H11026

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey **Hydrographic/Mulitibeam/**

Side Scan Sonar

Registry No. **H11026**

LOCALITY

State **Maryland**

General Locality **Chesapeake Bay**

Sub-locality **Bodkin Point to Love Point**

2001 - 2002

CHIEF OF PARTY
Lawrence T. Krepp, LT, 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	H11026

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

State:	**Maryland**		
General Locality:	**Chesapeake Bay ~~, Maryland~~**		
Sub-Locality:	**Bodkin Point to Love Point**		
Scale:	**1:10,000**	Date of Survey:	**01/16/01 to 09/19/02**
Instructions Dated:	**12/11/00**	Project Number:	**H11026**
Vessel:	**NOAA S/V Bay Hydrographer**		
Chief of Party:	**Lieutenant Lawrence T. Krepp, NOAA**		
Surveyed by:	**Bay Hydro Personnel**		
Soundings by:	**Odom Echotrac DF3200 MK II Echosounder,** **Knudson 320M Marine Echosounder** **Reson SeaBat 9001/8125 multibeam sonar**		
Graphic record scaled by:	**Bay Hydrographer Personnel**		
Graphic record checked by:	**Bay Hydrographer Personnel**		
Protracted by:	**N/A**	Automated Plot:	**HP-750C** ***(field)*** ***Hewlett Packard DesignJet 2500 CP (office)***
Verification by:	**Atlantic Hydrographic Branch** ***Personnel***		
Soundings in:	**Feet at MLLW**		

Remarks: ***Red, bold, italic notes in descriptive report were made during office processing.***

1) All Times are UTC.

2) This is a basic Hydrographic Survey.

3) Projection is UTM Zone 18.

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DESCRIPTIVE REPORT

to accompany

Hydrographic Survey H11026

Scale of Survey: 1:10,000
Year of Survey: 2001 ***-2002***
NOAA S/V Bay Hydrographer
LT Lawrence T. Krepp, Commanding

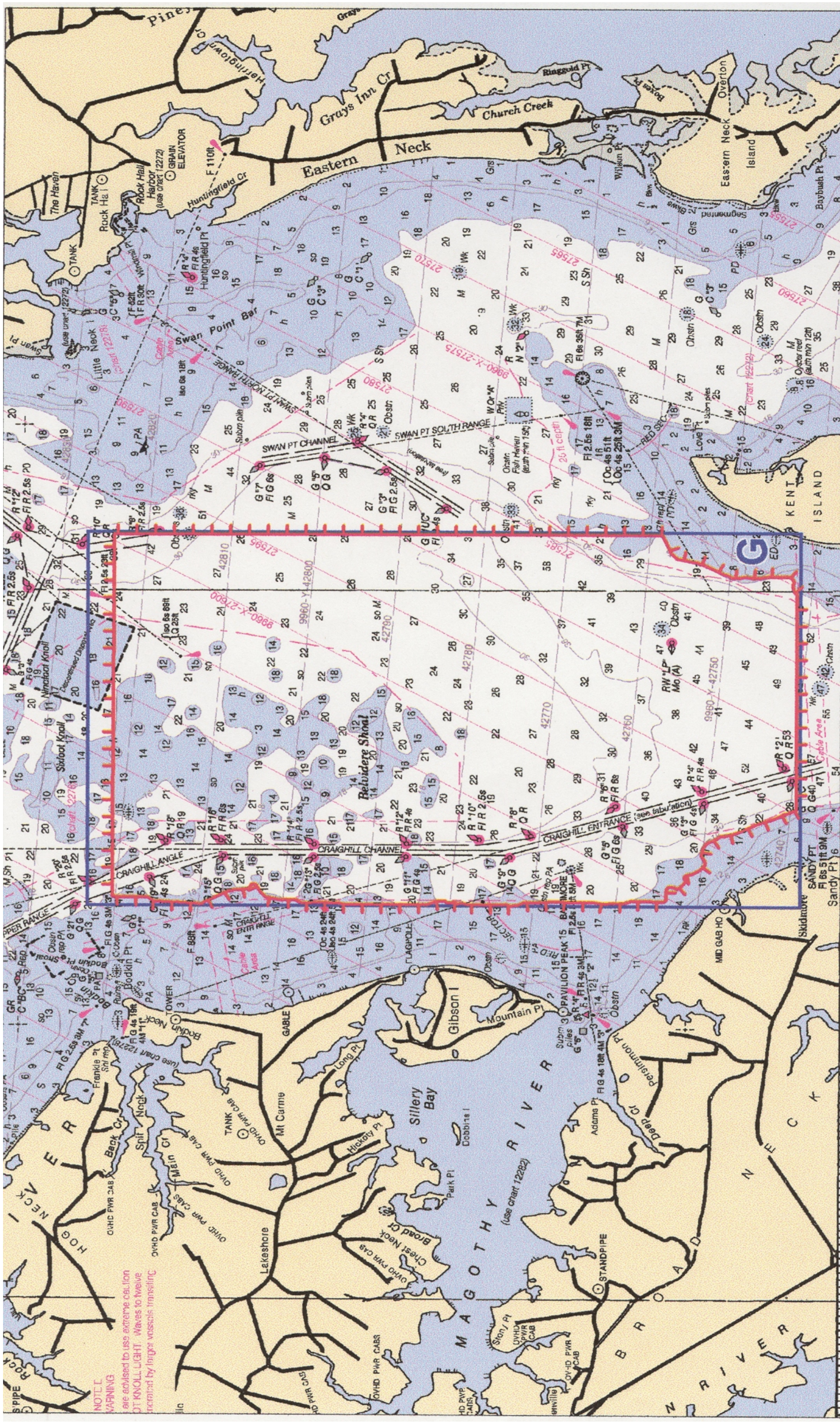
A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project OPR-E346-BH, Upper Chesapeake Bay. The instructions are dated December 11, 2000. One change relating directly to this survey was made to the letter instructions. ***Concur***

Change number 3 requests the completion of Sheet "G" to create a seamless data set in the upper Chesapeake Bay. ***Concur***

This Descriptive Report pertains to sheet "G" of project OPR-E346-BH. The assigned registry number for this sheet, as prescribed in the Letter Instructions, is H11026. ***Concur***

For complete survey limits, see the chart on the following page.



This chartlet has not been corrected through the latest Notice to Mariners.
NOT FOR NAVIGATION.

BAY HYDROGRAPHER
LT. Krepp
Commanding
January 2001 to
September 19, 2002

Sounding Units: *Feet*
Sounding Datum: *MLLW*
Horizontal Datum: *WGS 84*
Projection: *UTM 18*
Central Meridian: *075° 00 00*
Scale Factor: *0.9996*

Project: *OPR-E346-BH*
Survey: *H11026*
State: *Maryland*
Locality: *Upper Chesapeake Bay*
Sub-locality: *Bodkin Point to Love Point*
Survey Scale: *1:10,000*

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

Chartlet 1 of 1

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

B1. EQUIPMENT

Data were acquired by the 56 foot NOAA S/V BAY HYDROGRAPHER.

BAY HYDROGRAPHER acquired vertical beam echosounder (VBES), shallow-water multibeam (SWMB), side scan sonar (SSS), and sound velocity data. An Odom Echotrac DF3200 MK II echosounder and a Knudsen 320M Marine echosounder were used for VBES hydrography. Reson SeaBat 9001 and Reson Seabat 8125 multibeam systems were used for SWMB hydrography. Positioning was determined with a Trimble DSM212L integrated differential GPS receiver. Attitude was determined with a TSS DMS-05 attitude sensor. Side scan sonar data were acquired with an Edgetech 272-T towed side scan sonar and a Klein 5500 high speed high resolution side scan sonar . Velocity casts were conducted with SeaBird SeaCat CTD instruments. BAY HYDROGRAPHER also acquired detached positions (DP). ***Concur***

No unusual vessel configurations or problems were encountered. Refer to the Data Acquisition and Processing Report (DAPR) * for detailed equipment and vessel configuration information.

**** Data filed with original field records***

B2. QUALITY CONTROL

Side Scan Sonar Quality Control

This survey contains one large caveat. The final data package will not contain HDCS processed side scan sonar data. This data was lost due to faulty interaction between the Bay Hydrographer's external raid and a SAG CPU. This bad interaction caused the processed side scan data to be lost on two different occasions from the processed data drive. The decision was

made by the Chief of Hydrographic Surveys Operations Division and the OIC not to reprocess the data. At the time of this decision, side scan sonar contacts had already been picked and reviewed in Pydro for SWMB developement areas. Contacts that were deemed worthy of development were surveyed with SWMB. In summary, as a result from this loss of data, contact snapshots in Pydro and side scan sonar mosaic plots will not be available for reviewal during the verification of this survey. However, all of the raw XTF data has been saved. ***Concur***

Shallow Water Multibeam Quality Control

There was one fault with the SWMB system which affected data integrity. Beam number 14 of the 9001 SWMB system was removed using Caris beam filtering. The beam was consistently fluttering up and down in relation to its neighboring soundings. Refer to this project's DAPR* for detailed discussion of SWMB system calibrations, data acquisition, and data processing. No data from beam 14 were used in this survey. ***Concur***

Crosslines

40.1 nautical miles of VBES crosslines comprising 3% of the mainscheme data (100% and 200% SSS VBES) were acquired. 100% and 200% SWMB were acquired as mainscheme bathymetry over Belvidere Shoal, the northwest region of the sheet. Crossline and mainscheme comparisons were made in MAPINFO 6.0, and no differences greater than five percent were observed.

An area of developments south of Belvidere Shoal and east of the Craighill Channel were selected for use as SWMB check line data. The SWMB data were acquired on DN 302, and consisted of 5.45 linear nautical miles of mainscheme and crossline development lines. Mainscheme and crossline data were analyzed in a **CARIS/HIPS** subset mode (see project DAPR).* Crossline data agreed with 95% to 100% of the mainscheme data, based on the International Hydrographic Organization (IHO) statistical standards used in the **CARIS** Quality Control Report (see Separate V *). ***Concur*** **** Data filed with original field records***

Junctions

H11026 junctions with three surveys, H10757 to the north, H10859 to the east, and H10691 to the south. Agreement between H11026 and the three surveys listed above is acceptable. The majority of compared soundings fell within 1 foot of each other. An exception occurred when H10757 was compared to H11026. H10757 depths in the Craighill Angle were 2-3 feet deeper than current H11026 depths. H10757 was surveyed in 1997, therefore the channel may have shoaled in during the 3-4 years between surveys. H11026 depths match well with recent (July 2000) tabulated data from the Army Corps of Engineers. ***Concur***

B3. CORRECTIONS TO ECHO SOUNDING

All methods or instruments were used as described in the project DAPR.* A table detailing all sound velocity casts is located in Separate III.* ***Concur***

*** *Data filed with original field records***

C. VERTICAL AND HORIZONTAL CONTROL *See also Evaluation Report*

VERTICAL CONTROL

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating tide station at Tolchester, MD (857-3364) served as control for datum determination.

Tidal zoning for this survey is consistent with the Letter Instructions. The zone data applicable for this survey is as follows.

STATION	CORRECTOR (min)	RATIO	REFERENCE
NCB91	-66	x0.88	857-3364
NCB92	-72	x0.84	857-3364
NCB93	-60	x0.88	857-3364
NCB94	-60	x0.84	857-3364
NCB95	-54	x0.84	857-3364
NCB96	-54	x0.88	857-3364
NCB112	-42	x0.97	857-3364
NCB113	-42	x0.88	857-3364
NCB114	-42	x0.80	857-3364

A Request for Approved Tides letter was sent to N/OPS1 on September 24, 2002 (Appendix IV).* Verified tides from the N/OPS1 CO-OPS website were downloaded on July 15, 2002, and applied to all sounding data. ***Approved tides and zones were reapplied to survey in CARIS during office processing.***

*** Data filed with original field records***

HORIZONTAL CONTROL ***See also Evaluation Report***

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 18. ***Concur***

Sounding positional control was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon stations. The primary DGPS beacon's used for this survey were Annapolis and Cape Henlopen. Horizontal control stations were not used for this survey. ***Concur***

In addition to performance checks, horizontal dilution of precision (HDOP) and the positional dilution of precision (PDOP) were monitored daily. Neither value exceeded 4.00, and adequate satellite coverage was maintained throughout the survey period. ***Concur***

D. RESULTS AND RECOMMENDATIONS *See also Evaluation Report*

D1. CHART COMPARISON

There are ~~five~~ ***six*** charts affected by this survey:

12263, 51st edition, Aug 01, 2002, 1:80,000
12272, 29th edition, April 20, 2002, 1:40,000
12273, 53rd edition, April 13, 2002, 1:80,000
12278, 72nd edition, April 20, 2002, 1:40,000
12280, 2nd edition, June 23, 2001, 1:200,000
12282, 33rd edition, June 01, 2002, 1:25,000

General Agreement with Charted soundings

Sounding data agreed well with charted depths. Discrete differences are addressed in the "Dangers to Navigation" and "Charted Features" sections.

Tabulated Channel Depths

Soundings within Craighill Entrance/Channel and the Craighill Angle agreed well with tabulated depths reported by the Corps of Engineers (July 2002). Soundings were within 0.5 ft of depths reported for each specified quarter of the Craighill Entrance, Craighill Channel, Craighill Angle,* and the Craighill Channel Upper Range. There was one exception. A ~~49~~ ***50*** foot depth was discovered at the following position (Lat. 39˚ 06' 42.80" N, Long. 076˚ 23' 40.38" W).

*** *Concur with clarification See Evaluation Report Section D.1.a***

Shoaling Trends

In general soundings agree with charted depths, with two notable exceptions. First, a ~~33~~ ***34*** foot sounding (Lat. 39˚ 02' 38.7~~5~~ ***1***" N, Long. 076˚ 20' 31.40" W) was collected in the center of a ***charted*** 34 foot obstruction circle located east north east of the RW "LP" Mo(A) buoy. This obstruction appears to be a wreck with an approximate length of 52 feet. This was not an AWOIS Item. ***Concur with clarification. See Evaluation Report Sec. D.1.b*** Second, 40 foot soundings were found on a 58 foot sounding (Lat. 39˚ 03' 47.63" N, Long. 076˚ 19' 38.66" W) ***north***east of the RW "LP" Mo(A) buoy. It should be noted that, other neighboring soundings of the 58 agreed well with the chart. ***Concur***

Belvidere Shoal

The largest disagreement with the chart occurred at Belvidere shoal. At this location, a band of natural oyster beds show evidence of random migration throughout the Belvidere shoal area. Due to the large number of contacts, a 200X200 meter grid was created in Mapinfo over the Belvidere shoal area. Inside each 200 meter square, only the shoalest contact or oyster mound was developed. The shoalest soundings are 10 foot soundings located just east of the R "14" buoy on a charted 9 foot sounding. ***Concur (Lat. 39˚ 05' 59.18" N, Long. 076˚ 22' 54.05" W)***

Deepening Trends

Along the entire western side of the sheet, the 18 foot curve seems to be migrating westward, creating deeper water just west of the Craighill channel. ***Concur***

AWOIS and Item Investigations

There were four AWOIS items within the survey limits. The following discussion addresses these and one other item.

AWOIS:9742

Item Description: A 25 foot cabin cruiser sunk in 21 feet.

Source: LNM24/72

Item Position: Lat. 39˚ 07' 55.39" N, Long. 76˚ 23' 08.85" W

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

Charts Affected: 12278, 12273

INVESTIGATION

Contact No: N/A

Date(s):N/A

Least Depth Position Number: N/A

Investigation Used: S2

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% side scan sonar coverage was acquired within the 500 meter search radius of AWOIS 9742. No significant contacts were identified within the assigned radius.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends that the charted wreck in position Latitude 39˚ 07' 55.39" N, Longitude 76˚ 23' 08.85" W be removed. ***Concur***
Delete dangerous sunken wreck symbol

AWOIS:7133

Item Description: Obstruction reported approximately 275 yards and bearing 45 degrees from Baltimore Light

Source: NM28/70

Item Position: Lat. 39˚ 03' 38.5" N, Long. 76˚ 23' 50" W

Required Investigation: SD, BD, S2, SWMB, DI **Radius**: 200 meter

Charts Affected: 12278, 12273

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation Used: S2

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% side scan sonar coverage was acquired within the 200 meter search radius of AWOIS 7133. No contacts were found inside the search radius.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends that the charted obstruction in position Latitude 39˚ 03' 38.5" N, Longitude 76˚ 23' 50" W be removed. ***Concur***
Delete Obstn rep PA and danger curve

AWOIS:7134

Item Description: 21 foot motorboat, no deck or house, has been reported sunk appoximately 10 yards 279 degrees from Baltimore Light.

Source: NM32/64

Item Position: Lat. 39˚ 03' 34" N, Long. 76˚ 23' 59" W

Required Investigation: SD, BD, S2, SWMB, DI **Radius**: 200 meter

Charts Affected: 12278, 12273

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation Used: S2

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% side scan sonar coverage was acquired within the 200 meter search radius of AWOIS 7,134. Two contacts (099_242_1756_2, 059_609_1844_1) were selected and determined to be the Baltimore Light. No other significant contacts were identified within the assigned radius.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends that the charted wreck in position Latitude 39˚ 03'34***3.18***" N, Longitude 76˚ 23' ~~59~~ ***57.85***" W be removed. ***Concur***
Delete dangerous sunken wreck symbol

AWOIS:7135

Item Description:.Obstruction

Source: H10212/83--OPR-E456-HSB-82

Item Position: Lat. 39˚ 02' 49" N, Long. 76˚ 23' 20" W

Required Investigation: S2, SWMB **Radius:** 200 meter

Charts Affected: 12278, 12273

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation Used: S2

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% side scan sonar coverage was acquired within the 200 meter search radius of AWOIS 7135. No significant contacts were identified within the assigned search radius.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends that the unidentified submerged obstruction (position Latitude 39˚ 02' 49***.39***" N, Longitude 76˚ 23' ~~20~~ ***18.84***" W) remain uncharted. ***Concur Chart present survey soundings.***

Dangers to Navigation

One Danger to Navigation (DtoN) was reported by the Hydrographer to N/CS33 (AHB). For the complete DtoN report (sent September 25, 2002) see ~~Appendix I~~. ***Attachment*** The following table references the DtoN to its source data. SWMB data is referenced by its **CARIS** file (project/vessel/DN/line/ping/beam).

DTON #	LD (FEET)	LEAST DEPTH LATITUDE	LEAST DEPTH LONGITUDE	CARIS SOURCE DATA (P/V/D/L/P/B)	DESCRIPTION
1	20	39˚ 02' ~~17.046~~N ***16.97***	076˚ 19' 53.~~13~~ W ***41***	g_mb/bh00/~~302~~/ ~~1407/336/56~~ ***276/313_1746/236/32***	container with 20' shoalest sounding

Concur Retain as charted

Charted Features

There were no new charted features encountered during the course of this survey. ***Concur***

D2. ADDITIONAL RESULTS

Aids to Navigation and Other Detached Positions

All of the aids to navigation positioned during this survey are on location. There were no aids to navigation surveyed that did not appear on the chart or in the Light List.

A centerline was run to asses the positions of the Craighill Channel range lights. The soundings associated with the centerline plotted in the center of the channel. The range appears to be in good condition.

Submarine Cables and Pipelines

There were no submarine cables or pipelines encountered during the course of this survey.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: Nov 19, 2002

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-E346-BH-01/02
HYDROGRAPHIC SHEET: H11026

LOCALITY: Upper Chesapeake Bay, MD
TIME PERIOD: January 30, 2001 - September 19, 2002

TIDE STATION USED: 857-3364 Tolchester, MD
Lat. 39° 12.8'N Lon. 76° 14.7'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.433 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: NCB91, NCB92, NCB93, NCB94, NCB95, NCB96, NCB113 & NCB114

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.

Thomas V. Moro 11/19/02

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Printed on Recycled Paper

E. APPROVAL SHEET

OPR-E346-BH

Upper Chesapeake Bay

Maryland

Bodkin Point to Love Point

Survey Registry No. H-11026

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.

Respectfully,

Submitted:

Brian M. Kidd, NOAA
Physical Scientist

Approved and Forwarded:

LT Lawrence T. Krepp, NOAA
Officer in Charge

September 25, 2001

REPORT OF DANGERS TO NAVIGATION

Survey Registry Number: **H11026**

State: Maryland

Locality: Chesapeake Bay

Sub-Locality: Bodkin Point to Love Point

Project Number: OPR-E346-BH

Survey Date(s): January 16, 2001 - September 19, 2002

Soundings are reduced to Mean Lower Low Water (MLLW) using Verified Water Levels. Horizontal datum is NAD 83.

Chart(s) Affected:

12272, 29th edition, April 20, 2002, 1:40,000

12273, 53rd edition, April 13, 2002, 1:80,000

12278, 72nd edition, April 20, 2002, 1:40,000

12280, 2nd edition, June 23, 2001, 1:200,000

DANGERS TO NAVIGATION

One Danger to Navigation (DTON) was identified during operations for hydrographic survey H11026, Bodkin Point to Love Point, Chesapeake Bay, Maryland. Dangers to Navigation are summarized in the table on the following page.

Questions concerning this report should be directed to the Chief, Atlantic Hydrographic Branch at (757) 441-6746.

Dangers to Navigation Affecting NOAA Charts 12272, 12273, 12278, & 12280				
DTON #	LEAST DEPTH (FEET)	LEAST DEPTH LATITUDE	LEAST DEPTH LONGITUDE	DESCRIPTION
1	20	39˚ 2' 17.04" N	076˚ 19' 53.13" W	20 ft sounding on potential container

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H11026 (2001-2002)

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:

Hydrographic Processing System
MicroStation J, version 7.1
I/RAS B, version 5.01
NADCON, version 2.10
MapInfo, version 6.5
CARIS HIPS/SIPS 2000
PYDRO, version 2.9.1
BP-Processor 1.1.0

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

JUNCTIONS

F00474 (2001-2002) to the west
H10691 (1996) to the south
H10757 (1997) to the north
H10859 (1999) to the east

A standard junction was effected between the present survey and survey F00474 during compilation.

A standard junction could not be effected between the present survey and surveys H10691 (1996), H10757 (1997), and H10859 (1999). The junctional surveys are archived at NOS headquarters, Silver Spring, Maryland. Adjustments to depth curves in the junctional areas will be made during compilation.

Present survey depths are in harmony with the charted hydrography to the west.

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. The smooth sheet has been annotated with ticks showing the computed mean shift between the NAD 83 and the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27, move the projection lines 0.398 seconds (12.268 meters or 1.22 mm at the scale of the survey) north in latitude, and 1.150 seconds (27.651 meters or 2.76 mm at the scale of the survey) east in longitude.

D.1. COMPARISON WITH CHARTS 12278 (72nd Edition, Apr. 20/02)
12282 (33rd Edition, Jun. 01/02)
12272 (29th Edition, Apr. 20/02)

Tabulated Channel Depths

a)A conflict exists with the charted controlling depths in Craighill Angle Channel, left outside quarter, in the vicinity from Latitude 39˚07'55.82"N, Longitude 76˚24'07.73"W to Latitude 39˚07'14.71"N, Longitude 76˚23'50.08"W. The present survey shows shoaling to 48 feet, with a charted tabulated depth of 50.2 feet.

During office processing, through communication with Marine Chart Division personnel, it was determined that additional dredging and survey work, by the Army Corps of Engineers (ACOE), was completed subsequent to the present survey. This information is verified in Local Notice to Mariners 12/2003 (LNM 12/03).

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. Attention is directed to the following:

b) A charted dangerous obstruction with a depth of 34 feet(10^4 m), in Latitude 39˚02'38.71"N, Longitude 76˚20'31.40"W, originates with an unknown source. The feature was investigated by the field unit with side scan sonar and multibeam. The hydrographer determined the feature to be a wreck. It is recommended that the dangerous obstruction in Latitude 39˚02'38.71"N, Longitude 76˚20'31.40"W be deleted and a dangerous wreck with a depth of 34 feet (10^4 m), in Latitude

39˚02'38.71"N, Longitude 76˚20'31.40"W be charted as shown on present survey.

c) A charted submerged pile, in the vicinity of Latitude 39˚06'56.81"N, Longitude 76˚23'48.06"W, originates with an unknown source. The feature was not addressed by the field unit. It is recommended that the submerged pile be retained as charted.

Dangers to Navigation

One Danger to Navigation report was submitted by the hydrographer to the Marine Chart Division, N/CS3x1, Silver Spring, Maryland. A copy of this report is appended to the Descriptive Report.

Except as noted above, 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.

ADEQUACY OF SURVEY

This is an adequate hydrographic/side scan sonar and multibeam survey. No additional field work is recommended.

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 charts were used for compilation of the present survey (the date reflects the day each chart was downloaded from Continuous Maintenance):

12282 (34th Edition, Sep.25/03)
12278 (72nd Edition, Sep.25/03)
12272 (29th Edition, Sep.25/03)

Robert Snow

Robert Snow
Cartographic Technician
Verification of Field Data
Evaluation and Analysis

APPROVAL SHEET
H11026

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.

Marilyn L. Schluter Date: 6/26/03

Marilyn L. Schluter
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: Emily B Christman Date: 6/26/03

Emily B. Christman
Commander, NOAA
Chief, Atlantic Hydrographic Branch

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H11026

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
12272	9/30/03	Marilyn Schlüter	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No.
12278	9/30/03	Marilyn Schlüter	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No.
12282	9/30/03	Marilyn Schlüter	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.