H11088

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

(NAVIGABLE AREA CONCEPT)

Registry No. H11088

LOCALITY

State MARYLAND

General Locality CHESAPEAKE BAY

Locality COVE POINT

2004

CHIEF OF PARTY
LTJG HOLLY A. DEHART, NOAA

LIBRARY & ARCHIVES

DATE

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

HYDROGRAPHIC TITLE SHEET

REGISTRY NUMBER:

H11088

INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NUMBER: N/A

State/Territory:	**Maryland**	
General Locality:		**Chesapeake Bay**
Sub-Locality:		**Cove Point**
Scale:	**1:10,000**	**Dates of Survey: 11/26/01 to 08/25/04**
Instructions Dated:	**11/07/01**	**Project Number: S-E906-BH**
Vessel:	**NOAA S/V BAY HYDROGRAPHER, S-5501**	
Chief of Party:	**LTJG Holly A. DeHart, NOAA**	
Surveyed by:	**BAY HYDROGRAPHER Personnel**	
Soundings by:	**Knudsen 320M Marine Echosounder** **Reson Seabat 8125 multibeam sonar**	
Graphic record scaled by:	BAY HYDROGRAPHER Personnel	
Graphic record checked by:	BAY HYDROGRAPHER Personnel	
		Hewlett Packard Design Jet 2500 CP (office)
Protracted by:	N/A	Automated Plot: HP-1055cm plus ***(field)***
Verification by:	Atlantic Hydrographic Branch ***Personnel***	
Soundings in:	Meters ***Feet*** at MLLW	

Remarks:

Remarks: ***Bold, Red, Italic notes in Descriptiye Report were made during office processing.***

1) All Times are UTC.

2) This is a basic Hydrographic Survey under the Navigable Area Concept.

3) Projection is UTM Zone 18.

TABLE OF CONTENTS

APPENDICES *

Data filed with original field records.

DESCRIPTIVE REPORT

to accompany

Hydrographic Survey H11088

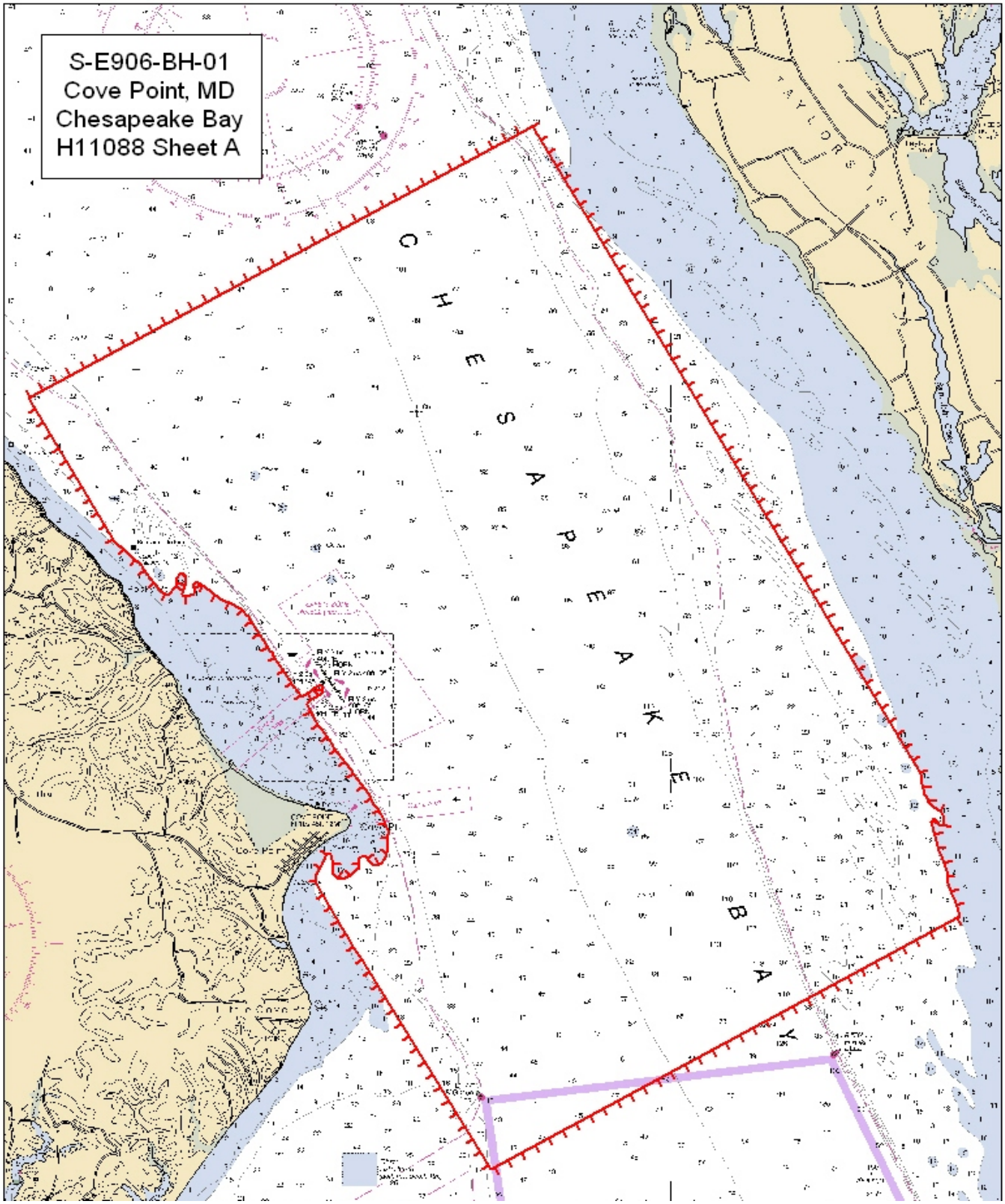
Scale of Survey: 1:10,000
Year of Survey: 2001-2004
NOAA S/V BAY HYDROGRAPHER
LTJG Holly A. DeHart, Officer-in-Charge

A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project S-E906-BH, Cove Point, Maryland. The instructions are dated November 7, 2001. No subsequent changes affecting this survey were made to the letter instructions.

This Descriptive Report pertains to survey H11088, Approaches to Cove Point, Maryland. Survey H11088 is referenced to the letter instructions as Sheet "A" of project S-E906-BH.

Survey limits are displayed graphically in the chartlet on the following page. A second chartlet, showing the final survey outline is included as Appendix III – Progress Sketch.


S-E906-BH-01
Cove Point, MD
Chesapeake Bay
H11088 Sheet A
CHESAPEAKE BAY
TAYLOR ISLAND

B. DATA ACQUISITION AND PROCESSING *See also the Evaluation Report.*

B.1. EQUIPMENT

All data were acquired by NOAA S/V BAY HYDROGRAPHER. BAY HYDROGRAPHER is a 17 meter vessel equipped to conduct both side scan and shallow water multibeam survey operations. The vessel was configured as described in the Data Acquisition and Processing Report (DAPR) * for this project. Major data acquisition systems are summarized below.

NOAA S/V BAY HYDROGRAPHER acquired side scan sonar (SSS), shallow water multibeam (SWMB), and vertical beam echosounder (VBES) data. All SSS data were acquired with the Klein T-5500 side scan sonar towfish. SWMB data were acquired with the Reson Seabat 8125 shallow water multibeam sonar. VBES data were acquired with a Knudsen 320M marine echosounder. At the start of this project, BAY HYDROGRAPHER's positioning system was a Trimble DSM212L integrated differential GPS receiver and vessel attitude was determined using a TSS DMS-05 Dynamic Motion Sensor. During the project, the vessel's positioning and attitude systems were upgraded to a TSS POS/MV Model 320, version 3, Position & Orientation System. The POS/MV is a GPS-aided inertial navigation system.

All velocity casts were conducted with either a Sea-Bird SBE 19 SEACAT Profiler instrument, or a Sea-Bird SBE 19 plus SEACAT Profiler instrument.

No unusual vessel configurations were employed on this project. Refer to the project DAPR * for detailed vessel configuration information.

**** Data filled at the Atlantic Hydrographic Branch (AHB).***

B.2. QUALITY CONTROL

No unusual conditions which would compromise data integrity were encountered during survey operations.

Side Scan Sonar Quality Control

Daily confidence checks were made with the side scan system by observing the real-time imagery during data acquisition. A satisfactory check was determined by the ability to distinguish contacts or known features across the entire range of the side scan trace.

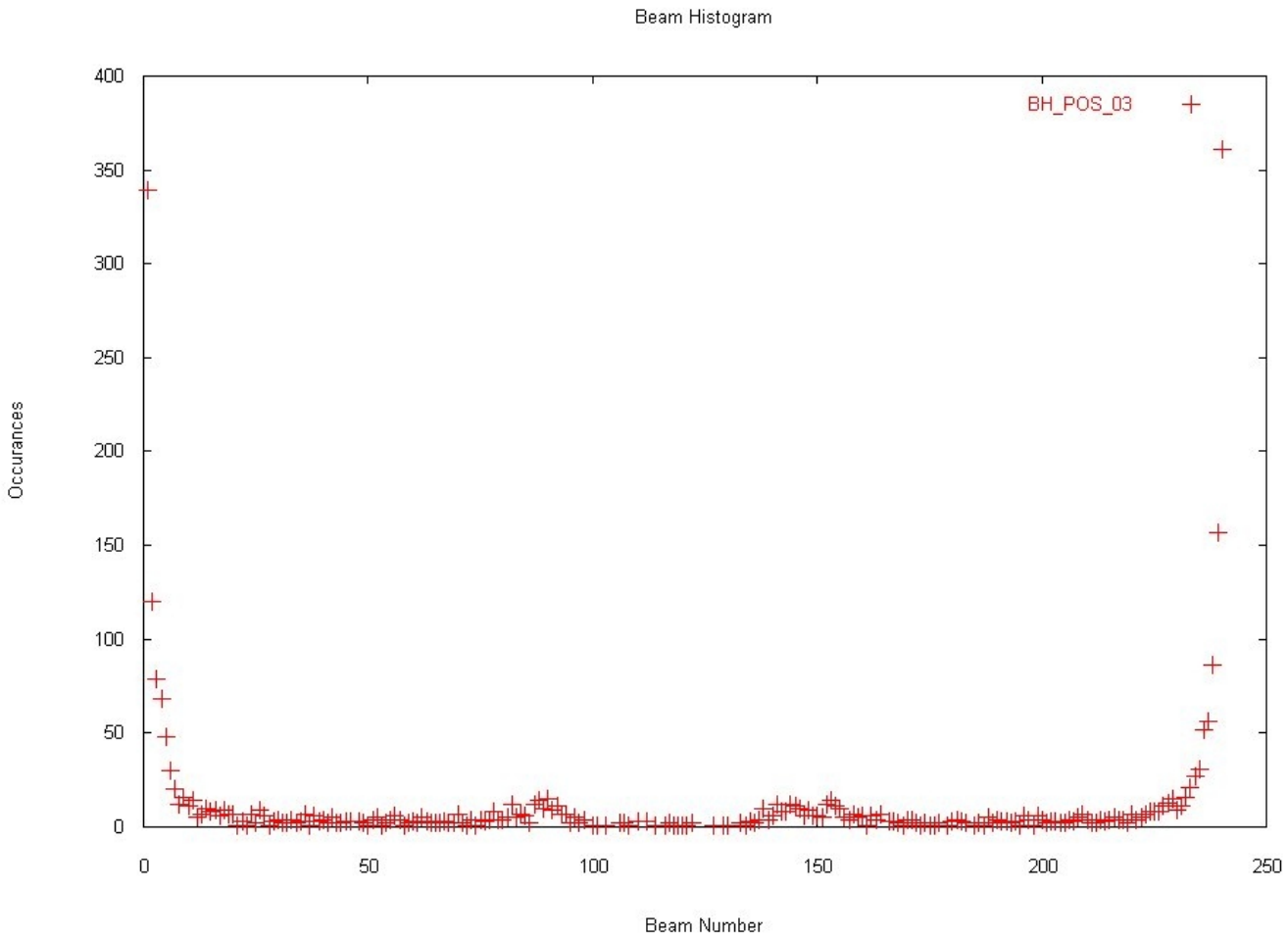
Shallow Water Multibeam Quality Control

Daily confidence checks were made with the SWMB system by correlating sounding data to the VBES sonar data during simultaneous acquisition. A bathymetry confidence check, performed in ISIS, provided a real-time comparison of the VBES data to nadir soundings fro the SWMB system. This comparison was monitored for significant discrepancies during data acquisition.

Post survey processing identified a slight difference of 0.2 meters or less between some adjacent lines of multibeam data acquired during developments. Based on the typical "smiling" or "frowning" nature of these survey lines, the cause of the discrepancy was determined to be variances in the sound velocity profile throughout the survey area.

Multibeam Histogram

The multibeam data histogram is shown on the following page. The horizontal axis "Beam Number" displays each of the 240 beams from the Reson 8125 multibeam. The vertical axis "Occurrences" identifies the number of times each beam has been selected for the shoal biased data set. The outer beams have a higher occurrence due their angles being less perpendicular to the water column than the inner beams, thus producing noisier data. This noise could not be effectively edited using the processing methods in place at the time of survey.



Crosslines

Over 65 linear nautical miles (lnm) of VBES crosslines were run, equivalent to 12% of all lnm of SSS mainscheme data acquired for this survey. Mainscheme data were defined for this survey to be both the 100% and 200% coverages. Crossline to mainscheme comparisons were made using the Points/Surface Stats Report feature in Pydro v. 4.9.3. A total of 1748 crossline/mainscheme intersections were counted on the survey sheet. Per the NOAA Specifications & Deliverables, Section 5.5.3 – Crosslines, 25 check points were placed randomly throughout the sheet for comparison using the International Hydrographic Organization (IHO) statistical standards for Order 1 surveys. All of the chosen crossline intersections met the IHO Order 1 standards at a 95% confidence level.

Junctions

No contemporary surveys, i.e. utilizing both SSS and SWMB sonar technology, were available for junction comparisons. F00424, a prior FE examination, was completed using SSS and VBES in 1996. This survey data had been applied to the chart several years ago. These junctions were addressed during the chart comparison.

B.3. CORRECTIONS TO ECHO SOUNDINGS

All survey methods and instruments were implemented as described in the Correction to Echo Soundings section of the DAPR* for this project.

A table detailing all sound velocity casts is contained in Separates III – Sound Velocity Profile Data.** Sound velocity data has been submitted with the digital data package in the Correctors > SVP folder.

C. VERTICAL AND HORIZONTAL CONTROL

Vertical Control

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating National Water Level Observation Network (NWLON) tide station at Solomons, MD (857-7330) served as control for datum determination.

Tidal zoning for this survey is consistent with the Letter Instructions. The entire survey area is contained within five tidal zones. The zone data applicable for this survey is summarized in the following table.

**** Data filed at AHB.***
***** Data filed with original field records.***

Zone Name	Time Corrector	Range Ratio	Reference Station
NCB34	**+6**	**x1.10**	**857-7330**
NCB35	**0**	**x1.02**	**857-7330**
NCB36	**+24**	**x1.10**	**857-7330**
NCB37	**+42**	**x0.97**	**857-7330**
NCB38	**+42**	**x1.10**	**857-7330**

A request for Approved Tides was sent to N/OPS1 on September 16, 2004 (See Appendix IV*). Verified tides from the N/OPS1 CO-OPS website were periodically downloaded by BAY HYDROGRAPHER personnel. Verified tidal data for this survey were concatenated into one file and applied to all sounding data. ***Approved tides were re-applied to survey in Caris during office processing.***

Horizontal Control ***See also Evaluation Report.***

The horizontal datum used for this survey is the North American Datum of 1983 (NAD83), projected using UTM zone 18.

Sounding positional control was established using the Global Positioning System (GPS) corrected with data from the nearest USCG differential GPS reference station. The differential beacon used for this survey was Annapolis, MD (Beacon #847, 301 kHz). No horizontal control stations were established for this survey.

The horizontal dilution of precision (HDOP) was monitored during data acquisition. HDOP values did not exceed 4.0, and adequate satellite coverage was maintained throughout survey operations. All positioning equipment was operated in a manner consistent with the manufacturers' requirements and as described in the DAPR**. A copy of the Vertical and Horizontal Control Report is included in Appendix IV – Tides and Water Levels.

**** Data filed with original field records.***
**** *Data filed at the Atlantic Hydrographic Branch (AHB).***

D. RESULTS AND RECOMMENDATIONS

D.1. CHART COMPARISON

Four traditional NOS paper/raster charts and one NOS electronic navigational chart (ENC) are affected by this survey.

Paper/raster charts:	12264, 28th edition, July 2002, 1:40,000
	12230, 61st edition, November 2003, 1:80,000
	12263, 53rd edition, November 2003, 1:80,000
	12280, 4th edition, October 2003, 1:200,000
ENC chart:	12264, 1st edition, updated April 19, 2004, US5MD21M.000

General Agreement with Charted Soundings

In general, sounding data agreed well with charted depths. Individual features and significant discrepancies with specific charted depths are addressed in the Dangers to Navigation and Charted Features sections. ***Data attached to this report.***

Automated Wreck and Obstruction Information System (AWOIS) Items and Item Investigations

Twelve AWOIS items are located within the survey limits. These AWOIS items and all additional item investigations are summarized in the following pages.

AWOIS: 3336

Item Description: Sunken 42 ft pleasure craft reportedly tied to a tree approx. 10 ft off shore

Source: LNM 37/80 – 5th CGD

Item Position: 38 21' 45.44" N, 076 23' 10.81" W

Item Status: Unassigned

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation: Visual Observation

Surveyed Position: N/A

Position Determined By: N/A

Investigation Summary: This item was provided for information, only, and is located outside of the survey limits. The item was not observed during survey operations.

CHARTING RECOMMENDATION

The hydrographer recommends that the wreck remain as charted.

Concur. Retain as charted.

AWOIS: 4016

Item Description: 9 ft shoaling

Source: FE280/86, S-E211-HFP-86

Item Position: 38 24' 02.14" N, 076 23' 15.11" W

Item Status: Completed

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation: N/A

Surveyed Position: N/A

Position Determined By: N/A

Investigation Summary: This item was provided for information, only, and is located outside of the survey limits. The item was not observed during survey operations.

CHARTING RECOMMENDATION

The hydrographer recommends retaining the 9 ft sounding as charted.

Concur. Retain as charted.

AWOIS: 4017

Item Description: Submerged scientific platform extending 2 ft off bottom, placed by the Philadelphia Academy of Sciences.

Source: CL444/78 – COE 3/9/78

Item Position: 38 23' 58.90" N, 076 23' 45.38" W

Item Status: Unassigned

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation: N/A

Surveyed Position: N/A

Position Determined By: N/A

Investigation Summary: This item was provided for information, only, and is located outside of the survey limits. The item was not observed during survey operations. Mr. William Yates, Jr., of the Morgan State University Estuarine Research Center (formerly the Philadelphia Academy of Sciences) was contacted via telephone (410-586-9700) regarding this charted platform. Mr. Yates confirmed the existence of a University owned submerged platform in this approximate location.

CHARTING RECOMMENDATION

Retain the submerged platform PA as charted.

Concur. Retain as charted.

AWOIS: 4695

Item Description: Historical barge wreck, demolished at request of USCG in 1979. Item was later identified during NOAA survey ops.

Source: FE242SS/96 – S-E902-AHP

Item Position: 38 25' 26.33" N, 076 23' 27.23" W

Item Status: Unassigned

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: 2003-008/411-1702, 2001-332/001-1417, 2001-330/046-2002

Date(s): 2001-330, 332; 2003-008; 2004-189

Least Depth Position Number: DN 2004-189, Line 075-1411, Ping 230, Beam 50

Investigation: 200% SSS, SWMB

Surveyed Position: 38 25' 26.57" N, 076 23' 27.08" W

Position Determined By: SWMB

Investigation Summary: The barge wreck was identified in 200% SSS coverage at the current charted location. The item was developed with SWMB to confirm a least depth of 39 feet.

CHARTING RECOMMENDATION

The hydrographer recommends retaining the wreck with least depth of 39 ft as charted.

Concur w/ clarification.

Delete 39 Wk w/ danger curve.
Add 39 Wk w/ danger curve in Latitude 38 25' 26.57" N, Longitude 76 23' 27.08" W.

AWOIS: 9658

Item Description: Submerged obstruction disproved by NOAA survey.

Source: LNM22/93, FE424SS/96 – S-E902-AHP

Item Position: 38 25' 30.00" N, 076 23' 24.00" W

Item Status: Disproved

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation: N/A

Surveyed Position: N/A

Position Determined By: N/A

Investigation Summary: This item was provided for information, only, and was previously disproved by a NOAA survey. No obstruction was observed in this area during present survey operations.

CHARTING RECOMMENDATION

None.

Concur w/ clarification. Plot present survey soundings in common area.

AWOIS: 9659

Item Description: Concrete bridge sections lost overboard, located and removed. Remaining debris is charted as a 43 foot obstruction.

Source: FOO424/96 – S-E902-AHP; BP160208/96 - USACE

Item Position: 38 25' 08.60" N, 076 23' 10.00" W

Item Status: Completed

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: 2002-010/412-1518, 2001-332/001-1417

Date(s): 2001-332, 2002-010, 2004-189

Least Depth Position Number: DN 2004-189, Line 014-1632, Ping 251, Beam 14

Investigation: 200% SSS, SWMB

Surveyed Position: 38 25' 09.25" N, 076 23' 09.76" W

Position Determined By: SWMB

Investigation Summary: The obstruction was identified in 200% SSS coverage at the current charted location. The item was developed with SWMB to confirm a least depth of 43 feet.

CHARTING RECOMMENDATION

The hydrographer recommends retaining the obstruction with least depth of 43 ft as charted.

Concur w/ clarification

Delete 43 Obstn w/ danger curve.
Add 43 Obstn w/ danger curve in Latitude 38 25' 09.25" N, Longitude 76 23' 09.76" W ..

AWOIS: 9861

Item Description: Obstruction

Source: FE424SS/96 – S-E902-AHP

Item Position: 38 25' 40.63" N, 076 23' 45.57" W

Item Status: Completed

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: 2001-330/046-2001

Date(s): 2001-330, 2004-189

Least Depth Position Number: DN 2004-189, Line 006-1414, Ping 282, Beam 25

Investigation: 200% SSS, SWMB

Surveyed Position: 38 25' 40.34" N, 076 23' 42.28" W

Position Determined By: SWMB

Investigation Summary: The obstruction was identified in 200% SSS coverage at the current charted location. However, SWMB development indicated a least depth of 40 feet rather than the current charted least depth of 41 ft.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted obstruction with least depth of 41 ft be changed to an obstruction with least depth of 40 ft. ***Concur.***

Delete 41 Obstn w/ danger curve.
Add 40 Obstn w/ danger curve in Latitude 38 25' 40.34"N, Longitude 76 23' 42.28"W.

AWOIS: 9862

Item Description: Obstruction

Source: FE424SS/96 – S-E902-AHP

Item Position: 38 24' 54.74" N, 076 23' 01.69" W

Item Status: Completed

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: 2001-332/001-1417, 2003-008/411-1702

Date(s): 2001-332, 2003-008, 2004-189

Least Depth Position Number: DN 2004-189, Line 010-1625, Ping 258, Beam 201

Investigation: 200% SSS, SWMB

Surveyed Position: 38 24' 54.75" N, 076 23' 01.70" W

Position Determined By: SWMB

Investigation Summary: The obstruction was identified in 200% SSS coverage at the current charted location. However, SWMB development indicated a least depth of 41 feet rather than the current charted least depth of 43 ft.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted obstruction with least depth of 43 ft be changed to an obstruction with least depth of 41 ft. ***Concur***

Delete 43 Obstn w/ danger curve.
Add 41 Obstn w/ danger curve in Latitude 38 24' 54.75"N, Longitude 76 23' 01.70"W.

AWOIS: 11,132

Item Description: Sunken and abandoned 25 ft boat.

Source: LNM 42/73

Item Position: 38 25' 30.44" N, 076 24' 58.82" W

Item Status: Assigned

Required Investigation: SD, S2, SWMB, DI Radius: 1,000

Charts Affected: 12264

INVESTIGATION

Contact No: None.

Date(s): N/A

Least Depth Position Number: N/A

Investigation: 200% SSS

Surveyed Position: N/A

Position Determined By: N/A

Investigation Summary: Due to shoal waters, only 50% of the assigned radius could be investigated with 200% SSS. Only one contact was identified in the accessible area. This contact is a singular piece of debris, and not the sunken boat in AWOIS record 11,132.

CHARTING RECOMMENDATION

The hydrographer recommends retaining the wreck PA as charted. ***Concur***

It is also recommended that an obstruction with a depth of 22 ft (22Obstn) and danger curve be charted in Latitude 38 25' 50.21" N, Longitude 76 25'25.22 W.

AWOIS: 11,133

Item Description: ACOE letter granting permission to Philadelphia Academy of Sciences to construct eight submerged scientific platforms 4 ft wide, 10 ft long, and extending 2 ft above natural bottom in the Chesapeake Bay and Potomac River.

Source: CL444/78

Item Position: 38 25' 07.17" N, 076 24' 46.18" W

Item Status: Assigned

Required Investigation: SD, S2, SWMB, DI Radius: 500

Charts Affected: 12264

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation: 200% SSS

Surveyed Position: N/A

Position Determined By: N/A

Investigation Summary: Due to shoal waters, only 30% of the assigned radius could be investigated with 200% SSS. No contacts were identified within the accessible area of the assigned radius. However, Mr. William Yates, Jr., of the Morgan State University Estuarine Research Center (formerly the Philadelphia Academy of Sciences) was contacted via telephone (410-586-9700) regarding this charted platform. Mr. Yates confirmed the existence of a University installed platform in this approximate location. He also noted that the charted visible research platform had been destroyed by ice and was replaced by this submerged platform. The charted visible platform was not observed during survey operations.

CHARTING RECOMMENDATION

Retain the submerged platform PA as charted. Delete the charted visible research platform at position 38 25'08.87" N, 076 24'48.12" W. ***Concur.***

Delete visible research platform and retain the submerged platform, PA.

AWOIS: 11,877
(DTON #1)

Item Description: Uncharted submerged wreck submitted as DTON #1

Source: SSS H11088, S-E906-BH

Item Position: 38 23' 02.74" N, 076 20' 20.24" W

Item Status: Completed

Required Investigation: Information Radius: N/A

Charts Affected: 12264

INVESTIGATION

Contact No: 2001-333/006-1614, 2002-065/422-1749, 2003-008/421-1908

Date(s): 2001-333, 2002-065, 2003-008, 2004-195

Least Depth Position Number: DN 2004-195, Line 006-1438, Ping 220, Beam 98

Investigation: 200% SSS, SWMB

Surveyed Position: 38 23' 02.25" N, 076 20' 20.06" W

Position Determined By: SWMB

Investigation Summary: The charted wreck was identified in 200% SSS coverage at the beginning of survey operations for H11088. At the time of discovery and DTON submission, BAY HYDROGRAPHER's SWMB system was inoperable. The least depth submitted with the DTON report was determined by VBES. Later SWMB development indicated a least depth of 62 feet rather than the least depth of 64 feet which was charted from the DTON report information.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck with least depth of 64 ft be changed to a wreck with least depth of 62 ft. ***Concur w/clarification.***

Delete 64Wk with danger curve.
Add 62Wk with danger curve in Latitude 38 23' 02.25" N, Longitude 76 20' 20.06" W.

AWOIS: 11,935

Item Description: Sunken 33 ft cabin cruiser

Source: LNM 26/80

Item Position: 38 28' 15.44" N, 076 21' 04.81" W

Item Status: Assigned

Required Investigation: SD, S2, SWMB, DI Radius: 500

Charts Affected: 12264

INVESTIGATION

Contact No: 2003-328/210-1914, 2003-254/102-1840

Date(s): 2003-328,254; 2004-191

Least Depth Position Number: DN 2004-191, Line 022-1541, Ping 242, Beam 85

Investigation: partial 200% SSS, logical deduction

Surveyed Position: 38 27' 43.75" N, 076 21' 54.32" W

Position Determined By: SWMB

Investigation Summary: Due to shoal water depths, the entire search radius for this item was not investigated. Approximately 25% of the radius was covered with 200% SSS. Although no contacts were located within the radius, the Hydrographer notes that the position data in the AWOIS record is very inconsistent. The original reported position is located on shore at the southern tip of James Island. The "revised" position in the AWOIS record is located 3,850m SW of the original position. Also, the closest charted wreck "PA" is located 450 m south of the "revised" position. The hydrographer is assuming that this is the corresponding charted feature, as a separate AWOIS number is not listed for it. The contact referenced in this report appears to be a cabin cruiser, approximately 33 ft long, located 1,550 m WSW of the "revised" position in the AWOIS record. Knowing that a small, submerged boat has the potential to drift a significant distance due to currents in the area, the hydrographer believes this wreck to be the one referenced in AWOIS 11,935.

CHARTING RECOMMENDATION

The hydrographer recommends deleting the wreck "PA" in position 38 28'00" N, 076 21'04" W, charting a wreck with least depth of 53 ft at position 38 27' 43.75" N, 076 21' 54.32" W, and adjusting the position record for AWOIS 11,935 to correspond with the wreck identified at position 38 27' 43.75" N, 076 21' 54.32" W. ***Do not concur***

Inadequate investigation performed on the wreck, PA. Retain as charted.
It is also recommended that a wreck with a depth of 53 feet (53Wk) and danger curve be charted in Latitude 38 27'43.75"N, Longitude 76 21' 54.32"W. Chart 53Wk w/danger curve.

Contact: 2004-189/034-1509
(DTON # 1.1)

Item Description: Submerged platform

Source: H11088 200% SSS

Item Position: 38 26' 29.63" N, 076 24' 54.49" W

Charts Affected: 12264, 12263, 12280

INVESTIGATION

Correlating Contacts: 2002-007/402-1639

Date(s): 2002-007, 2004-189

Least Depth Position Number: DN 2004-189, Line 034-1509, Ping 251, Beam 107

Investigation Used: 200% SSS, SWMB

Surveyed Position 38 26' 29.63" N, 076 24' 54.49" W

Position Determined By: Differential GPS

Investigation Summary: Contact 2002-007/402-1639 was identified during 200% SSS operations. The SSS image resembled a submerged platform. A least depth of 11.67 m (38.29 ft), corrected with verified tides, was determined by SWMB. The SWMB weighted grid identifies a level rectangular surface approximately 6m x 10m and elevated approximately 1 meter above the seafloor. This information further supports the determination that the item is a submerged platform. This contact was submitted as DTON #1.1 for this survey.

CHARTING RECOMMENDATION

Since the least depth is known, the hydrographer recommends charting an obstruction with least depth of 38 ft at position 38 26' 29.63" N, 076 24' 54.49" W.

Concur w/clarification. Item shown on chart 12264, 29th., Ed., Jan./05.
No change in charting.

Contact: 2004-189/219-1529
(DTON #1.2)

Item Description: Submerged platform

Source: H11088 200% SSS

Item Position: 38 26' 03.41" N, 076 25' 19.73" W

Charts Affected: 12264, 12263, 12280

INVESTIGATION

Correlating Contacts: 2003-329/102-1945, 2004-051/007-1208

Date(s): 2003-329; 2004-007, 189

Least Depth Position Number: DN 2004-189, Line 219-1529, Ping 236, Beam 89

Investigation Used: 200% SSS, SWMB

Surveyed Position 38 26' 03.41" N, 076 25' 19.73" W

Position Determined By: Differential GPS

Investigation Summary: Contacts 2003-329/102-1945 and 2004-051/007-1208 were identified during 200% SSS operations. The SSS images resembled a submerged platform. A least depth of 6.33 m (20.77 ft), corrected with verified tides, was determined by SWMB. The SWMB weighted grid identifies a level rectangular surface approximately 5m x 5m and elevated approximately 1 meter above the seafloor. This further supports the determination that the item is a submerged platform. This contact was submitted as DTON #1.2 for this survey.

CHARTING RECOMMENDATION

Since the least depth is known, the hydrographer recommends charting an obstruction with least depth of 21 ft at position 38 26' 03.41" N, 076 25' 19.73" W.

Concur w/clarification. Item shown on chart 12264, 29th., Ed., Jan./05.
No change in charting.

Contact: 2004-189/043-1659

(DTON #1.3)

Item Description: Wreck

Source: H11088 200% SSS

Item Position: 38 24' 00.13" N, 076 22' 14.43" W

Charts Affected: 12264, 12230, 12263, 12280

INVESTIGATION

Correlating Contacts: 2002-010/412-1516, 2003-008/412-1749, 2001-332/047-1504

Date(s): 2001-332, 2002-010, 2003-008, 2004-189

Least Depth Position Number: DN 2004-189, Line 043-1659, Ping 249, Beam 164

Investigation Used: 200% SSS, SWMB

Surveyed Position 38 24' 00.13" N, 076 22' 14.43" W

Position Determined By: Differential GPS

Investigation Summary: Contacts 2002-010/412-1516, 2003-008/412-1749 and 2001-332/047-1504 were identified as a wreck during 200% SSS operations. A least depth of 13.05 m (42.81 ft), corrected with verified tides, was determined by SWMB. This item was submitted as DTON #1.3 for this survey.

CHARTING RECOMMENDATION

The hydrographer recommends charting a wreck with least depth of 43 ft at position 38 24' 00.13" N, 076 22' 14.43" W.

Concur w/clarification. Item shown on chart 12264, 29th., Ed., Jan./05.
No change in charting.

Contact: 2004-191/018-1611

Item Description: Obstruction

Source: H11088 200% SSS

Item Position: 38 27' 11.91" N, 076 22' 03.03" W

Charts Affected: 12264, 12263, 12280

INVESTIGATION

Correlating Contacts: 2003-252/102-1353, 2003-310/207-1716

Date(s): 2003-252, 310; 2004-191

Least Depth Position Number: DN 2004-191, Line 018-1611, Ping 91, Beam 40

Investigation Used: 200% SSS, SWMB

Surveyed Position: 38 27' 11.91" N, 076 22' 03.03" W

Position Determined By: Differential GPS

Investigation Summary: Contacts 2003-252/102-1353 and 2003-310/207-1716 were identified as an obstruction during SSS operations. A least depth of 21.21 m (69.59 ft), corrected with verified tides, was determined by SWMB.

CHARTING RECOMMENDATION

The hydrographer recommends charting an obstruction with least depth of 69 ft at position 38 27' 11.91" N, 076 22' 03.03" W. ***Concur***

Add 69 Obstn

Dangers to Navigation

Four items associated with this survey were submitted to N/CS33 as Dangers to Navigation (DTON's). These items are summarized in the following table. A copy of the DTON reports submitted by BAY HYDROGRAPHER has been included as Appendix I.*

**** Data attached to this report.***

DANGERS TO NAVIGATION			
DTON #	LEAST DEPTH (FEET)	LEAST DEPTH POSITION	DESCRIPTION
1	61.98	38 23'02.24" N, 076 20'20.06" W	Wreck**
1.1	38.29	38 26'29.62~~3~~" N, 076 24'54.48~~9~~" W	Obstruction**
1.2	20.77	38 26'03.40" N, 076 25'19.72"W	Obstruction**
1.3	42.81	38 24'00.13" N , 076 22'14.43" W	Wreck**

*****See pages 21, 23, 24, and 25 of this report for charting recommendations.***

Charted Features

The following is a list of significant charted features within the survey limits which have not been previously addressed in this report.

ITEM	CHARTED POSITION	REMARKS/RECOMMENDATIONS
Charted Fish Haven	38 27'51.92" N, 076 21'27.29" W	The fish haven was investigated with a combination of 200% SSS and SWMB developments of significant contacts. The SSS imagery indicates that some fish haven material has been placed partially outside of the charted haven boundaries. The majority of the debris is low-lying. A least depth of 30 feet was determined at position 38 27'59.55"N, 076 21'26.40"W, which would be essentially coincidental with the fish haven border at chart scale. The authorized minimum depth of the haven is 15 feet. Recommend no change in charting of the fish haven. ***Concur***
Mooring Buoy	38 24'20.82" N, 076 23'22.93" W	This mooring buoy does not exist, as verified visually during survey operations. No remnants of the buoy were noted on SSS. Recommend deleting the charted mooring buoy. ***Concur****
Charted depth of 51 feet	38 23'21.12" N, 076 21'19.42" W	Soundings at this position vary between 54 and 56 feet. No contacts were identified in 200% SSS in close proximity to this depth. Recommend charting present survey soundings in this area. ***Concur***

****Defer to Marine Chart Division (MCD) Source Data Branch for charting disposition.***

D.2. ADDITIONAL RESULTS

Bottom Samples

A total of 19 bottom samples were taken in a grid pattern throughout the survey area. Although charted bottom types are sparse in this area, the samples agreed with a general overall trend of predominantly soft mud with a sandier bottom in areas starting at approximately the 30 foot contour.

Aids to Navigation (ATONs)

Only one federally maintained aid to navigation is located within the survey limits. This buoy (Lighted Buoy "77") was noted to be on station, as charted, during survey operations. Seven privately maintained aids to navigation are located within the survey boundaries, all associated with the Cove Point LNG terminal. Five fixed lights are located on the pier and associated dolphins, and two mooring buoys are located 450-600 meters southeast of the pier. Pier/dolphin lights were observed to be correctly charted during survey operations. The mooring buoys are not presently charted, and were positioned by BAY HYDROGRAPHER All ATONS within the survey limits are noted in the following table.

ATON	LIGHT LIST NUMBER	LATITUDE / LONGITUDE (SURVEYED POSITION)
Lighted ~~Bouy~~ *Buoy*"77" Fl G 2.5s	7625	Visually noted to be on station. No DP acquired.
Platform Light A	7640	Visually noted to be on station. No DP acquired.
Platform Light B	7645	Visually noted to be on station. No DP acquired.
South Mooring Dolphin Light C	7650	Visually noted to be on station. No DP acquired.
Middle Mooring Dolphin Light D	7655	Visually noted to be on station. No DP acquired.
North Mooring Dolphin Light E	7660	Visually noted to be on station. No DP acquired.
Mooring Buoy *	None	38 23'47.01"N, 076 22'45.54"W
Mooring Buoy *	None	38 23'42.62"N, 076 22'43.59"W

Defer to Marine Chart Division (MCD) Source Data Branch for charting disposition.

Prior Survey Comparisons ***See also Evaluation Report.***

With the exception of a small cluster of AWOIS items, no prior survey comparisons were conducted by BAY HYDROGRAPHER personnel. The AWOIS item data reviewed was acquired in 1996, and agreed well with present survey data. The majority of current soundings within the survey area are from partial bottom coverage sources dating prior to 1969. The present survey data is considered adequate to supersede this historic source data.

Bridges, Overhead Cables and Overhead Pipelines

No bridges or overhead cables are located within the survey limits.

Ferry Routes

No ferry routes or ferry terminals are active within the survey limits.

Submarine Cables and Pipelines

One charted submarine cable area is located at position 38 23'14.89"N, 076 22'12.36"W. The existence of this cable area could not be confirmed or disproven by the sonar records. The hydrographer recommends retaining the cable area as charted. ***Concur***

One charted submarine "Tunnel Area" is partially located within the survey limits. This area extends from shore at position 38 23'34.20"N, 076 23'54.93"W to the center of the Cove Point LNG terminal. Although no evidence of this tunnel was identified on sidescan sonar records, the tunnel's existence was confirmed by Mr. Michael Gardner, Manager of LNG Operations, Dominion Cove Point LNG, LP (410-286-5101). The tunnel is used to provide access between shore and the Cove Point LNG terminal. ***No change in charting.***

Drilling Structures, Platforms and Well Heads

No drilling structures or well heads were charted or observed within the survey area. Two submerged platforms located in shoal waters to the west of the survey limits are included in the AWOIS database. Also, two submerged platforms were identified with SSS within the survey limits. These four items have been addressed in Section D.1 – Chart Comparison, AWOIS Items and Item Investigations.

E. APPROVAL SHEET

S-E906-BH
Approaches to Cove Point
Maryland

Survey Registry No. H11088

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.

This survey is adequate to supersede all prior surveys in common areas, and for application to the relevant NOS nautical charts.

Submitted: _____
Peter Holmberg, NOAA
Physical Scientist

Submitted: _____
Eric Moore, NOAA
Physical Scientist

Approved and Forwarded: _____
LTJG Holly A. DeHart, NOAA
Officer-In-Charge

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: April 14, 2005

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-E906-BH-2001-04
HYDROGRAPHIC SHEET: H11088

LOCALITY: Cove Point, MD
TIME PERIOD: November 26 - November 29, 2001
January 7 - March 6, 2002
June 10 - June 14, 2002
January 8, 2003
August 20 - September 11, 2003
October 9 - November 25, 2003
February 17 - May 20, 2004
July 7 - August 27, 2004

TIDE STATION USED: 857-7330 Solomons Island, MD
Lat. 38° 19'N Lon. 76° 27.1'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.405 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: NCB34, NCB36, NCB37, NCB37A, NCB38, & NCB38A

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).

For ----------
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H11088 (2004)

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

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

CARIS HIPS/SIPS version 6.0 service pack 1
MicroStation J, version 07.1
I/RAS B, version 07.1
NADCON, version 2.10
MapInfo, version 8.0
CARIS HIPS/SIPS 2000
PYDRO, version 6.8.0

The smooth sheet was plotted using a Hewlett Packard Design Jet 2500CP plotter.

C. HORIZONTAL CONTROL

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). Office processing of this survey is based on these values.

D. COMPARISON WITH CHARTS 12230 (62st Edition, MAY 00/05)
12263 (53th Edition, NOV 00/03)
12264 (29th Edition, JAN 00/05)
12280 (05th Edition, OCT 00/04)

Hydrography

The charted hydrography originates with the prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section D. of the Descriptive Report. The following should be noted:

An obstruction with a depth of 19 feet, in Latitude 38˚27'24.90"N, Longitude 76˚21'06.58"W was located during office processing. It is recommended that the obstruction with a depth of 19 feet, (19 Obstn)and danger curve, be charted in above location.

The present survey is adequate to supersede the charted hydrography within the common area.

Comparison with Prior Surveys

A comparison with prior surveys was not done during office processing in accordance with section 4. of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

Dangers To Navigation

A Danger to Navigation Report containing one feature was submitted to the Marine Chart Division, N/CS3x1, Silver Spring, Maryland. A copy of that report is appended to this report.

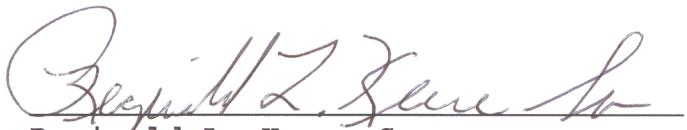
Miscellaneous

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. The following NOS Chart was used for compilation of the present survey:

12264 (29th Edition, JAN/05)

Adequacy of Survey

This is an adequate hydrographic survey. No additional field work is recommended.



Reginald L. Keene Sr.
Cartographer
Verification of Field Data
Evaluation and Analysis

REPORT OF DANGERS TO NAVIGATION
H11088

Hydrographic Survey Registry Number: H11088
Survey Title: **State:** Maryland
Locality: Chesapeake Bay
Sub-locality: Cove Point

Project Number: OPR-S-E906-BH

Survey Date: November 26, 2001 - August 25, 2004

Depths are reduced to Mean Lower Low Water using Verified Tides.
Horizontal datum is North America Datum 83 (NAD83).

Charts affected:

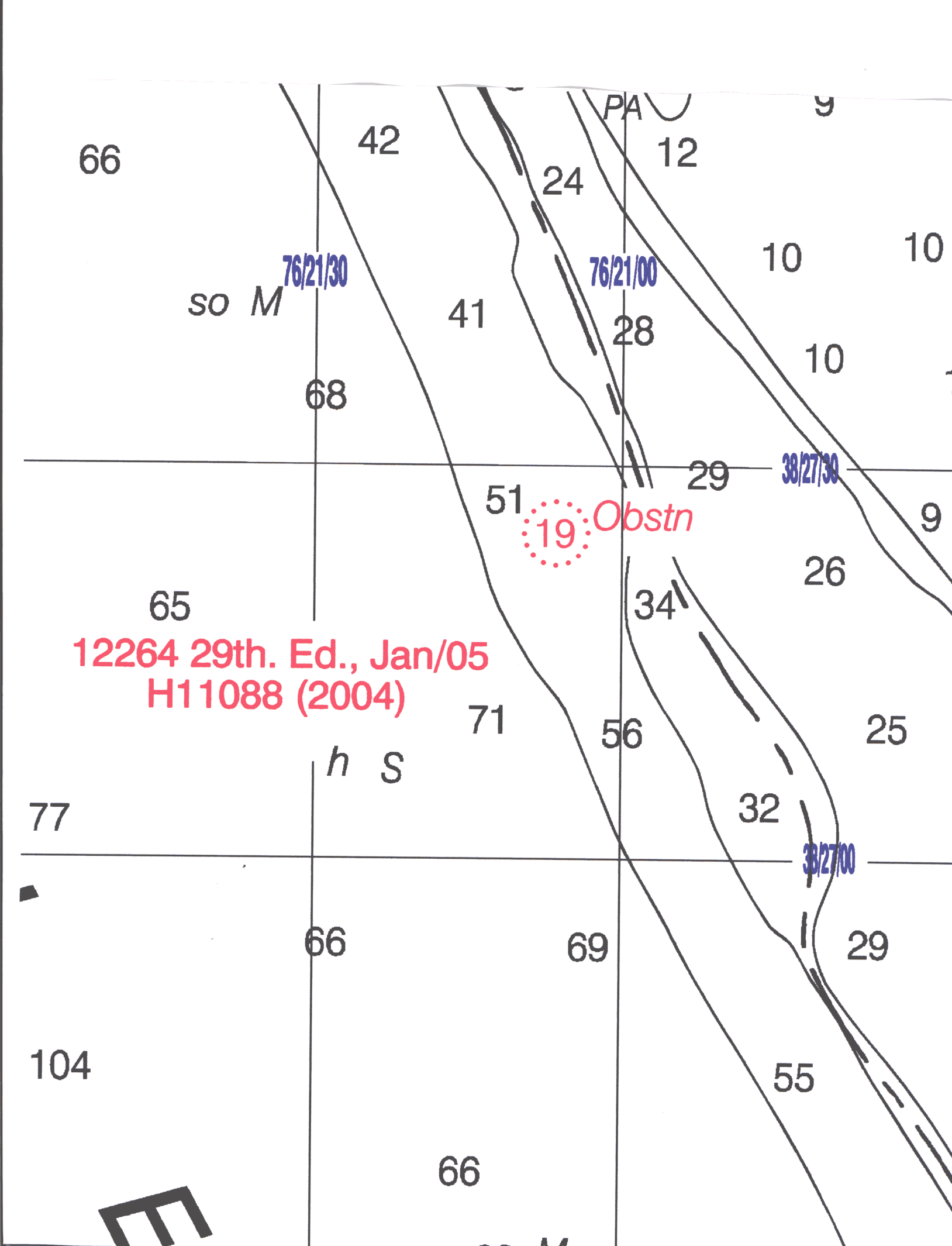
- 12264 29th Edition January 2005 1:40,000 scale
- 12263 53rd Edition November 2003 1:80,000 scale

The following item was found during hydrographic survey operations:

DANGERS TO NAVIGATION

Feature	Depth (FT)	Latitude (N)	Longitude (W)
Obstruction	19	38º 27’ 24.90"	076º 21´ 06.58"

Questions concerning this report should be directed to the Chief, Atlantic Hydrographic Branch at (757) 441-6746.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12264 29th. Ed., Jan/05
H11088 (2004)
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APPROVAL SHEET
H11088 (2004)

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. All revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Date: 9/21/06

Norris A. Wike
Cartographer
Atlantic Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved: _____ Date: 9/22/06

P. Tod Schattgen
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Paul Turner
AWOIS and SURF check
Operations Branch
2006.09.29 12:19:34 -04'00'