007)

Survey Line: h11603 / ru_mb / 2007-249 / 874_1914

Profile/Beam: 263/47

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 13003_1

Remarks:

Existance of AWOIS #886 has been confirmed. Approximatley 100 meters from Charted ED.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-249/874_1914	263/47	0.00	000.0	Primary
h11603/ru_mb/2007-249/871_1909	562/65	1.35	087.6	Secondary
h11603/ru_ss/2007-170/124_1427	0001	4.97	265.3	Secondary
h11603/ru_ss/2007-206/223_1357	0001	9.01	112.5	Secondary
AWOIS_OPR-E350-RU-07	AWOIS # 886	106.73	156.2	Secondary

Hydrographer Recommendations

Remove currently charted Wk ED from position 36*59'00.52"N, 076*03'58.750"W. Chart this Wk based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

23ft (12254_1, 12222_1, 12208_1, 12221_1, 12280_2)

3 ¾fm (13003_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	VALSOU - 7.151 m

Office Notes

Concur. Remove dangerous wreck ED (AWOIS 886) and text "ED" from chart. Revise dangerous wreck to present survey position with a least depth of 23-ft.

Feature Images

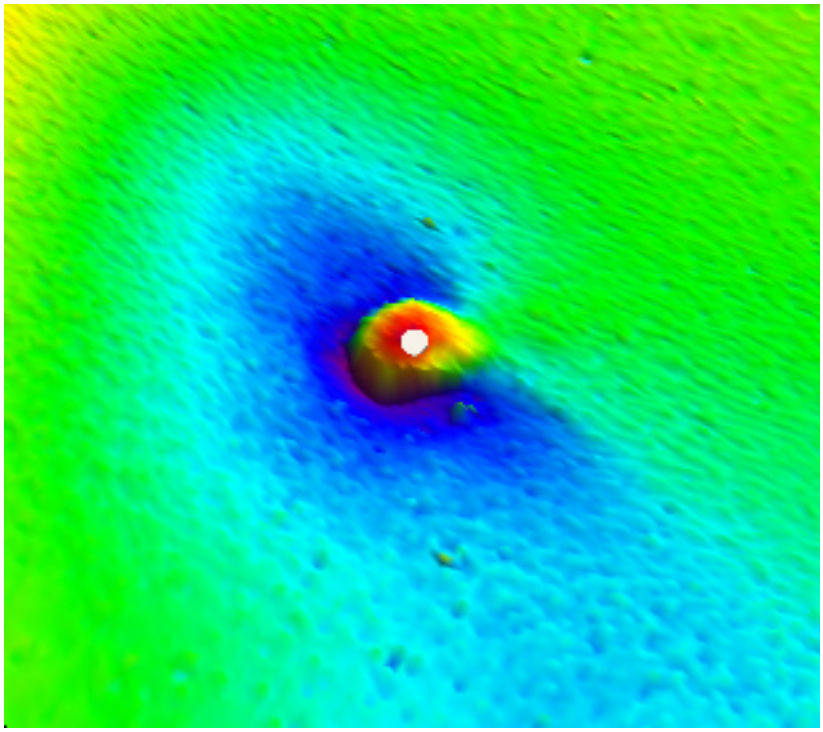


Figure 3.29.1

4 - Dangers to Navigation

4.1) charted 22-ft OBSTRN (DtoN)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 37° 00' 34.9" N, 076° 01' 50.5" W

Least Depth: 6.91 m (= 22.67 ft = 3.779 fm = 3 fm 4.67 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.854 m ; **TVU (TPEv)** ±0.181 m

Timestamp: 2007-248.16:53:44.423 (09/05/2007)

Survey Line: h11603 / ru_mb / 2007-248 / 816_1652

Profile/Beam: 836/117

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

Uncharted dangerous Obstruction located during H11603 survey operations. Item initially located with 200% SSS. Reson 8125 MBES development data determined a least depth of 22 feet with surrounding depth of 29 feet. This obstruction lies between the 36 and 30 foot contour lines north of the Chesapeake Channel. All soundings were adjusted to MLLW using approved water levels.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-248/816_1652	836/117	0.00	000.0	Primary
h11603/ru_ss/2007-164/206_1459	0001	8.69	313.5	Secondary
h11603/ru_ss/2007-163/106_1344	0001	10.67	147.0	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

22ft (12254_1, 12222_1, 12208_1, 12221_1, 12280_2)

3 ¾fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 6.911 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Shown on chart 12254; 47th Ed., March 2008. Retain as charted.

Feature Images

[Image file h:/compilation/h11603_e350-ru-07/ahb_h11603/pss/images/206_14590001_m.tif does not exist.]

[Image file h:/compilation/h11603_e350-ru-07/ahb_h11603/pss/images/206_14590001_s.tif does not exist.]

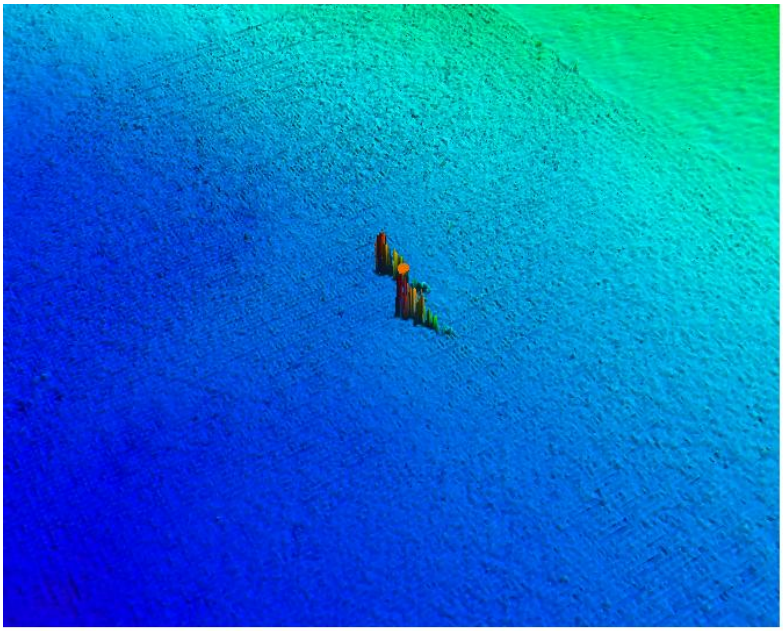


Figure 4.1.1

4.2) uncharted 20-ft OBSTRN

DANGER TO NAVIGATION

Survey Summary

Survey Position: 37° 00' 26.1" N, 076° 01' 28.4" W

Least Depth: 6.05 m (= 19.84 ft = 3.307 fm = 3 fm 1.84 ft)

TPU (±1.96σ): **THU (TPEh)** ±7.857 m ; **TVU (TPEv)** ±0.181 m

Timestamp: 2007-248.17:03:26.334 (09/05/2007)

Survey Line: h11603 / ru_mb / 2007-248 / 821_1702

Profile/Beam: 706/45

Charts Affected: 12254_1, 12222_1, 12208_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

Obstn found during 200% side scan coverage with least depth determined during MBES development.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11603/ru_mb/2007-248/821_1702	706/45	0.00	000.0	Primary
h11603/ru_mb/2007-248/832_1706	690/98	1.10	063.2	Secondary
h11603/ru_ss/2007-163/105_1360	0001	4.46	110.1	Secondary
h11603/ru_ss/2007-164/204_1420	0001	8.06	312.8	Secondary

Hydrographer Recommendations

Chart this Obstn based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

20ft (12254_1, 12222_1, 12208_1, 12221_1, 12280_2)

3 ¼fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20070913

SORIND - US,US,nsurf,H11603

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

VALSOU - 6.047 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous Obstn, least depth 20-ft., as shown on the present survey.

Feature Images

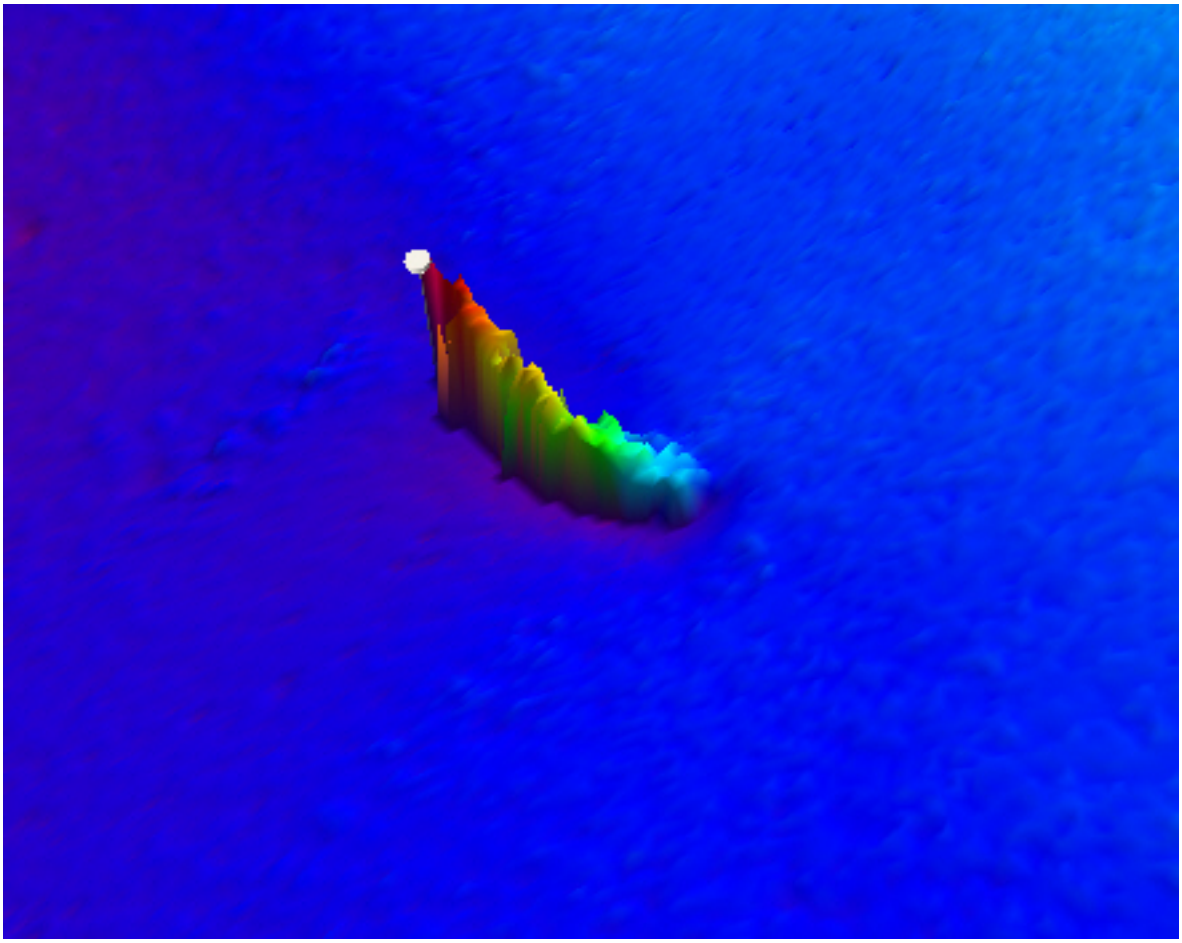


Figure 4.2.1

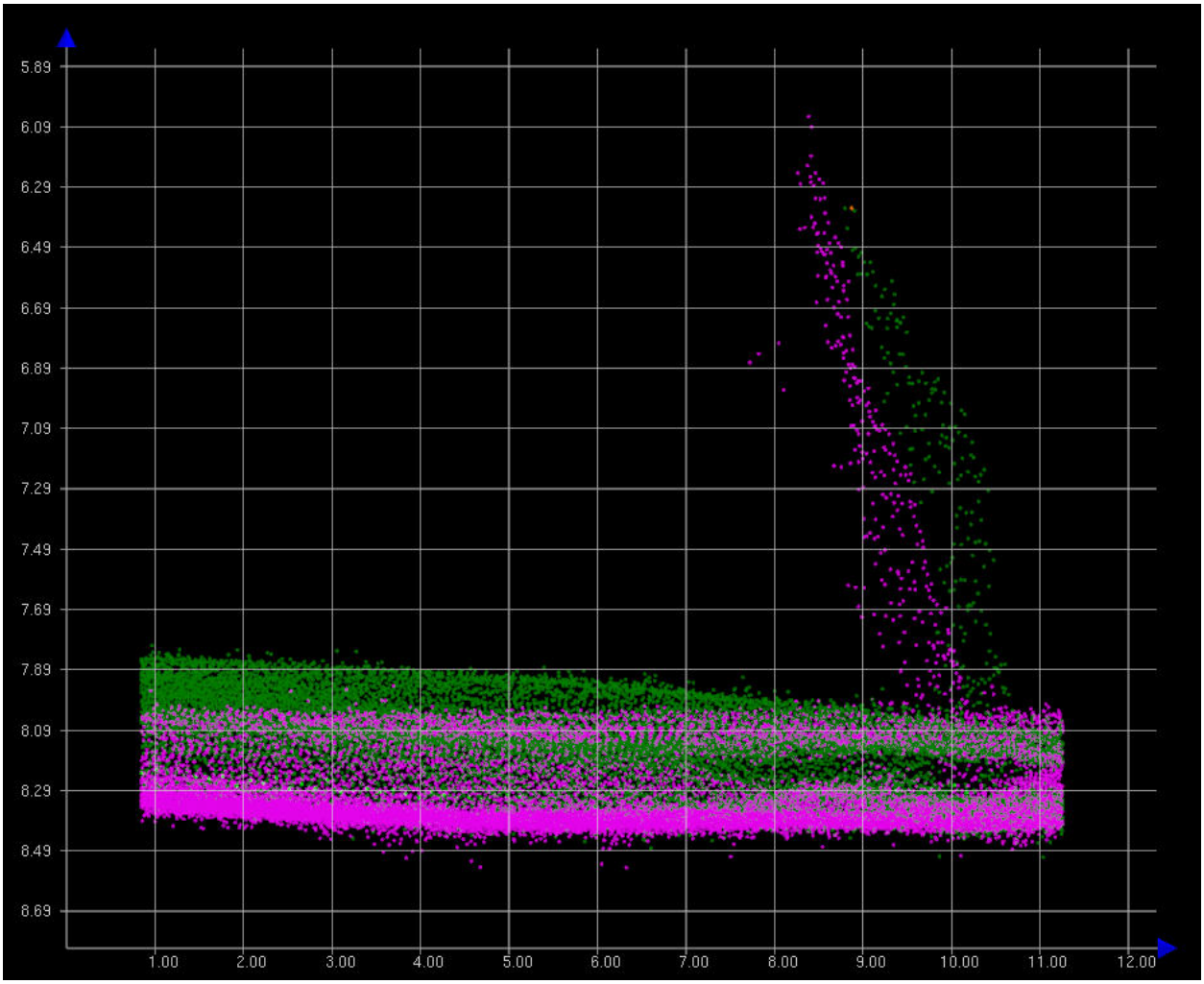

5.89
6.09
6.29
6.49
6.69
6.89
7.09
7.29
7.49
7.69
7.89
8.09
8.29
8.49
8.69
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00

Figure 4.2.2

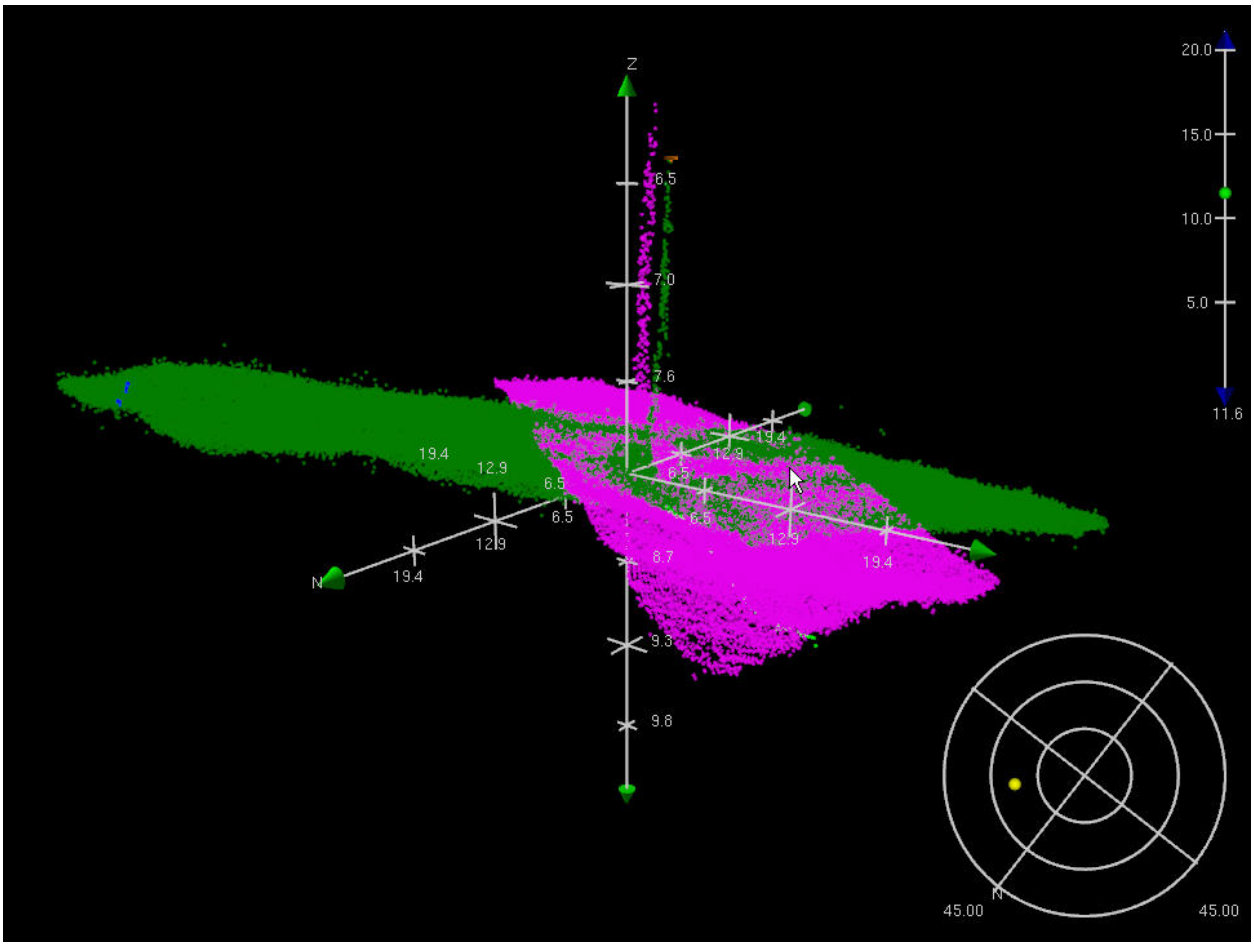

Z
6.5
7.0
7.6
19.4
12.9
6.5
6.5
12.9
19.4
N
19.4
12.9
6.5
6.5
12.9
19.4
8.7
9.3
9.8
20.0
15.0
10.0
5.0
11.6
N
45.00
45.00

Figure 4.2.3

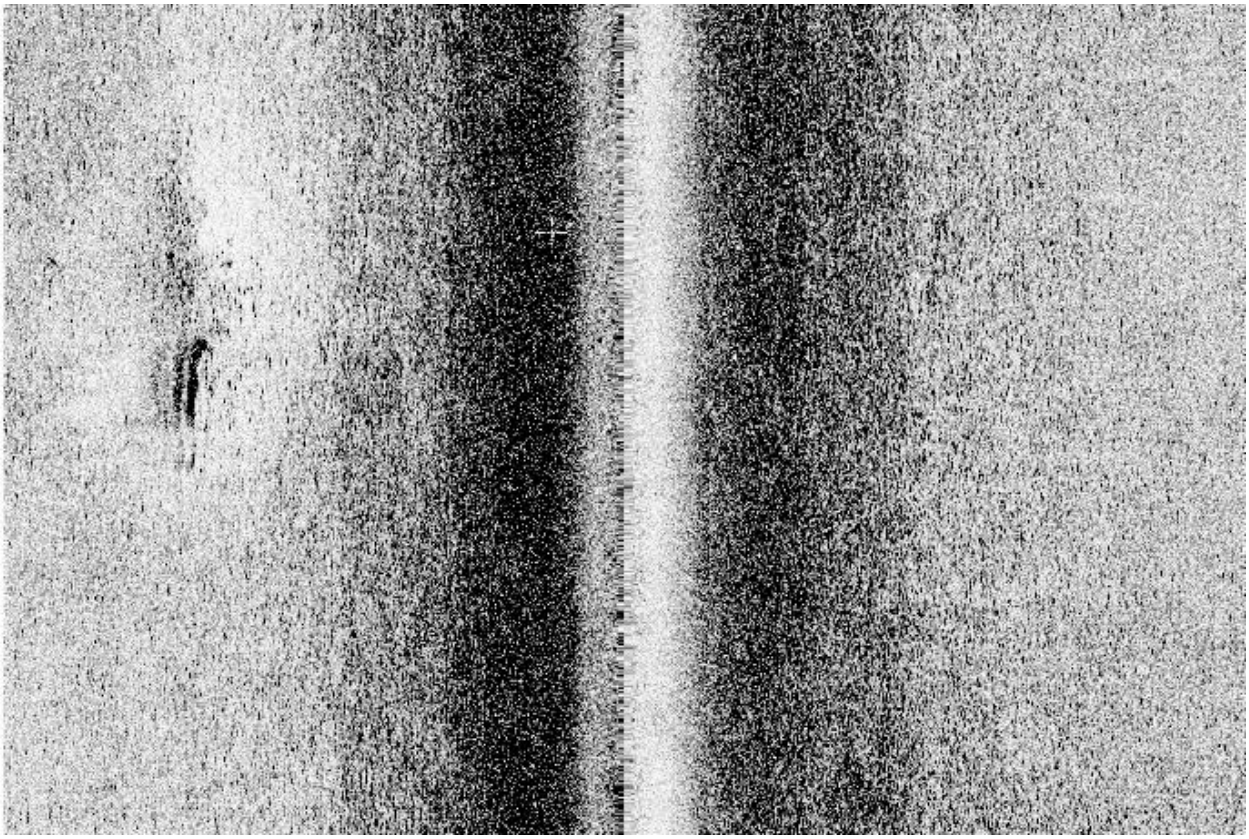


Figure 4.2.4

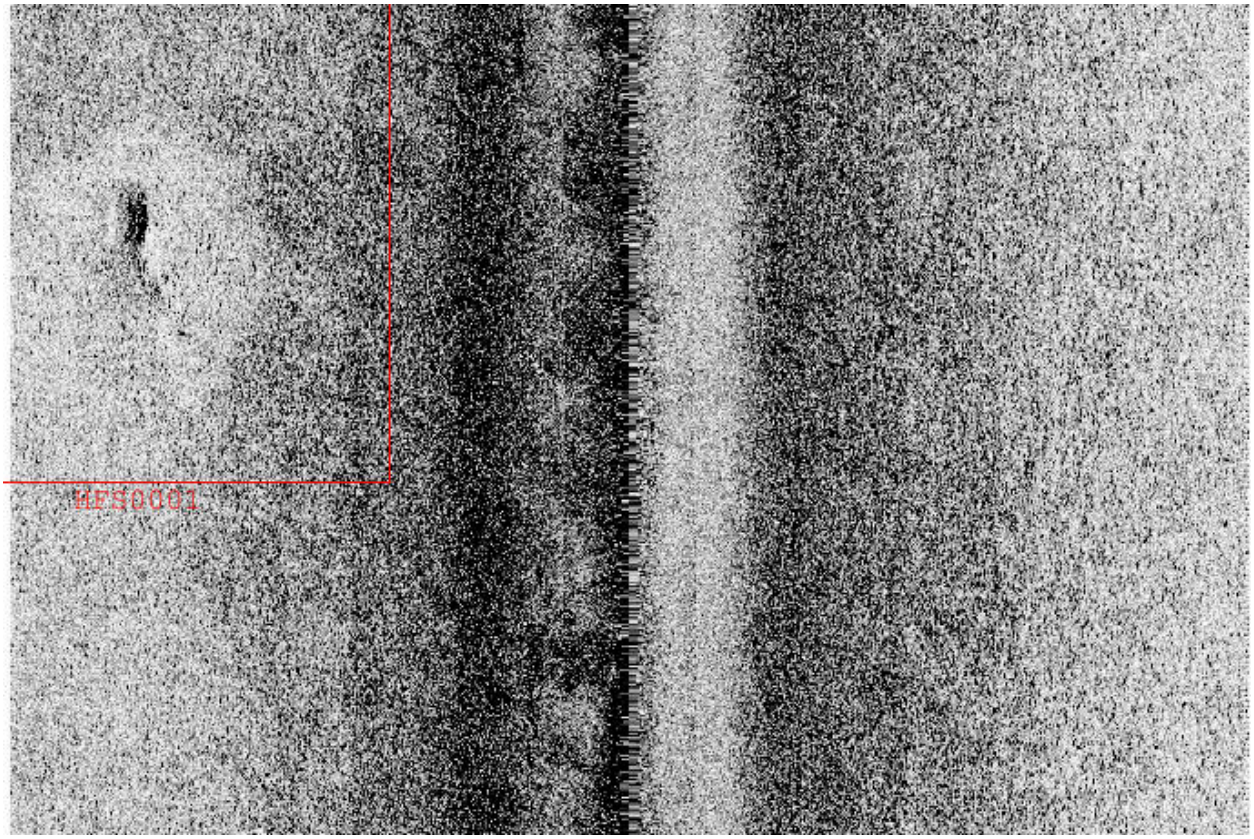
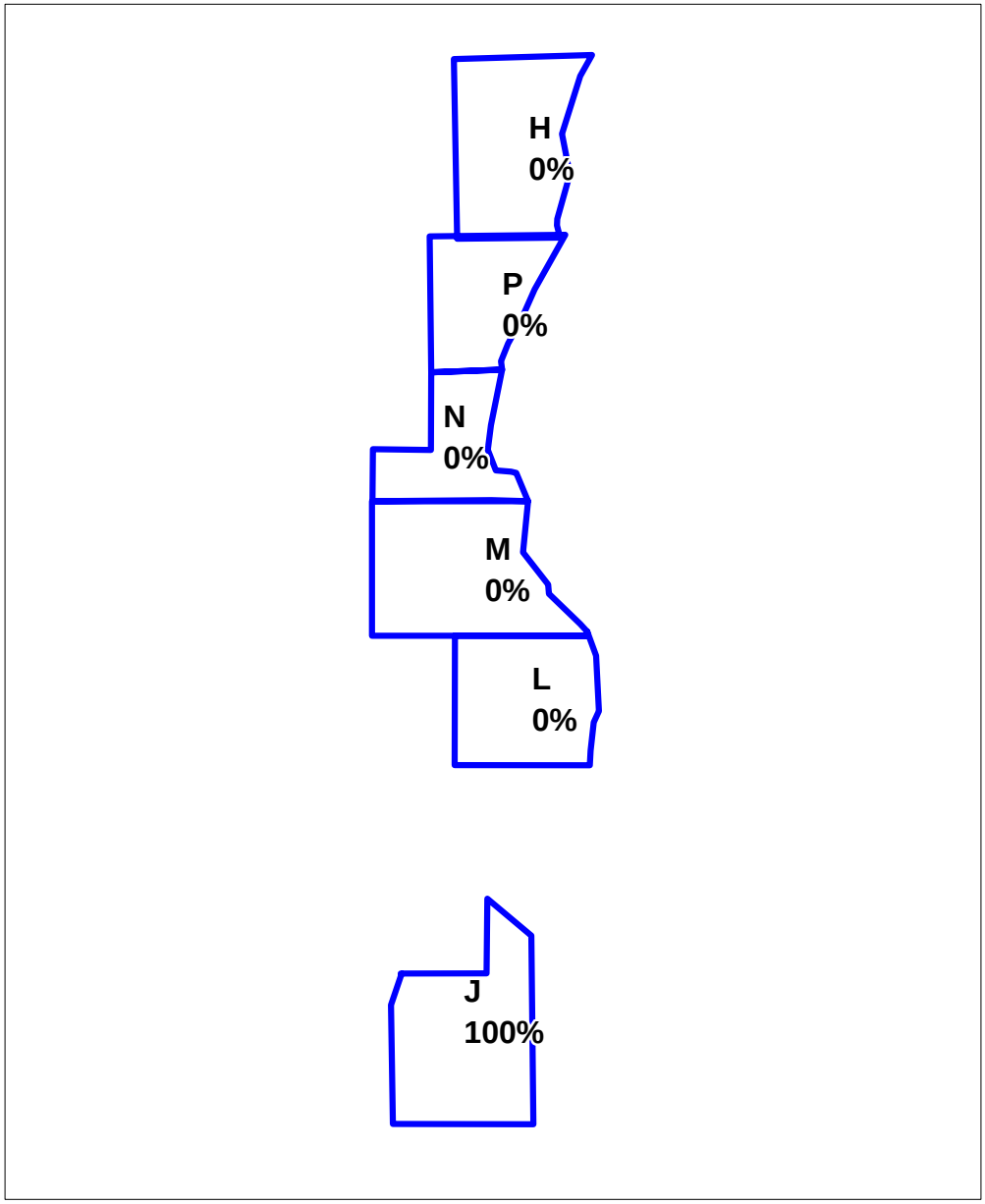
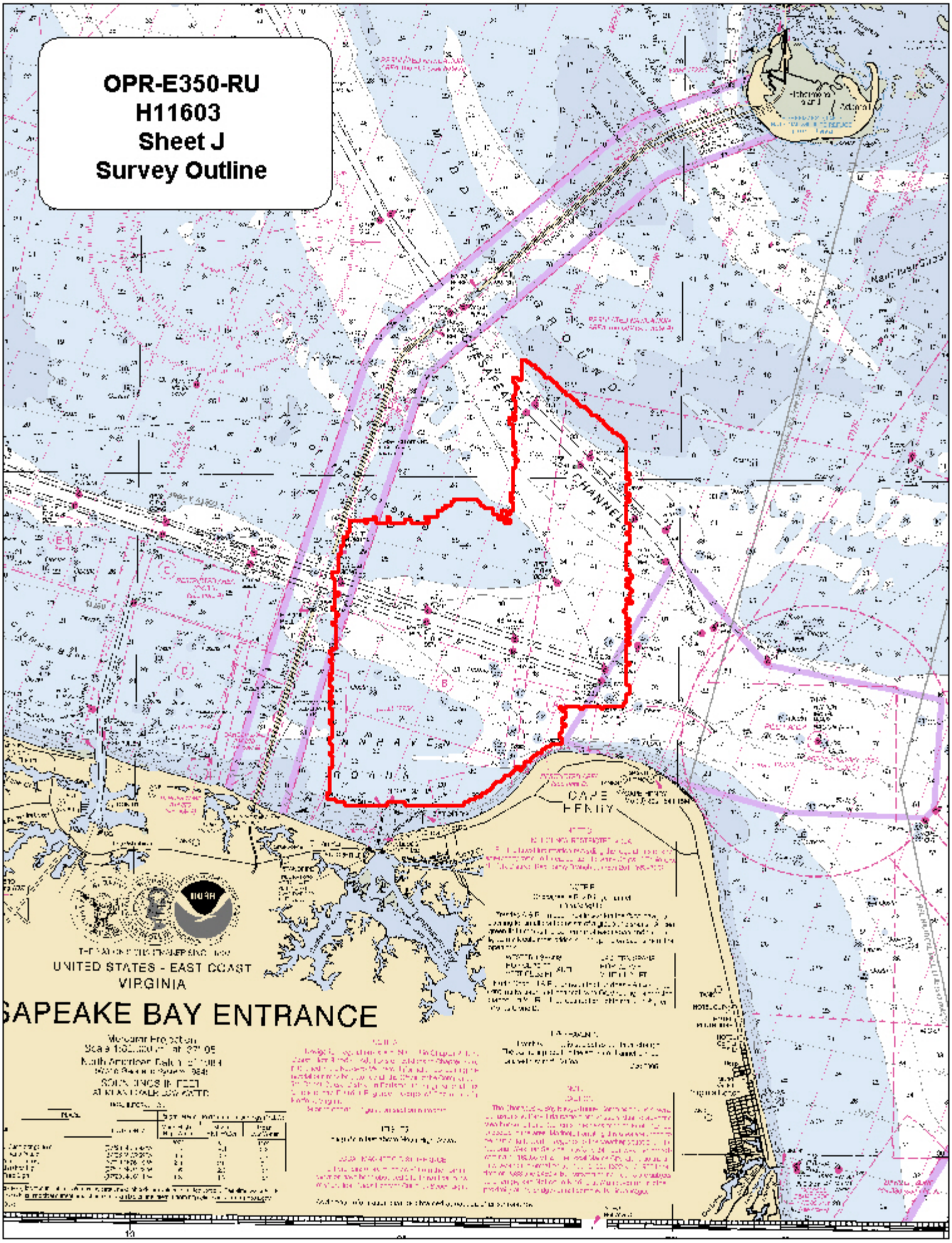


Figure 4.2.5



Project	Sheet_Letter	H_num	HQ_Est_SNM	CumlPercCompPrev	CumlPercCompCu	SNM_CompCurN	CumSNMcom
E350-07	H	11530	19	0	0	0	0
E350-07	P		12	0	0	0	0
E350-07	N		11	0	0	0	0
E350-07	M		21	0	0	0	0
E350-07	L		17	0	0	0	0
E350-07	J	11603	18	95	100	1	18

Progress Sketch OPR-E350-RU-07
September 2007


OPR-E350-RU
H11603
Sheet J
Survey Outline
CAPE HENRY
UNITED STATES - EAST COAST
VIRGINIA
SAPEAKE BAY ENTRANCE

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Ship RUDE (MOA-RU)
439 West York St
Norfolk, VA 23510-1114

October 02, 2007

MEMORANDUM FOR: Chief, Requirements and Development Division, N/OPS1

FROM: LCDR RICHARD T. BRENNAN, NOAA Ship RUDE (MOA-RU)

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final zoning in MapInfo and .MIX format
3. Six Minute Water Level data (Co-ops web site)

Transmit data to the following:

NOAA/NOS/Atlantic Hydrographic Branch
N/CS33, Building #2
439 West York Street
Norfolk, VA 23510
ATTN: Chief AHB

These data are required for the processing of the following hydrographic survey:

Project No.:	OPR-E350-RU-07
Registry No.:	H11603
State:	Virginia
Locality:	Southern Chesapeake Bay
Sublocality:	Middle Ground to Lynnhaven Roads

Attachments containing:

1) an Abstract of Times of Hydrography,
2) digital MID MIF files of the track lines from Pydro

cc: N/CS33

Year_DOY	Min Time	Max Time
2006_303	19:57:26	20:10:00
2006_304	15:15:29	20:04:38
2006_305	14:44:30	20:18:18
2006_306	14:07:21	14:17:20
2006_313	16:01:57	16:37:22
2006_318	14:56:55	19:53:40
2006_319	14:30:58	19:56:50
2007_072	14:16:45	18:16:23
2007_073	13:06:12	19:09:36
2007_163	13:44:50	18:22:30
2007_164	13:21:22	18:26:37
2007_170	13:25:48	20:23:34
2007_171	12:56:28	18:33:49
2007_176	16:29:12	18:34:29
2007_177	13:24:54	17:26:27
2007_178	15:04:45	18:04:46
2007_179	16:56:38	18:12:59
2007_199	13:27:41	18:30:58
2007_200	14:27:01	14:54:56
2007_204	16:22:42	18:30:42
2007_206	13:56:50	18:23:50
2007_207	13:13:51	18:54:23
2007_208	13:44:03	15:51:13
2007_211	16:30:53	17:51:45
2007_212	13:24:43	18:03:39
2007_213	13:29:39	17:51:26
2007_214	13:21:28	18:15:28
2007_218	15:32:05	19:27:58
2007_219	16:15:24	19:05:20
2007_220	13:31:55	17:53:57
2007_225	16:33:59	19:24:28
2007_226	15:04:32	19:25:45
2007_227	14:39:01	19:28:27
2007_228	15:19:23	19:14:17
2007_232	17:10:14	19:42:06
2007_233	14:47:40	18:35:02
2007_234	13:41:34	19:35:21
2007_239	15:27:44	19:28:10
2007_240	17:46:12	19:36:01
2007_241	14:50:40	19:25:49
2007_242	15:13:32	19:14:16
2007_247	16:00:50	19:22:00
2007_248	15:23:31	19:05:59
2007_249	14:24:29	19:14:59
2007_250	13:54:41	15:38:13
2007_253	16:46:29	23:58:59
2007_254	00:31:19	13:53:54
2007_256	10:30:44	13:09:58

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : October 10, 2007

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-E350-RU-2007
HYDROGRAPHIC SHEET: H11603

LOCALITY: Middle Ground to Lynnhaven Roads, Southern Chesapeake Bay, VA
TIME PERIOD: October 30, 2006 - September 13, 2007

TIDE STATION USED: 863-8863 Chesapeake Bay Bridge Tunnel, VA
Lat. 36° 58.0'N Long. 76° 06.8' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.814 meters

REMARKS: RECOMMENDED ZONING

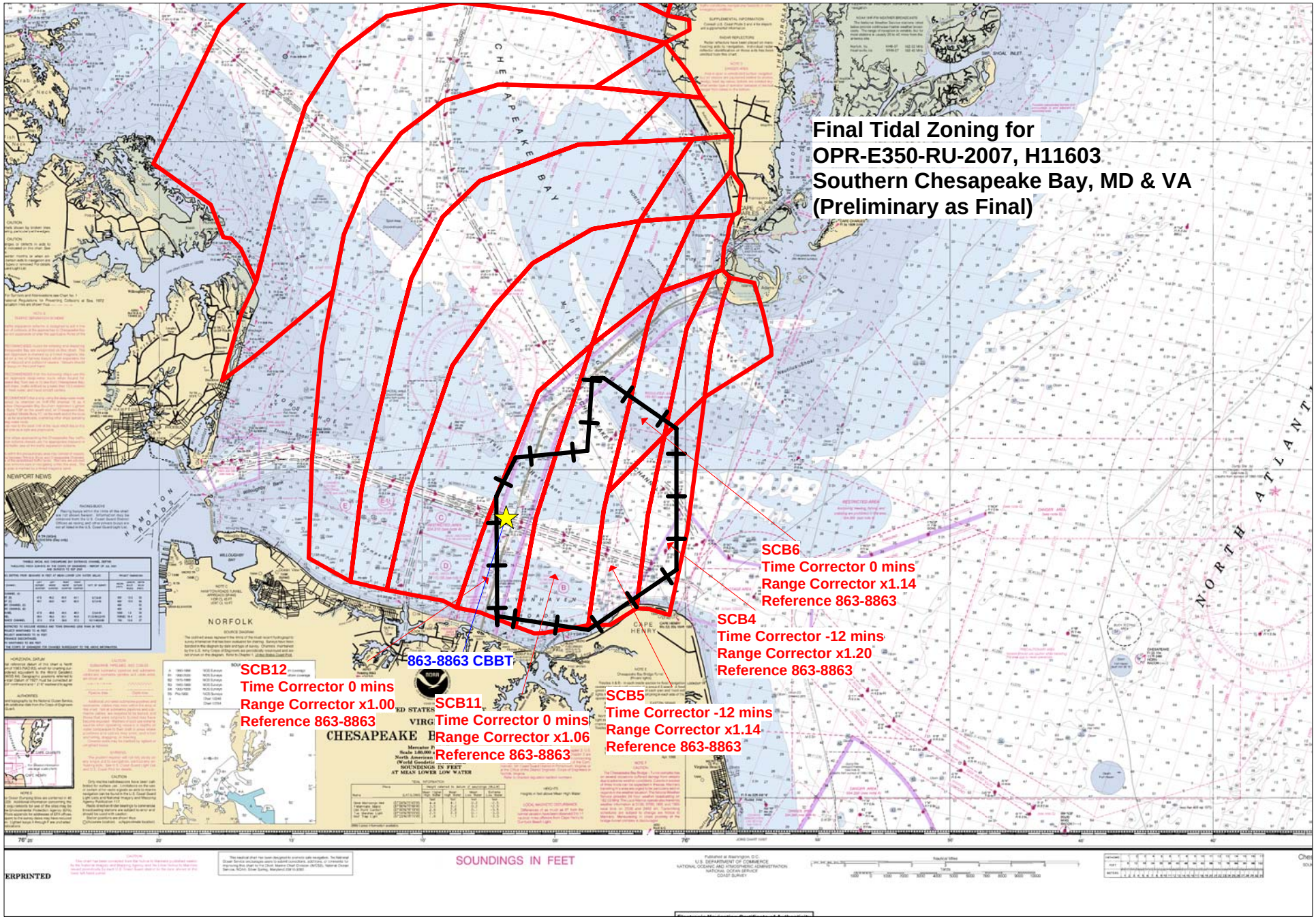
Preliminary zoning is accepted as the final zoning for project OPR-E350-RU-2007, H11603, during the time period between October 30, 2006 to September 13, 2007.

Please use the zoning file "E350RU2007CORP" submitted with the project instructions for OPR-E350-RU-2007. Zones SCB4, SCB5, SCB6, SCB11 & SCB12 are the applicable zones for H11603.

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).

_____
CHIEF, PRODUCT AND SERVICES DIVISION


Final Tidal Zoning for
OPR-E350-RU-2007, H11603
Southern Chesapeake Bay, MD & VA
(Preliminary as Final)
SCB6
Time Corrector 0 mins
Range Corrector x1.14
Reference 863-8863
SCB4
Time Corrector -12 mins
Range Corrector x1.20
Reference 863-8863
SCB5
Time Corrector -12 mins
Range Corrector x1.14
Reference 863-8863
863-8863 CBBT
SCB12
Time Corrector 0 mins
Range Corrector x1.00
Reference 863-8863
SCB11
Time Corrector 0 mins
Range Corrector x1.06
Reference 863-8863
CHESAPEAKE BAY
NORFOLK
NEWPORT NEWS
HAMPTON ROADS
NORTH ATLANTIC
SOUNDINGS IN FEET

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to ACCOMPANY
SURVEY H11603 (2007)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

B.1 DATA PROCESSING

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

HSTP PYDRO version 7.3 r2586
CARIS HIPS/SIPS version 6.1 SP2 HF 1-6
CARIS Bathy Manager version 2.1 SP1 HF 1-10
DKART INSPECTOR, version 5.0 Build 732 SP1
CARIS HOM version 3.3 SP3 HF 1-8
CARIS S57 Composer version 2.0 HF 1-2

B.2. QUALITY CONTROL

B.2.1. H-Cell

The AHB source depth grid for the survey's nautical chart update product entailed the field's original six 50cm MB resolution grids combined with one 2m resolution SB grid in a *bag format to form a combined grid at a 2 meter resolution, then using them to create a product surface grid with a resolution of 10m. The survey scale selected soundings were extracted from the 2m combined surface. The selected sounding set is approximately 35 to 40 times the number of charted depths. The chart scale selected soundings are a subset of the survey scale selected soundings. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

Depth curves were created from a 10m shifted product surface grid. The 10m grid resolution product surface model was generated at a scale of 1:10,000, generalization radius of 100m with no defocusing. The depth curves are forwarded to MCD for reference only. The curves were utilized during chart scale sounding selection and quality assurances efforts at AHB.

The pre-compilation products or components (Stand Alone HOB files (SAHOB)) are detailed in the Pre-Compile Process Log attached at the end of this document. The SAHOB files included depth curves (DEPCNT), sounding selections (SOUNDG), features (SBDARE, OBSTRN, WRECKS), Meta objects (M_COVR, M_QUAL), and

cartographic Blue Notes. The individual SAHOB files were inserted into one BASE Manager feature layer and exported to S57 format in order to create the H-Cell deliverable.

The completed H-Cell was exported as a Base Cell File (ENC.000) in S-57 format with all values in metric units. The metric equivalent ENC.000 file was then converted to NOAA chart units (ENC_CU.000) with all values measured in feet following NOAA sounding rounding rules.

Chart compilation was performed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

The H11603 CARIS H-Cell final deliverables include the following products:

US511603_CS.000	1:20,000 Scale	H11603 H-Cell with Chart Scale Selected Soundings
US511603_SS.000	1:10,000 Scale	H11603 Selected Soundings (Survey Scale)

B.22. Junctions

Survey H11603 (2007) junctions with surveys H11323 (2006) to the west, H11205 (2006) to the northwest, H11651 (2007) to the east, and H11402 (2005) to the southeast. H11603 soundings are in general agreement with the soundings from these surveys, with H11323 being 1-2 feet different, H11651 being 0-1 foot different, H11205 being 0-2 feet different, and H11402 being 1-3 feet different.

C. VERTICAL AND HORIZONTAL CONTROL

Final vertical correction processing was completed by office personnel at the Atlantic Hydrographic Branch. The office personnel applied verified water levels in conjunction with the preliminary tidal zoning which was accepted and approved by N/OPSI CO-OPS as the final zoning for H11531. Sounding datum is Mean Lower Low Water (MLLW). Vertical datum is Mean High Water (MHW)

A systematic motion artifact, the cause of which is undetermined, existed in the VBES data from several days. The amplitude of the artifact generally ranged from 0.1-0.5 meters, approaching 0.6 meters in isolated cases. “Re-svp-ing” with the heave data multiplied by -1 helped mitigate the artifact for certain data (2007-207, 2007-2008, 2007-214, and 2007-232); however, multiplying the heave by -1 resulted in no discernable improvement in data from days 2007-212, 2007-213, 2007-218, 2007-225, and 2007-226, for which. The amplitude of the artifact in the “corrected” data ranges generally from 0.1-0.2 meters.

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 17. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON — **12254 (47th Edition, Mar/08)**
Corrected through NM Mar 22/08
Corrected through LNM Mar 18/08
Scale 1:20,000

12222 (50th Edition, Sep./08)
Corrected through NM Sep.06/08
Corrected through LNM Sep.02/08
Scale 1: 40,000

ENC Comparison — **US5VA19M**
Chesapeake Bay Cape Henry to
Thimble Shoal Light
Edition 14
Application Date 2008-10-27
Issue Date 2008-10-27
Chart 12254

D.1.1 Hydrography

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section "D" and Appendix 1&2 of the Descriptive Report.

D.3. MISCELLANEOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, 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.4. 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 BASE Cell File or the Blue Notes should be retained as charted. **Refer to the Descriptive Report for further recommendations by the hydrographer.**

Version 1.0

This Document is for Office Process use only and is intended to supplement, not supersede or replace, information/recommendations in the Descriptive or Evaluation Reports

AHB PRE-COMPILATION PROCESS

REGISTRY No.	H11603
PROJECT No.	OPR-E350-RU-07
FIELD UNIT	NOAA SHIP RUDE; RUDE PERSONNEL
PRE-COMPILER	KELLY SCHILL
LARGEST SCALE CHART	12254, edition 47, 20080322
CHART SCALE	1:20,000
SURVEY SCALE	1:10,000
DATE OF SURVEY	10-30-2006 to 09-13-2007
CONTENT REVIEW DATE	December 08, 2008

Components	File Names
Product Surface	PS_H11603_10k_100mrad_10mres.hns
Shifted Surface	PS_H11603_10k_100mrad_10mres_Shifted.hns
Contour Layer	H11603_Contours.hob
Survey Scale Soundings	H11603_SS_Soundings.hob
Chart Scale Soundings	H11603_CS_Soundings.hob
ENC Retain Soundings	H11603_ENC_Retain_Soundings.hob
Feature Layer	H11603_Features.hob H11603_ENC_Features.hob
Meta-Objects Layer	H11603_MetaObjects.hob
Blue Notes	H11603_Bluenotes.hob

SPECIFICATIONS:

I. COMBINED SURFACE:
   a. File name: H11603_2m_Combined.hns
   b. Resolution: 2 m
   c. Final Grid Location: H:\Compilation\H11603_E350-RU-07\AHB_H11603\COMPILE\Working

II. PRODUCT SURFACE (SOUNDINGS):
   a. Scale: 1: 10,000
   b. Radius: 100 m
   c. Resolution: 10 m

   d. Depth
      i. Minimum: 2.94 m
      ii. Maximum: 21.23 m

   PRODUCT SURFACE (CONTOURS):
   a. Scale: 1: 10,000
   b. Radius: 100 m
   c. Resolution: 10 m

III. SHIFTED SURFACE:
   Single Shift Value: -0.229 *[-0.229m (feet), (≤ 10 fathoms)]*
   [-1.372m (fathoms), (> 10 fathoms)]

IV. CONTOUR LAYER:

a. Use a Depth List: H11603_NOAA_depth_curves_list.txt
Depth List:
0
0.914
1.829
3.658
5.486
7.315
9.144
10.973
18.288

b. Output Options:
i. Create contour lines:
1. Line Object: DEPCNT
2. Value Attribute: VALDCO

V. SOUNDING SELECTION:
a. Selection Criteria:
i. Radius
ii. Shoal biased
iii. Use Single-Defined Radius: ____ distance on ground (m)
iv. Filter: Generalized !=1

VI. FEATURES:
a. Brought in from Survey
Total No. 36
b. Brought in from ENC
ENC: # 2
Total No. 38

VII. META-OBJECTS:
a. M_COVR attributes

Acronym	Value
SORDAT	20070913
CATCOV	Coverage available
SORIND	US,US,survy,H11603

b. M_QUAL attributes

Acronym	Value
CATZOC	Zone of Confidence (not assessed)
INFORM	H11603,OPR-E350-RU-07,RUDE
POSACC	10
SORDAT	20070913
SORIND	US,US,survy,H11603
SUREND	20070913
SURSTA	20061030
TECSOU	

c. DEPARE attributes

Acronym	Value
DRVALV 1	8.440-ft
DRVALV2	69.652-ft
SORDAT	20070913
SORIND	US,US,survy,H11603

d. M_CSCL attributes

Acronym	Value
CSCALE	
SORDAT	
SORIND	

VIII. NOTES:

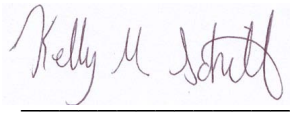
1. One line of single beam bathymetry was missing from the 2m *bag. Ed and I added that line of bathymetry to the fieldsheet. The updated fieldsheet is titled AHB_H11603_VBES_2m_SHOAL_EXTRACT_120408.hns. This fieldsheet still needs to be transformed into a *bag format by Sarah. Sarah was not informed of this.

APPROVAL SHEET
H11603

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, representation 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 Evaluation Report.

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



Kelly Schill
I attest to the accuracy and
integrity of this document
2009.02.10 15:54:11 -05'00'

Kelly Schill
Hydrographic Intern
Atlantic Hydrographic Branch

Marilyn Schluter

Digitally signed by Marilyn Schluter
DN: cn=Marilyn Schluter, o=NOAA, ou=Atlantic Hydrographic Branch, email=marilyn.l.schluter@noaa.gov, c=US
Date: 2009.02.10 12:53:29 -05'00'

Marilyn L. Schlüter
Cartographer
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.

Approved: _

Digitally signed by Shepard Smith
DN: cn=Shepard Smith, o=NOAA, ou=AHB, email=shep.smith@noaa.gov, c=US
Date: 2009.02.10 15:49:26 -05'00'

Shepard M.Smith
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Jeremy McHugh
AWOIS/SURF Check Completed
2009.02.11 10:13:47 -05'00'