

FOO424

NOAA FORM 76-35A	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE	
DESCRIPTIVE REPORT	
Field Examination	
Type of Survey	Side Scan Sonar.....
Field No.	AHP-10-4-96.....
Registry No.	FE-424.....
LOCALITY	
State	Maryland.....
General Locality	Chesapeake Bay.....
Sublocality	2 NM North of Cove Point.....
19 96	
CHIEF OF PARTY	
LT K. N. Harbinson.....	
LIBRARY & ARCHIVES	
DATE	JAN 20 1997.....

DIAGRAM 77-4

Ref-160228
Ref-L-153/96
Ref-BP-160207-08

Charts

CP3
12264
12263
12280
13003-NC

HYDROGRAPHIC TITLE SHEET

FE-42496

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 NO.
AHP-10-4-96

State Maryland

General locality Chesapeake Bay

Locality 2.0 NM North of Cove Point

Scale 1:10,000 Date of survey 20 February to 23 February 1996

Instructions dated 16 February 1996 Project No. S-E902-AHP

Vessel NOAA Vessel BAY HYDROGRAPHER (1107)

Chief of party LT Kevin N. Harbison, NOAA

Surveyed by R. T. Brennan, M. J. Annis

Soundings taken by echo sounder, hand lead, pole Echosounder and MOD III Diver depth gauge

Graphic record scaled by RTB, MJA

Graphic record checked by RTB, MJA

Protracted by N/A Automated plot by ENCAD NOVATET III N/A PLOTTER (AMA)

Verification by N/A ATLANTIC HYDROGRAPHIC BRANCH PERSONNEL

Soundings in fathoms feet at MLW MLLW

REMARKS: All times recorded in UTC

NOTES IN RED WERE MADE DURING OFFICE
PROCESSING.

ADDIS/SURF ✓ 1/22/97 SJV

SC 1-17-97

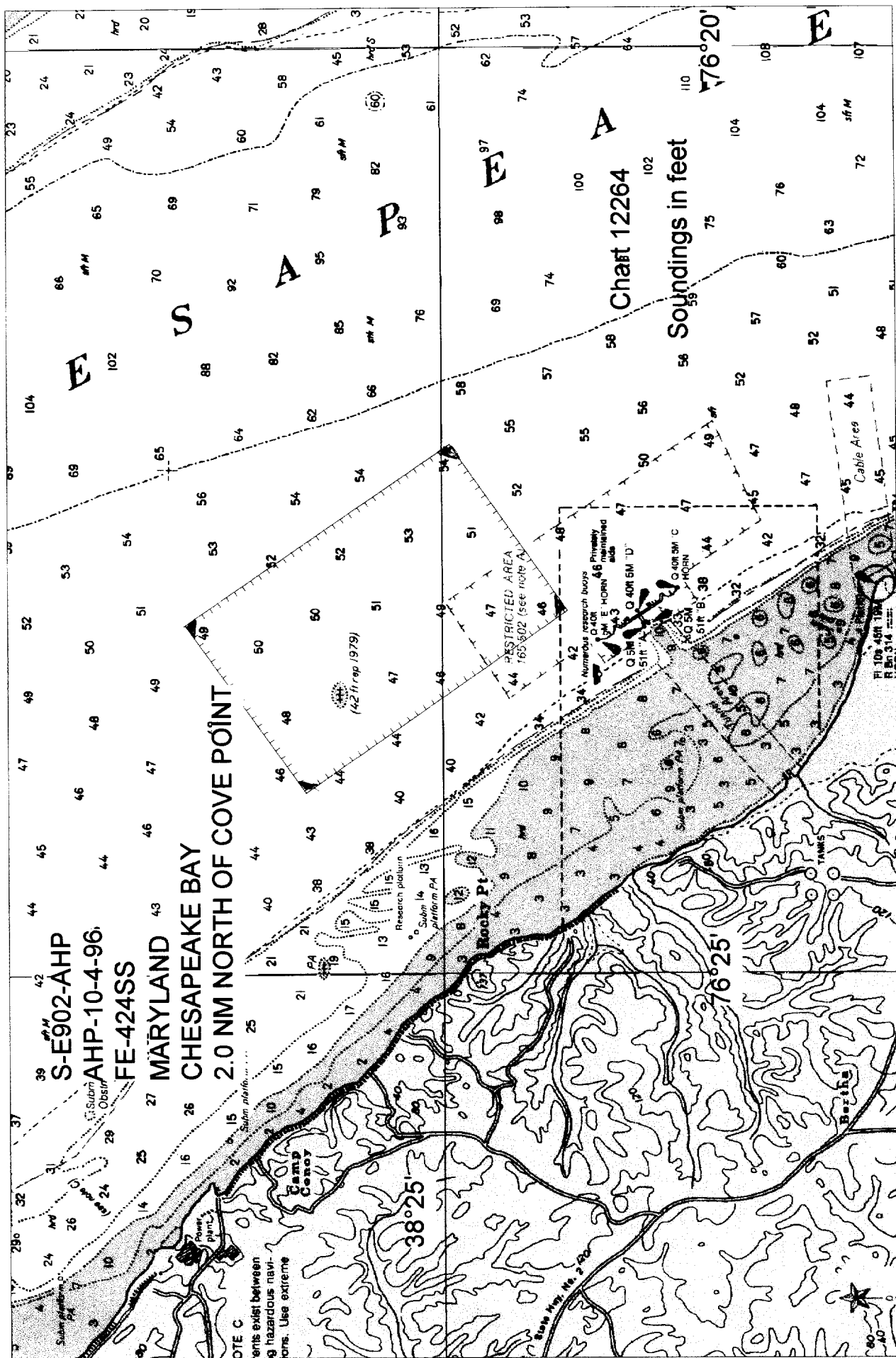


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SEPARATES } <i>FIELD RECORDS.</i>	

A. PROJECT

A.1 This survey was conducted in accordance with Hydrographic Project Instructions S-E902-AHP, Item Investigations, Chesapeake Bay, Cove Point, Maryland.

A.2 The original instructions are dated February 16, 1996.

A.3 There have been no changes to the original instructions.

A.4 This Descriptive Report covers a rectangular search area situated approximately 1.0 nautical mile north of the liquid natural gas (LNG) terminal as specified in the S-E902-AHP Project Instructions. See section B.2 for exact survey boundaries.

A.5 Project S-E902-AHP responds to requests from the U.S. Army Corps of Engineers, Baltimore District, to locate and determine least depths and extent of debris scattered from a barge accident in 1993.

B. AREA SURVEYED

B.1 This survey covers an area near the western shore of the Chesapeake Bay, approximately 2.0 nautical miles north of Cove Point, Maryland.

B.2 The survey comprises one sheet with the following boundaries:

NE Corner - 38°26'04"N, 076°23'07"W
NW Corner - 38°25'34"N, 076°24'01"W
SW Corner - 38°24'28"N, 076°23'02"W
SE Corner - 38°24'58"N, 076°22'08"W

B.3 Data collection for this survey began on February 20, 1996 (DN 051) and ended on February 23, 1996 (DN 054).

C. SURVEY VESSELS

C.1 The following vessel was used during this survey:

Vessel	EDP Number	Primary Function
NOAA Survey Vessel BAY HYDROGRAPHER	1107	Hydrography and Side Scan Operations

C.2 No unusual vessel configurations were used during this survey.

D. AUTOMATED DATA ACQUISITION AND PROCESSING *SEE ALSO THE EVALUATION REPORT.*

D.1 **HYPACK for Windows version 5.9** was used exclusively for data acquisition on this survey. Section D.3 discusses post processing using the Hydrographic Processing Software (HPS). The **HYPACK CONVERTOR 2.37** program developed by Hydrographic Surveys Division's System Support Office was used to transfer data to a format which was useable by HPS.

D.2 The SEABIRD SBE-19 sound velocity profile unit was utilized with **SEASOFT 3.3M** and **SEACAT 2.0** software. The program **VELOCITY** (Version 2.11, September 21, 1994) was used to process the collected data and calculate velocity corrections.

D.3 Post processing was accomplished using a prototype version of the Hydrographic Processing Software designed by the Atlantic Hydrographic Branch. This software suite was originally designed for use as a verification tool within the Atlantic Hydrographic Branch, but is currently being expanded for field use.

E. SONAR EQUIPMENT

E.1 The BAY HYDROGRAPHER conducted all side scan sonar operations using an EG&G Model 260 image-corrected side scan sonar recorder and a 100 kHz Model 272-T towfish.

E.2 The towfish was configured with a 20° beam depression, which is the normal setting and yields the optimum beam correction.

E.3 The 100 kHz frequency was used throughout the survey.

E.4 a. Given the average depth of water in the survey area, the 100-meter range scale was used at a line spacing of 170 meters to obtain complete area coverage and provide optimal contact resolution. This line spacing is in accordance with the value specified in section 7.3.2.1 of the Field Procedures Manual (FPM). Data collected with an EPE of 15 or greater were either rejected or smoothed during post-processing, so the maximum line spacing was never exceeded.

E.4 b. Confidence checks were obtained during frequent passes past the sunken barge contained within this survey area and during passes by the Liquid Natural Gas terminal pier. These features were routinely annotated on the sonar grams.

E.4 c. Two hundred percent side scan coverage was completed for this survey. All side scan coverage was checked with smooth plots to ensure proper overlap between adjoining lines. Since this survey was conducted to determine the extent of debris lost by a capsized barge, all questionable contacts were investigated using a reduced side scan range scale (either 25-meter or 50-meter range scale) followed by a full echo sounder investigation.

E.4 d. There were no degraded data returns collected during this survey.

E.4 e. The towfish was deployed exclusively from the stern.

E.5 Significant side scan sonar contacts were investigated using conventional hydrographic "splits" routinely run at 2-meter line spacing to ensure 100% vertical echo sounder coverage. Detailed descriptions of each contact investigation are outlined in section N.

E.6 At this time there is no way to check overlap coverage on-line with HYPACK. All overlap was checked and holidays identified during post processing.

F. SOUNDING EQUIPMENT

F.1 All hydrographic soundings were acquired using a Raytheon Model 6000N Digital Survey Echosounder (DSF-6000N S/N: B050N).

F.2 No other sounding equipment was used.

F.3 There were no faults in sounding equipment which affected the accuracy or quality of the data.

F.4 Both high (100 kHz) and low (24 kHz) frequency sounding data were recorded during data acquisition. Only high frequency soundings were plotted.

G. CORRECTIONS TO SOUNDINGS

G.1 a. Sound Velocity Correctors

The velocity of sound through water was measured using a Sea-Bird SBE 19 Seacat Profiler (s/n 285). Seacat Data Quality Assurance Tests were conducted after each respective velocity cast to ensure that the unit was operating within tolerance.

All sound velocity data were processed using program **VELOCITY**. Computed velocity correctors were entered into the HPS sound velocity table and re-applied during post-processing to both high and low frequency soundings.

Cast #1 (96056070.AA), acquired on DN: 056 at Latitude: 38°26'29"N, Longitude: 076°22'11" W, was the only cast acquired for this survey and was applied to all data.

b. Leadline Comparison

A dual leadline comparison with the DSF-6000N was conducted during special project S-E902-AHP on:

DN 051 at 38°27.85'N and 076°28.31'W (21 ft depths)

The leadline comparison for this survey was conducted inside a protected harbor while alongside. The water surface was calm and glassy, enabling the leadman to make multiple, quick readings. The unusually calm water also provided a steady fathometer reading. These ideal conditions were an excellent check on the accuracy of the fathometer as well as the vessel's offsets. Data from these comparisons can be found in Separate IV.*

c. Static Draft

After taking possession of BAY HYDROGRAPHER from the Navy, it underwent a brief yard period to prepare it for service. At this time a survey was conducted by LT Guy Noll to determine the exact position of the vessels transducers. An exact vertical distance was calculated from the transducer face to a permanent bolt (transducer reference mark) on the starboard side of the vessel. Once the vessel was re-floated, the distance from the transducer reference mark to the water's surface was measured. The vessel's static draft was calculated to be exactly 0.84 meter (2.8 feet). Refer to Separate IV* for data records. This draft corrector was applied to all sounding data through the HPS offset table.*

* ⁶ DATA FILED WITH ORIGINAL FIELD RECORDS

d. Dynamic Draft (Settlement and Squat Correctors)

Settlement and squat correctors for the BAY HYDROGRAPHER were determined on the Elizabeth River, Norfolk, VA on November 21, 1995. An observer, stationed with a level on a pier, measured changes in relative height by sighting to a staff held at the longitudinal position of the vessel's transducer. The vessel ran directly toward and then away from the observer. The values obtained from the toward and away runs were averaged and applied to soundings through the HPS Offset Table #1. Refer to Separate IV for data records. * FILED WITH ORIGINAL FIELD RECORDS

e. Heave, Roll, and Pitch Correctors

No heave, roll and pitch data were acquired for this survey.

f. Tide Correctors

The tidal datum for this project is Mean Lower Low Water. The operating tide station at Solomons, MD (857-7330) served as control for datum determination. At the time of the survey, HPS had no utility to apply predicted tides. Since the Solomons gauge was a primary Nextgen gauge, smooth tides were expedited allowing all soundings to be corrected in post processing with real tides using HPS.

A +30 minute time correction and a x1.11 range ratio was applied to the tidal data acquired at Solomons, MD. These correctors were applied during post processing in HPS.

Smooth tides were requested from N/OES in a letter mailed and dated March 4, 1996. *APPROVED TIDES AND ZONING WERE APPLIED DURING OFFICE PROCESSING*

The BAY HYDROGRAPHER employed no unusual or unique methods or instruments to correct echo soundings.

All sounding correctors were applied to both the narrow (100 kHz) and wide (24 kHz) DSF-6000N beams. Zoning for this project is consistent with the Project Instructions.

H. CONTROL STATIONS *SEE ALSO THE EVALUATION REPORT.*

The horizontal datum for this survey is the North American Datum of 1983 (NAD 83). No horizontal control stations were used or established for this survey.

I. HYDROGRAPHIC POSITION CONTROL

I.1 This survey was conducted exclusively using the Global Positioning System (GPS) corrected by the U.S. Coast Guard Differential GPS reference station network. Differential correctors were supplied from USCG radiobeacon transmitters, precluding the need for shore-based horizontal control stations.

I.2 Accuracy requirements were met as specified by the Hydrographic Manual and Field Procedures Manual (FPM). The Horizontal Dilution of Precision (HDOP) and Expected Position Error (EPE) specified by the FPM were monitored during on-line data collection. If the positioning degraded beyond the

acceptable limits while on-line, the data were either smoothed or rejected, depending on the extent of the affected data.

I.3 Differential GPS Equipment:

<u>Unit A</u>	<u>Unit B</u>
Ashtech GPS Sensor	Ashtech GPS Sensor
s/n 700417B1129	s/n 700417B1004
Firmware Version 1E89D-P	Firmware Version 1E89D-P
Magnavox MX50R	Magnavox MX50R
DGPS Receiver s/n 315	DGPS Receiver s/n 316

I.4 Correctors were received from the Cape Henlopen, DE, and Cape Henry, VA radiobeacons for the entire survey.

I.5 Daily performance checks were conducted using the Shipboard Data Integrity Monitor program ("**SHIPDIM**", Version 2.1), according to section 3.4.5 of the FPM. See SHIPDIM PERFORMANCE CHECKS in Separate III* for daily system checks.

I.6 The application of calibration data to the raw positioning data was not required, since DGPS was the primary positioning system.

I.7 a. There were no unusual methods used to operate or calibrate electronic positioning equipment.

I.7 b. There were no equipment malfunctions.

I.7 c. No unusual atmospheric conditions affected data quality.

I.7 d. No systematic errors were detected which required adjustments.

I.7 e. The maximum allowed HDOP value of 3.35 was never exceeded.

I.8 f. Antenna positions were corrected for offset and layback, and referenced to the position of the DSF-6000N echo sounder transducer. These correctors are located in HPS Offset Table #1, and were applied during post processing to the positioning algorithm. A copy of Offset Table #1 is contained in Separate III.*

I.9.g. Offset and layback distances for the A-frame (tow point) are located in HPS Offset Table #1 and were applied on-line. These offsets, along with the cable length, towfish

height, and depth of water, were used by the HPS system to compute the position of the towfish.

J. SHORELINE

No shoreline is contained within the boundaries of this survey.

K. CROSSLINES

The second 100% of side scan sonar coverage for this survey was conducted at 90° to the mainscheme side scan sonar coverage. This means approximately 50% of the total side scan sonar miles were crosslines.

An excessed plot of mainscheme soundings, superimposed with crosslines, was used to conduct mainscheme-to-crossline comparisons. Soundings at intersections were compared to all other soundings within a 5 m (50 meter) radius. Based on this procedure, agreement between mainscheme and crossline soundings was found to be excellent. The majority of compared soundings fell within 0.1 meter of each other, with only an occasional difference of 0.2 meter noted along contour lines.

L. JUNCTIONS

L.1 FE-424SS does not junction with any surveys. *CONCUR
PRESENT SURVEY DEPTHS ARE IN HARMONY WITH CHARTED
HYDROGRAPHY*

M. COMPARISON WITH PRIOR SURVEYS *SEE ALSO THE EVALUATION REPORT.*

A comparison with prior surveys will be performed by the Atlantic Hydrographic Branch as part of the office verification process.

N. ITEM INVESTIGATION REPORTS

N.1.1 Area of Investigation

AWOIS 4695
Chesapeake Bay
Reported Position:
38°25'26.24"N
076°23'28.21"W
Datum: NAD 83
Feature: Wreck

N.2.1 Description and Source of Item

AWOIS 4695 is a sunken barge first reported in Local Notice to Mariner 3/78. The location is marked on the chart with a Dangerous Wreck symbol and the annotation "42 FT REP 1979". See the Automated Wreck and Obstruction Information System (AWOIS) listing for project S-E902-AHP for a detailed description.

N.3.1 Survey Requirements

A full investigation was required, including 200% side scan coverage and diver investigation.

N.4.1 and N.5.1 Method and Results of Investigation

The area of AWOIS item 4695 was covered with 200% side scan sonar, and further developed with mainscheme hydrography splits at a line spacing of 5 meters. The barge could be clearly seen on the side scan sonar trace at positions 143.0, 172.5, and 682.4. The charted position is excellent.

N.7.1 Comparison with Chart and Charting Recommendations

The echo-sounder investigation of AWOIS item 4695, a submerged barge, produced a 12.0' meter (39.5⁷ feet) corrected least depth at fix 1098.2'. This depth is 2.5 feet shoaler than the charted 42 foot depth. Upon closer inspection of the fathogram, the "hit" that was inserted could possibly be attributed to fish. In addition the Army Corps of Engineers (the source for the charted depth) conducted two hours of survey operations on this item, arriving at a corrected least depth of 42 feet. No dives could be conducted on this item at the time of the survey to disprove the suspect sounding. Therefore, it is the hydrographer's opinion that AWOIS item 4695 remain as charted until divers are able to investigate this wreck further and verify or disprove the echosounder depth. Currently, dives are planned for early spring, during the BAY HYDROGRAPHER's transit to Annapolis. *Do NOT CONCUR. CHART A 39 WK IN*
LAT: 38-25-26.33 N, LONG: 76-23-27.23 W

N.1.2 Area of Investigation

AWOIS 9658
Chesapeake Bay
Reported Position:
38°25'30.00"N
076°23'24.00"W
Datum: NAD 83
Feature: Obstruction

N.2.2 Description and Source of Item

AWOIS 9658 is a dangerous submerged obstruction believed to be precast concrete bridge sections lost from a tug and tow. This was first reported in Local Notice to Mariner 22/93. The location is marked on the chart with a danger circle and the annotation "Obstn PA". See the Automated Wreck and Obstruction Information System (AWOIS) listing for project S-E902-AHP for a detailed description.

N.3.2 Survey Requirements

A full investigation was required, to include 200% side scan coverage and diver investigation.

N.4.2 and N.5.2 Method and Results of Investigation

The area of AWOIS item 9658, a dangerous submerged obstruction, was covered with 200% side scan sonar. No contacts were noted other than AWOIS item 4695, a sunken coal barge immediately to the west of the geographic position given for this item. After a discussion with Mr. Steve Verry in the Hydrographic Surveys Division, it was determined that the position given for AWOIS item 9658 was the initial position recorded by the tug boat captain several minutes after the cargo of bridge sections were lost from the barge. The captain also confirmed that all bridge sections were lost at one time and, not one after the other along the track of the vessel, as had been previously suspected. This information was gathered by Mr. Verry during a telephone conversation with the captain in charge of the tug boat at the time of the incident. With this information and strong side scan contacts found approximately 675 meters southwest of the estimated position, this area was abandoned and the focus centered around contact number 186.5.

N.7.2 Comparison with Chart and Charting Recommendations

AWOIS item 9658 has been resolved. It is the opinion of the hydrographer that the danger circle and the associated annotation "Obstn PA" be removed from the chart. The items described in AWOIS item 9658 are synonymous with item 9659. Please reference section N.7.3 for charting recommendations for the associated obstruction. *CONCUR*

N.1.3 Area of Investigation

AWOIS 9659
Chesapeake Bay
Reported Position:
38°25'05.40"N
076°22'45.60"W
Datum: NAD 83
Feature: Obstruction

N.2.3 Description and Source of Item

AWOIS item 9659 is the Army Corps of Engineer's position for the precast concrete bridge sections described in AWOIS item 9658.

N.3.3 Survey Requirements

A full investigation was required, including 200% side scan coverage and diver investigation.

N.4.3 and N.5.3 Method and Results of Investigation

The precast bridge sections described in AWOIS item 9659 were found 601 meters west-northwest of the Army Corps of Engineer's position. These items are visible on side scan sonar at position 186.5, 747.6, and 768.3. An echo-sounder investigation was conducted over these items producing a least depth of 8.5 meter (27.9 feet) MLLW. No dives were conducted at the time of the survey. Diver investigations are planned during BAY HYDROGRAPHER's transit to Annapolis in the early spring of 1996.

N.7.3 Comparison with Chart and Charting Recommendations

AWOIS item 9659 has been resolved. This item should be charted as a 28-foot obstruction located at 38°25'08.9"N, 076°23'10.0"W. This is consistent with the Danger to Navigation letter mailed to the Commander of the Fifth Coast Guard District on 11 March 1996. See Appendix I for a copy of this Danger to Navigation. *APPENDED TO THIS REPORT.*

CONCUR, CHART AS 28 OBSTN

O. COMPARISON WITH THE CHART

O.1 Three charts are affected by this survey:

Chart 12260
"Chesapeake Bay, Northern Part"
30th Ed. 19 March 1994
Scale: 1:197,250

Chart 12263
"Chesapeake Bay, Cove Point to Sandy Point"
43rd Ed. 16 April 1994
Scale: 1:80,000

Chart 12264
"Chesapeake Bay, Patuxent River and Vicinity"
26th Ed. 23 September 1995
Scale: 1:40,000

O.2 One Danger to Navigation report was submitted for this survey to the Commander, Fifth Coast Guard District on 11 March, 1996. See Appendix I for a copy of this report.

O.3 a. The overall correlation between charted soundings and survey depths is excellent. Survey depths were overlaid on the largest scale chart of the area using MapInfo software. Survey depths were converted from meters to feet within MapInfo. To account for the NOS rounding rule, 0.28 foot was then subtracted from the depth and a rounding routine was applied to round the depth to the nearest foot. Depths typically agreed within one foot, with the survey data always being shoaler. There was an occasional difference of two feet, however they tended to occur near contour lines. *Concur*

O.3 b. No shoaling or deepening trends were found in the survey area.

P. ADEQUACY OF SURVEY

This report contains no diver information for the AWOIS items which were being investigated. Dives are scheduled for spring of 1996. All data collected during these dives will be forwarded immediately to the Atlantic Hydrographic Branch for addition to this report.

Q. AIDS TO NAVIGATION

No floating or non-floating aids to navigation exist within the limits of this survey.

R. STATISTICS

R.1 a.	Number of Positions	1214
b.	Lineal Nautical Miles of Sounding Lines:	
	Nautical Miles of Survey With the Use	
	of Side Scan Sonar	28.4
	Nautical Miles of Survey Without the Use	
	of Side Scan Sonar	2.3
R.2 a.	Square Nautical Miles of Hydrography	
	per 100% of Coverage	1.6
b.	Days of Production4
c.	Detached Positions0
d.	Bottom Samples0
e.	Tide Stations	1
g.	Velocity Casts.	1

S. MISCELLANEOUS

S.1 a. No evidence of silting was found during this survey.

S.1 b. No evidence of anomalous tides or tidal current conditions was found during this survey.

S.2 No bottom samples were required for this survey.

T. RECOMMENDATIONS

T.1 There are four items to be investigated by divers during the BAY HYDROGRAPHER's transit to Annapolis, Maryland. These items are outlined below.

Side Scan Sonar Contact	Description
1098.2	AWOIS Item 4695; sunken barge
1118.6	AWOIS Item 9659; bridge sections
1180.4	uncharted wreck
1200.0	possible wreck

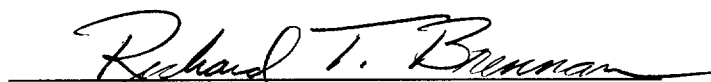
T.2 Options for removal of the bridge sections described in AWOIS item 9659 and section N.1.3 of this report are being explored by the Army Corps of Engineers. If these items are removed, the associated sounding would also need to be removed or altered.

T.3 Aside from the items mentioned in section T.1, no further investigation of the survey area is recommended.

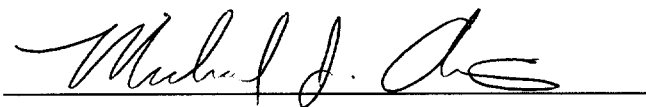
U. REFERRAL TO REPORTS

No reports or data are referred to in this Descriptive Report that are not included with this survey.

This report and the accompanying field sheets are respectfully submitted.



LTJG Richard T. Brennan, NOAA
Officer-in-Charge,
NOAA Survey Vessel BAY HYDROGRAPHER

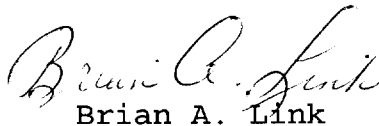


Michael J. Annis
Survey Technician
NOAA Survey Vessel BAY HYDROGRAPHER

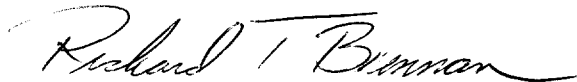
APPROVAL SHEET
Field Examination Survey
S-E902-AHP
AHP-10-4-96
FE-424
1996

This field examination survey was conducted in accordance with the project instructions for S-E902-AHP, the Hydrographic Manual, the Hydrographic Survey Guidelines, and the Field Procedures Manual. All reports, records, and survey sheets were reviewed by LT(jg) Richard T. Brennan, hydrographer in charge of daily operations. The descriptive report was reviewed and approved by Mr. Brian A. Link, Chief of Party (acting). The chief of party did not directly supervise any part of this survey

This survey is a complete field examination survey for the area described in Section B of this report.


Brian A. Link

Chief, Atlantic Hydrographic Party (acting)



Richard T. Brennan, LT(jg), NOAA
Hydrographer-in-charge

APPENDIX III

LIST OF HORIZONTAL CONTROL STATIONS

No horizontal control stations were needed for this survey since Differential GPS was employed exclusively for all positioning control. The geographic positions for the two Differential GPS radio beacons used during this survey are as follows:

Cape Henry, VA	36°55'37.580"N
289 KHz	076°00'23.884"W
Cape Henlopen, DE	38°46'36.421"N
298 KHz	075°05'15.667"W



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

11 March 1996

Commander
Fifth Coast Guard District
Federal Building
431 Crawford Street
Portsmouth, Virginia 23704-5004

Dear Sir:

NOAA Launch 1107 recently investigated several submerged pre-cast concrete bridge sections which were lost from a tug and tow during its transit north through the Chesapeake Bay. These items fell overboard approximately 2.0 nautical miles north of Cove Point, which is on the north side of the entrance to the Patuxent River. Upon investigation, these items were determined to be a danger to navigation. It is requested that information concerning these discrepancies be published in the Local Notice to Mariners. These items are found on charts 12263 (43rd ed. 16 April 94) and 12264 (26th ed. 23 September 95).

Updated depths and additions/deletions are outlined in the tables found in this report. In addition, there is a chartlet enclosed with the boundaries of the survey outlined.

The survey soundings were determined during preliminary hydro investigation using a Raytheon DSF-6000 survey fathometer. The depths have been reduced to Mean Lower Low Water (MLLW) by applying real tide corrections based on NOAA tide gauge #857-7330 located on Solomons Island, Maryland. The horizontal datum is NAD 83.



This investigation was performed in support of the following hydrographic survey.

REPORT OF DANGER TO NAVIGATION

Hydrographic Survey Registry Number...FE-424SS
 State.....Maryland
 General Locality.....Chesapeake Bay
 Locality.....2.0 NM North of Cove Point
 Project Number.....S-E902-AHP
 Surveyed by.....NOAA Launch 1107

ADD THIS FEATURE TO THE FOLLOWING CHARTS:

12263 (43rd ed. 16 April 94)
 Chart Scale: 1:80,000

12264 (26th ed. 23 September 95)
 Chart Scale: 1:40,000

DEPTH (MLLW)	LATITUDE	LONGITUDE
28 ft	38°-25'-08.9"N	076°-23'-10.0"W
OBSTRUCTION		

**DELETE THIS FEATURE
 FROM THE FOLLOWING CHARTS:**

12263 (43rd ed. 16 April 94)
 Chart Scale: 1:80,000

12264 (26th ed. 23 September 95)
 Chart Scale: 1:40,000

FEATURE	LATITUDE	LONGITUDE
OBST PA	38°-25'-30.0"N	076°-23'-24.0"W

Contact either of the following personnel for further information.

Officer In Charge,
NOAA Launch 1107
439 W. York St.
Norfolk, VA. 23510
804-441-6292

Chief, Atlantic Hydrographic Branch
Atlantic Marine Center
439 W. York St
Norfolk, VA. 23510
804-441-6746

Sincerely,

A handwritten signature in cursive script, reading "Richard T. Brennan".

Richard T. Brennan
Lieutenant (J.G.), NOAA
Officer In Charge, NOAA Launch 1107

AHP-10-4-96,
FE-424SS

MARYLAND
CHESAPEAKE BAY

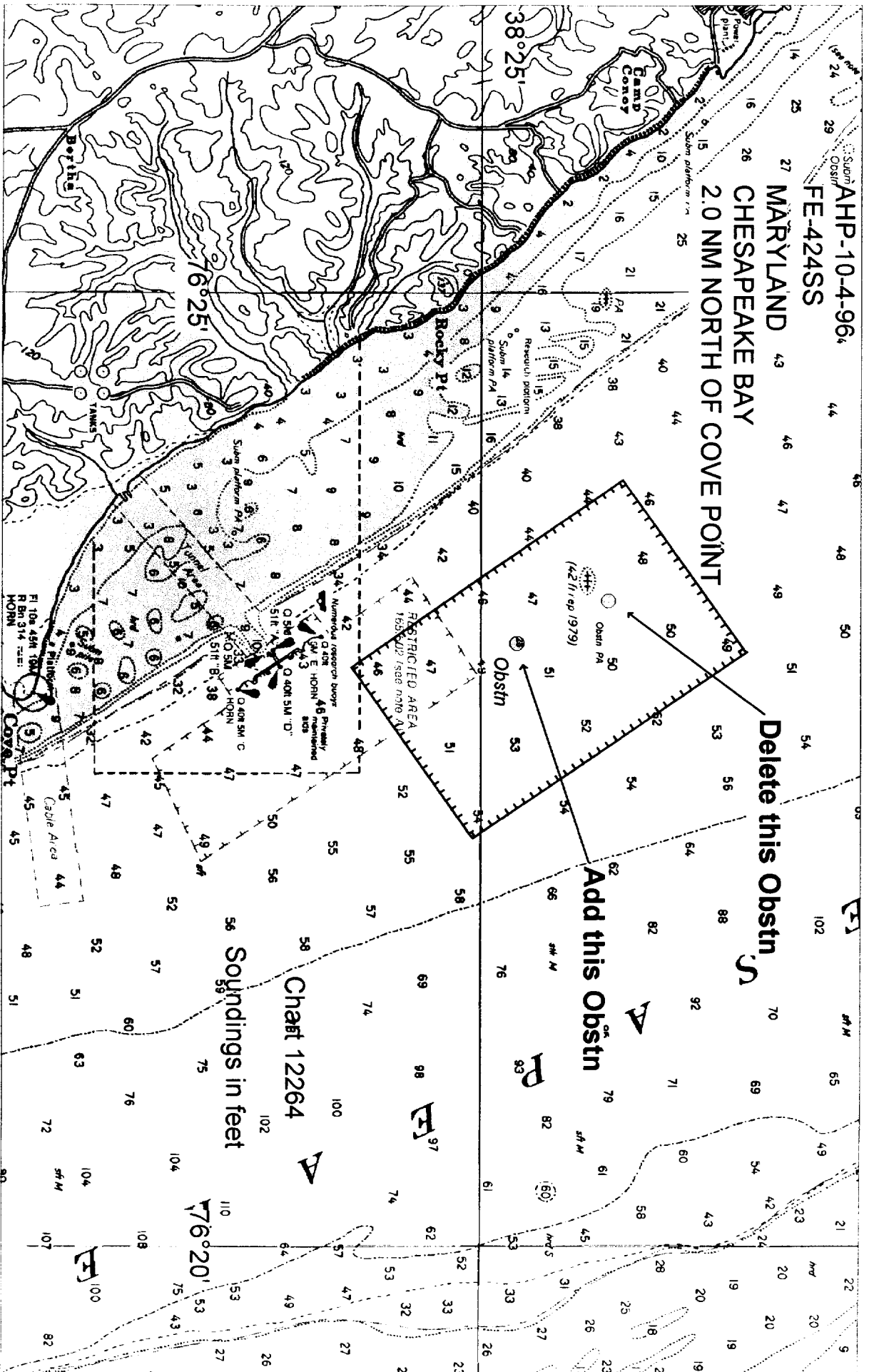
2.0 NM NORTH OF COVE POINT

Delete this Obsn

Add this Obsn

Chart 12264

Soundings in feet





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

18 August 1993

MEMORANDUM FOR: Dennis J. Romesburg
Chief, Nautical Data Branch

FROM: Lieutenant (j.g.) *Richard T. Brennan* Richard T. Brennan, NOAA
Officer-in-Charge, NOAA Launch 1107

SUBJECT: Danger To Navigation Report

Attached please find a copy of a Danger To Navigation report issued by the NOAA Launch 1107 to the Fifth Coast Guard District Commander in Portsmouth, Virginia. This obstruction was investigated during survey operations on project S-E902-AHP. A copy of the report was also sent to the Director of the Defense Mapping Agency's Hydrographic/Topographic Center in Washington, DC.

Attachments






UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

11 March 1996

Director
Defense Mapping Agency
Hydrographic/Topographic Center
Attention: MCNM (Mail Stop D-44)
6500 Brookes Lane
Washington, DC 20315-0030

Dear Sir:

Enclosed please find a copy of a Danger To Navigation report issued by the NOAA Launch 1107 to the Fifth Coast Guard District Commander in Portsmouth, Virginia.


LTJG Richard T. Brennan,
Officer-in-Charge, NOAA Launch 1107





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Norfolk, Virginia 23510-1114

11 March 1996

MEMORANDUM FOR: Commander Nicholas E. Perugini, NOAA
Chief, Atlantic Hydrographic Branch

FROM: Lieutenant (j.g.) Richard T. Brennan, NOAA
Officer-in-Charge, NOAA Launch 1107

SUBJECT: Danger To Navigation Report

Attached find a hardcopy of the report mailed on 11 March 1996 concerning discrepancies on chart 12263 (43rd ed. 16 April 94) and 12264 (26th ed. 23 September 95) discovered during survey operations on project S-E902-AHP, registry number FE-424SS. This report was sent to the Fifth Coast Guard District Commander in Portsmouth, Virginia, and a copy was sent to the Director of the Defense Mapping Agency's Hydrographic/Topographic Center in Washington, DC.

Copies of all information were sent to the Nautical Data Branch, N/CS26 in Silver Spring, MD.

Attachments





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 12, 1996

MARINE CENTER: Atlantic

HYDROGRAPHIC PROJECT: S-E902-AHP

HYDROGRAPHIC SHEET: FE-424

LOCALITY: Maryland, Chesapeake Bay 2.0 Nautical Miles North of Cove Point

TIME PERIOD: February 20 - 23, 1996

TIDE STATION USED: 857-7330 Solomons Island, Md.
Lat. 38° 19.0'N Lon. 76° 27.2'W


PLANE OF REFERENCE (MEAN LOWER LOW WATER): 3.47 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.4 ft.

REMARKS: RECOMMENDED ZONING

Apply a +36 minute time correction and a X1.11 range ratio to heights using Solomons Island, Md. (857-7330).

Note: Times are tabulated in Greenwich Mean Time.


CHIEF, DATUMS SECTION

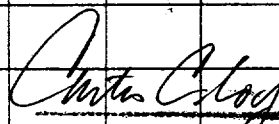


GEOGRAPHIC NAMES

FE-424

Name on Survey	ON CHART NO. 12264, 12263, 12260 ON PREVIOUS SURVEY NO.										
	A	B	C	D	E	F	G	H	K		
	CON U.S. QUADRANGLE MAPS										
	FROM LOCAL INFORMATION										
	ON LOCAL MAPS										
	P.O. GUIDE OR MAP										
	GRAND McNALLY ATLAS										
	U.S. LIGHT LIST										
CHESAPEAKE BAY (title)	X		X							1	
COVE POINT (title)	X		X							2	
MARYLAND (title)	X		X							3	
										4	
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Approved


Chief Geographer

DEC 3 1996

01/16/97

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: FE-424

NUMBER OF CONTROL STATIONS

2

NUMBER OF POSITIONS

1214

NUMBER OF SOUNDINGS

6373

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	12	09/20/96
VERIFICATION OF FIELD DATA	10	12/04/96
QUALITY CONTROL CHECKS	2	
EVALUATION AND ANALYSIS	12	
FINAL INSPECTION	1	12/05/96
COMPILATION	17	12/07/96
TOTAL TIME	54	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		12/09/96

N/CS33-3-97

LETTER TRANSMITTING DATA

TO:

NOAA/National Ocean Service
Chief, Data Control Group, N/CS3x1
SSMC3, Station 6815
1315 East-West Highway
L Silver Spring, MD 20910-3282

DATA AS LISTED BELOW WERE FORWARDED TO YOU
BY (Check):

- ☐ ORDINARY MAIL ☐ AIR MAIL
☐ REGISTERED MAIL ☒ EXPRESS
☐ GBL (Give number) _____

DATE FORWARDED

January 15, 1997

NUMBER OF PACKAGES

1 Box, 1 Tube

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

FE-424

Maryland, Chesapeake Bay, 2 nm North of Cove Point1 Box Containing:

- 1 Envelope with Original Descriptive Report with original Smooth Sheet for FE-424 included in the Descriptive Report
- 1 Envelope with HISTORY OF CARTOGRAPHIC WORK (NOAA form 76-71) for FE-424 for chart 11264

1 Tube Containing:

- 1 Paper Composite plot of Survey FE-424 for NOS chart 11264
- 1 Mylar H-DRAWING of FE-424 for NOS chart 11264

FROM: (Signature)

Richard H. Whitfield

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Atlantic Hydrographic Branch N/CS331
439 W. York Street
Norfolk, VA 23510-1114

**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR FE-424 (1996)**

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.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

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

Hydrographic Processing System (HPS)
AUTOCAD, Release 12
MicroStation 95, version 5.05
NADCON, version 2.10.
I/RAS B, version 5.01

The smooth sheet was plotted using an ENCAD NovaJet III plotter.

H. CONTROL

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). 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 0.397 seconds (12.25 meters or 1.22 mm at the scale of the survey) north in latitude, and 1.140 seconds (27.40 meters or 2.74 mm at the scale of the survey) east in longitude.

M. 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.

- O. COMPARISON WITH CHARTS 12260 (30th Edition, Mar. 19/94)**
12263 (43rd Edition, Apr. 16/94)
12264 (26th Edition, Sep. 23/95)

Hydrography

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes an adequate chart comparison in sections 0.3.a. and b. of the Descriptive Report. The following should be noted:

1. An uncharted obstruction with a depth of 41 feet (12⁵ m), in Latitude 33°25'40.63"N, Longitude 76°23'42.57"W, was located but not discussed by the field unit. It is recommended that an obstruction with a depth of 41 feet (41 *Obstn*) be charted as shown on the present survey.

2. An uncharted obstruction with a depth of 43 feet (13¹ m), in Latitude 33°24'54.74"N, Longitude 76°23'01.69"W, was located but not discussed by the field unit. It is recommended that an obstruction with a depth of 43 feet (43 *Obstn*) be charted as shown on the present survey.

The present survey is adequate to supersede the chart in the common area.

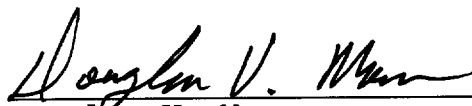
P. ADEQUACY OF SURVEY

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

S. MISCELLANEOUS

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

MT MITCHELL Processing Team

A handwritten signature in cursive script, reading "Douglas V. Mason", written over a horizontal line.

Douglas V. Mason.
Cartographic Technician
Verification of Field Data

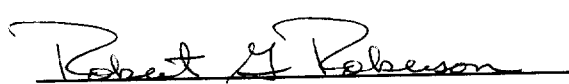
A handwritten signature in cursive script, reading "Richard H. Whitfield", written over a horizontal line.

Richard H. Whitfield
Cartographer
Evaluation and Analysis

APPROVAL SHEET
FE-424

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproof of charted data. The digital data have been completed and 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.



Robert G. Roberson
Cartographer
Chief, Cartographic Section

Date: 12/9/96

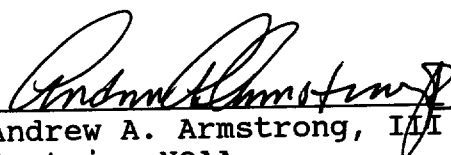
I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.



Nicholas E. Perugini, CDR, NOAA
Chief, Atlantic Hydrographic Branch

Date: 12-9-96

Final Approval:

Approved: 

Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

Date: Jan 24, 1997

$$76^{\circ} 23' 30''$$
$$\underline{38^{\circ} 26' 30''}$$

76° 23' 00"

38° 26' 00"

$$76^{\circ} 22' 30''$$

38° 25' 30"

76° 22' 00"

38° 25' 00"

00"

FE-424
MARYLAND
CHESAPEAKE BAY
2.0 NM NORTH OF COVE POINT
FEB 20, 1988 TO FEB 23, 1988
1:10,000
VERTICAL DATUM: SOUNDINGS IN FEET AT MLLW
HORIZONTAL DATUM: NAD 83
SHEET 1 OF 1
AOWIS ITEMS 4885, 9852, 9859

70/23/30
NAD 27
CHECKED
9/21/98
38/28/30
BY:DYM

(The page contains a large grid of numbers, likely a calendar or ledger, with some handwritten notes and corrections.)