H10752

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC/ SIDE SCAN SONAR

Field No. AHP-10-04-97

Registry No. H-10752

LOCALITY

State MARYLAND

General Locality CHESAPEAKE BAY

Sublocality FRANKLIN POINT TO BLOODY POINT

1997

CHIEF OF PARTY

LT J. A. ILLG, NOAA

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NOAA FORM 77-28 (10/72)

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

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-10752

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-10-4-97

State: Maryland

General locality: Chesapeake Bay

Locality: Franklin Point to Bloody Point

Scale: 1:10,000 Date of survey: May 27 - November 11, 1997

Instructions dated: 4-17-95 Project No.: OPR-E346-AHP

Vessel: NOAA Vessel BAY HYDROGRAPHER

Chief of party: LT James A. Illg

Surveyed by: LT R.T. Brennan, LTJG S. Smith, C.E. Parker, M.J. Annis, M.M. Cisternelli

Soundings taken by echo sounder, hand lead, pole: Raytheon DSF-6000N Fathometer

Graphic record scaled by: LT R.T. Brennan, LTJG S. Smith, C.E. Parker, M.J. Annis, M.M. Cisternelli

Graphic record checked by: LT R.T. Brennan, LTJG S. Smith, C.E. Parker, M.J. Annis, M.M. Cisternelli

Protracted by: N/A Automated plot by: HP DesignJet 750C Plus (FIELD)

Verification by: Hydrographic Surveys Branch PERSONNEL

Soundings in fathoms feet at MLW MLLW ~~Meters~~ FEET at MLLW

REMARKS: All times are recorded in UTC

NOTES IN THE DESCRIPTIVE REPORT WERE MADE IN RED DURING OFFICE PROCESSING

AWOIS/SURF ~ 10/14/98, SJV

NOAA FORM 77-28 SUPERSEDES FORM C & GS-837.

This form was electronically produced by Elite Federal Forms, Inc.

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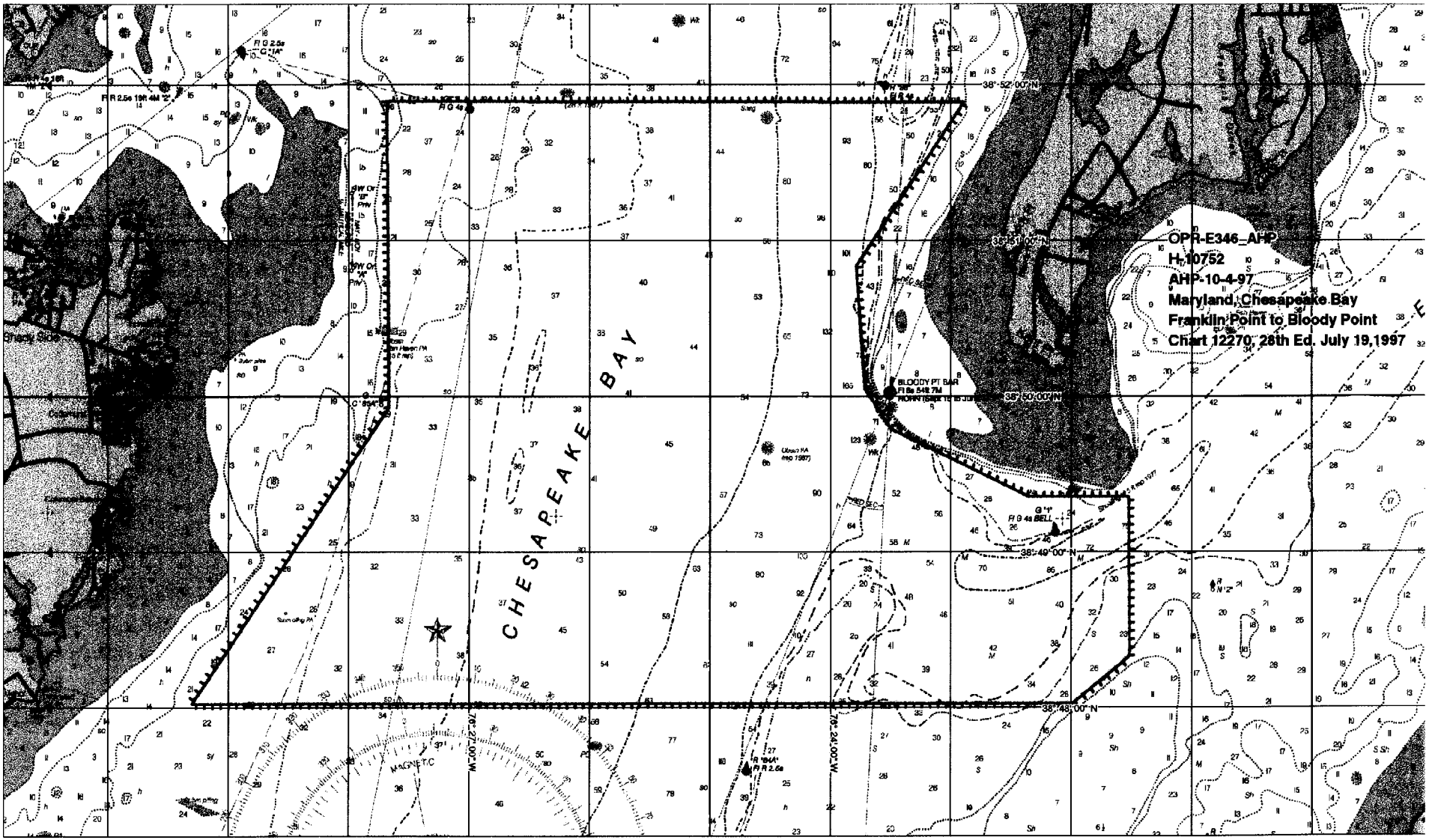

OPR-E346_AHP
H-10752
AHP-10-4-97
Maryland, Chesapeake Bay
Franklin Point to Bloody Point
Chart 12270, 28th Ed. July 19,1997
CHESAPEAKE BAY
38° 52' 00" N
38° 51' 00" N
38° 50' 00" N
38° 49' 00" N
38° 48' 00" N
76° 28' 00" W
76° 27' 00" W
BLOODY PT BAR
MAGNETIC

A. PROJECT

A.1 This navigable area survey was conducted in accordance with Hydrographic Project Instructions for OPR-E346-AHP, Chesapeake Bay, Franklin Point to Bloody Point, Maryland.

A.2 The original instructions are dated April 17, 1995.

A.3 Change number one to Hydrographic Project Instruction , OPR-E346-AHP, dated April 25, 1996 directly effects this survey.

A.4 This Descriptive Report for H-10752 covers sheet "I" of OPR-E346-AHP.

A.5 Project OPR-E346-AHP responds to requests from the Maryland Port Administration, Association of Maryland Pilots, U.S. Army Corps of Engineers, and the U.S. Coast Guard. Modern hydrographic surveys are required due to the growth of international bulk and container trade during the past few decades.

B. AREA SURVEYED

B.1 This survey covers the navigable area of the Chesapeake Bay, from Franklin Point to Bloody Point. This survey is located approximately 8.0 nautical miles southeast of Annapolis, Maryland, 1.0 nautical miles west of Kent Point, and 1.5 nautical miles east of Horseshoe Point. Sheet "I" is a 1:10,000 scale survey that complies with the 200% side scan sonar sonar coverage requirement.

B.2 The survey comprises one sheet with the following boundaries, starting at the NE corner and proceeding clockwise:

1. 38°51'54"N 076°22'55"W
2. 38°50'51"N 076°23'47"W
3. 38°50'03"N 076°23'43"W
4. 38°49'47"N 076°23'30"W
5. 38°49'21"N 076°22'21"W
6. 38°49'21"N 076°21'31"W
7. 38°48'20"N 076°21'31"W
8. 38°48'02"N 076°21'59"W
9. 38°48'02"N 076°29'18"W
10. 38°49'56"N 076°27'40"W
11. 38°51'54"N 076°27'41"W

B.3 Data collection for this survey began on May 27, 1997 (DN 147) and ended on November 11, 1997 (DN 315).

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 Sonar 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 6.4 was used exclusively for data acquisition on this survey. Section D.3 discusses post processing using the Hydrographic Processing Software (HPS). The HSD UTILITIES version 3.18 provided by Hydrographic Surveys Division (N/CS32) was used to transfer data to a format that was useable by HPS. Due to the nature of operations on the *BAY HYDROGRAPHER*, experimental versions of HYPACK, HSD UTILITES, and HPS were used throughout the field season. These experimental software versions were monitored and updated by N/CS32.

D.2 The SEABIRD SBE-19 sound velocity profile unit (serial number 2039) 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 the Hydrographic Processing Software provided by the Atlantic Hydrographic Branch. This software suite was originally designed for use as a verification tool within the Atlantic Hydrographic Branch, which has been expanded for field use.

E. SONAR EQUIPMENT

E.1 The *BAY HYDROGRAPHER* conducted side scan sonar sonar operations using an EG&G model 260 recorder and model 272-T towfish for all main scheme data acquisition from DN 147 through DN 260. Throughout the remainder of the survey, DN 275 through DN 315, the Klein System 5000, 500 kHz High Speed High Resolution (HSHR) side scan sonar sonar was used in conjunction with Triton's Isis System as the data recorder. The digital side scan sonar sonar system was used during side scan sonar contact investigations as a visual tool for identifying contacts prior to development with the Raytheon DSF 6000N echo sounder.

E.2 The EG&G model 260 image-corrected side scan sonar sonar recorder (s/n 16673) and a 100 kHz model 272-T towfish (s/n 16696) was operated at 100kHz and configured with a 20° beam depression. This is the normal setting and yields the optimum beam correction.

E.3 The Klein System 5000, consists of a model T5100 sonar transceiver, a model 5250 towfish (s/n 240), and model 5300 cable. The model T5100 sonar transceiver is a high speed, high resolution, multiple beam side scan sonar sonar with a 12 bit digital multiplexer for transmission of sonar and control data over a single coaxial cable. The towfish has five side scan sonar sonar channels or beams per side that operate at 500 kHz nominal (455 kHz actual) with uncorrected sonar data processing (non slant range correction); the vertical beam angle is 40°. Range scale includes 50 meters minimum to 150 meter maximum per side. The actual range varies with environmental conditions and operating frequency. The model 5250 towfish includes sensors recording pressure information for towfish depth, pitch and roll data, and gyro information.

The HSHR data recorder utilizes the Isis System produced by Triton Technology, Inc. Isis is a modular shipboard data acquisition and image processing system, which operates under Microsoft's Windows 95.

E.4 a. During survey preparation, it was determined that the depth of water in the survey area would require multiple range scales and line spacing. The 100-meter and 75-meter range scales were used at a line spacing of 170 meters and 120 meters, respectively, to obtain complete area coverage and provide optimal contact resolution. The line spacing is in accordance with the value specified in section 7.3.2.1 of the Field Procedures Manual (FPM). A range scale of 50 meters was used for contact development purposes. Data collected with an EPE of 15 or greater was rejected or smoothed during post-processing, so the maximum line spacing was never exceeded.

E.4 b. Confidence checks were obtained during frequent passes by navigational aids and over anchor scours, sand waves, and other bottom features contained within this survey area. These features were routinely annotated on the sonargrams.

E.4 c. Two hundred percent side scan sonar coverage was completed for this survey. All side scan sonar coverage was checked with smooth plots to ensure proper overlap between adjoining lines. All relevant and questionable contacts were investigated using a reduced side scan sonar range scale of 50 meters, followed by an echo sounder investigation.

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

E.5 Significant side scan sonar contacts were investigated using conventional hydrographic "splits" routinely run at two to ten meter line spacing to ensure 100% vertical echo sounder coverage. These hydrographic developments were named using the side scan sonar contact name that first identified the object. So, if a wreck were first recorded as contact 1234.5P, then the development name would also be 1234.5P. The side scan sonar was simultaneously run during

contact development to aid in determining the exact position of a contact with respect to the line being run. This aided in determining whether a contact was to the left or right while running the initial line, and also offered an indication as to whether or not the final line passed directly over the contact. All echo-sounder developments were recorded in the Contact Correlator and list the development name, the least depth, the least depth fix, the geographic position of the least depth, and charting recommendations and comments. The Contact Correlator can be found in section "N" of this report. Detailed descriptions of all AWOIS items falling within the navigable area are addressed in the AWOIS REPORTS found at the beginning of 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 echo sounder (DSF-6000N S/N: A109N).

F.2 No other sounding equipment was used during this survey.

F.3 There were no faults in sounding equipment which affected the accuracy or quality of the data. It should be noted that on DN 204 (7/23/97) the high frequency transducer failed. Sounding collection ceased; the transducer was replaced and normal operations were resumed. Data quality was not jeopardized, but did require minor post processing.

F.4 Both high (102 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. *Sound Velocity Correctors*

The velocity of sound through water was measured using a Sea-Bird SBE 19 Seacat Profiler (s/n 2039). 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.

Velocity casts taken during this survey are shown in the following table:

Cast Number	Day Number	Position of Cast		Days Covered
		Latitude	Longitude	
01	154	38°50'18"N	076°24'00"W	147, 153, 155, 156, 157
02	161	38°50'25"N	076°24'02"W	160, 161, 162, 167
03	177	38°50'26"N	076°23'59"W	177, 178, 182, 183
04	189	38°50'25"N	076°24'00"W	189, 196, 198, 199
05	203	38°50'24"N	076°24'00"W	203, 204
06	219	38°50'22"N	076°23'58"W	217, 218, 219, 224
07	225	38°50'22"N	076°23'58"W	225, 226, 227
08	233	38°50'24"N	076°23'54"W	232, 233, 234, 237, 238, 239
09	240	38°50'24"N	076°24'00"W	240
10	259	38°50'05"N	076°23'51"W	259, 260
11	279	38°50'05"N	076°23'51"W	275, 279
12	301	38°50'02"N	076°23'50"W	295, 300, 302, 304
13	309	38°50'21"N	076°23'06"W	309, 314, 315

G.2. *Leadline Comparison*

The leadline comparison for this survey was conducted alongside at the Severn River Naval Complex YP Basin in Annapolis, Maryland. 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. DATA FILED WITH TO ORIGINAL FIELD RECORDS

The Electronic Sounder Depth Tester built by Electronic Devices Incorporated (EDI) was used as instrument comparison for the DSF6000N echo sounder. This instrument check was performed by electronic input of the proper 102 kHz frequency and associated depth from the EDI tester to the echo sounder, then comparing the analog output or graphic image and digital depth to the EDI test depth. This procedure was not used to replace the direct comparison, but to ensure that the instrument was working properly.

G.3. *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.

A draft mark measured from the transducer was painted on the vessel's hull when the high frequency transducer was replaced. The measurement for the draft of the new transducer was performed using the same method as for the original transducer mentioned above. The draft remained the same.

G.4. *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.

G.5. *Heave, Roll, and Pitch Correctors*

Heave, roll, and pitch correctors were acquired and applied to sounding data using a TSS Motion Sensor, Type DMS-05, serial number 002040. The TSS sensor appeared to have malfunctioned starting on DN 275 through DN 315. Browsing data within HPS showed that heave, pitch, and roll data had been zeroed, indicating that these correctors were not recorded nor applied.

G.6. *Tide Correctors*

The tidal datum for this project is Mean Lower Low Water. The operating tide station at Annapolis, MD (857-5512) served as control for datum determination.

The project area for this survey encompasses tidal zone CB65 as specified in the project instructions for OPR-E346-AHP. The primary reference station was located at Annapolis, MD (station 857-5512.) Zone correctors had a time delay of –00:42 minutes and a range ratio of X1.08. Predicted tides provided by the Ocean and Lake Levels Division, Products and Services Branch (N/OES23) were used to correct all soundings during data collection. Predicted tide

* FILED WITH TO ORIGINAL FIELD RECORDS

corrections were applied during post processing using HPS. Smooth tides were requested from N/OES234 in a letter dated and mailed December 10, 1997. APPROVED TIDES AND ZONES WERE APPLIED DURING OFFICE PROCESSING.

The *BAY HYDROGRAPHER* employed no unusual or unique methods or instruments to correct echo soundings not already mentioned in this section.

All sounding correctors were applied to both the narrow (102 kHz) and wide (24 kHz) DSF-6000N beams. Tidal 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, eliminating 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 acquisition. 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:*

Unit A	Unit B
Starlink GPS Receiver	Ashtech GPS Sensor
DNAV-212	s/n 700417B1129
Ashtech OEM Sensor II	Firmware Version 1E89D-P
Starlink MRB-2A	Magnavox MX50R
s/n 835	DGPS Receiver s/n 315

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.* FILED WITH THE ORIGINAL FIELD RECORDS

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 3.4 for a 1:10,000 scale survey was never exceeded.

I.7 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.7 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. CROSS LINES

There were 221 nautical miles of main-scheme side scan sonar accomplished during the first 100% coverage. This total mileage was used to compute the approximate amount of lines and line spacing that would need to be run in order to accomplish the 8% to 10% of crosslines needed, as specified in the Hydrographic Manual. Twenty-six miles of crosslines, equal to 11.8% of the main-scheme mileage, were actually accomplished during this survey.

An excessed plot of main scheme soundings, superimposed with cross lines, was used to conduct main scheme-to-cross line comparisons. Soundings at intersections were compared to all other soundings within a 5 mm (50 meters at survey scale) radius. Based on this procedure, agreement between main scheme and cross line soundings was found to be excellent. The majority of compared soundings fell within 0.0 feet to 1.0 feet of each other, with only an

* FILED WITH ORIGINAL FIELD RECORDS

occasional difference of 2.0 feet noted along areas where the bottom profile is sloping or irregular.

L. JUNCTIONS See also the Evaluation Report

This sheet junctions with H-10691 at the northern survey limit of H-10752. Survey H-10691 was a 1:20,000 scale survey conducted in 1996 using survey vessel *BAY HYDROGRAPHER*. Junction soundings agree within 0.0 ft to 2.0 ft except where the bottom profile is sloping or irregular. Sounding differences between H-10752 and H-10691 may decrease upon the re-application of smooth tides to sounding data from H-10752. It should also be noted that soundings from H-10691 were not corrected with predicted tides as was H-10752. Survey H-10691 was corrected with unverified real tides downloaded from the OLLD web page.

M. COMPARISON WITH PRIOR SURVEYS See also the Evaluation Report.

The Atlantic Hydrographic Branch as part of the office verification process will perform a comparison with prior surveys.

N. ITEM INVESTIGATION REPORTS See also the Evaluation Report

The AWOIS REPORTS listed in this section replace sections N.1 through N.7 as listed in Figure 6.3 of the Field Procedures Manual. Five items were investigated as part of this survey. Three of the items originate from prior survey FE305SS/87 from OPR-E609-RU/HE-87.

AWOIS NO:7431

Item Description: UNKNOWN - Wreck

Source: FE305SS/87 – OPR-E609-RU/HE-87

AWOIS Position: Lat - 38°49'42.71"N **Lon** – 076°23'40.69"W

Required Investigation: Not Listed

Charts Affected: 12263, 12270

INVESTIGATION

Date(s)/DN(s): 10/31/97 (DN:304)

Position Numbers: 18627-18659 **Launch Number:** 1107

Investigation Used: S2/Echo Sounder **Water Visibility:** <2.0m

Position Determined By: DGPS

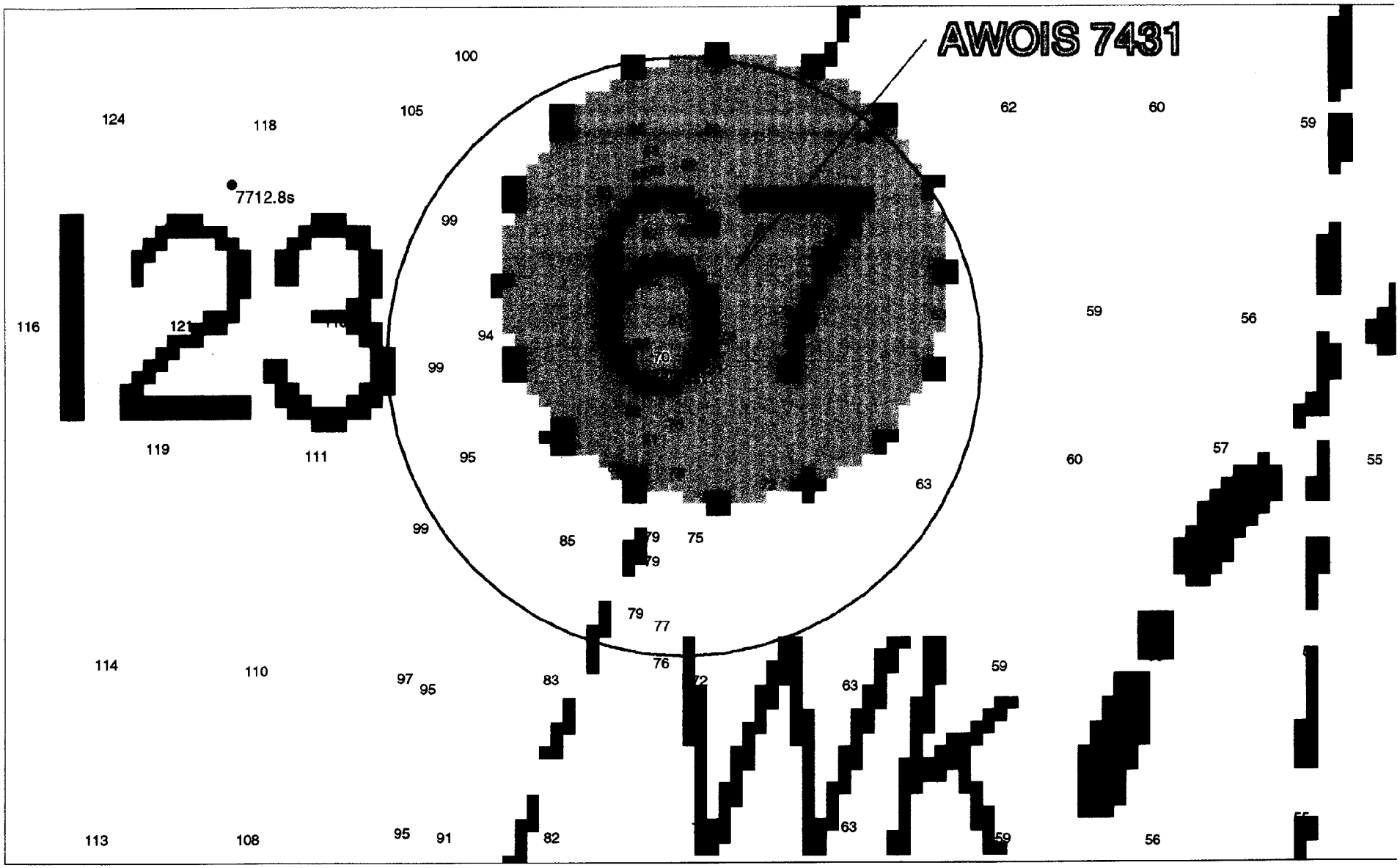
Investigation Summary: The investigation included the 200% side scan sonar coverage of the entire survey area as well as echo sounder development using 10-meter line spacing over the item area. This item is associated with contact 10762.2S. The echo sounder graphic record indicates a least depth of 21.4 meters (70 feet) corrected for predicted tides at fix number 18649.5. The object rises 2.7 meters off the bottom on the upward slope and 3.3 meters on the downward slope. Fix 18649.5 is located 270° and 7.5 meters from the AWOIS target center.

CHARTING RECOMMENDATION

The hydrographer recommends that the charted wreck be retained with the position and depth revision found by this survey CONCUR IN PART. DELETE 67' WK FROM THE CHART. CHART A 70' WK.

Recommended Position: **Lat** – 38°49'42.72"N **Lon** – 076°23'41.0"W

Recommended Least Depth: 21.4 meters(70 feet) MLLW ~~Predicted~~ APPROVED Tides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83
76
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59
56

AWOIS NO:7433

Item Description: OBSTRUCTION - Snag

Source: FE305SS/87—OPR-E609-RU/HE-87

AWOIS Position: Lat - 38°51'21.83"N **Lon** – 076°25'38.92"W

Required Investigation: N/A

Charts Affected: 12263, 12270

INVESTIGATION

Date(s)/DN(s): 10/29/97 (DN:302)

Position Numbers: 18344-18465 **Launch Number:** 1107

Investigation Used: S2/Echo Sounder **Water Visibility:** <2m

Position Determined By: DGPS

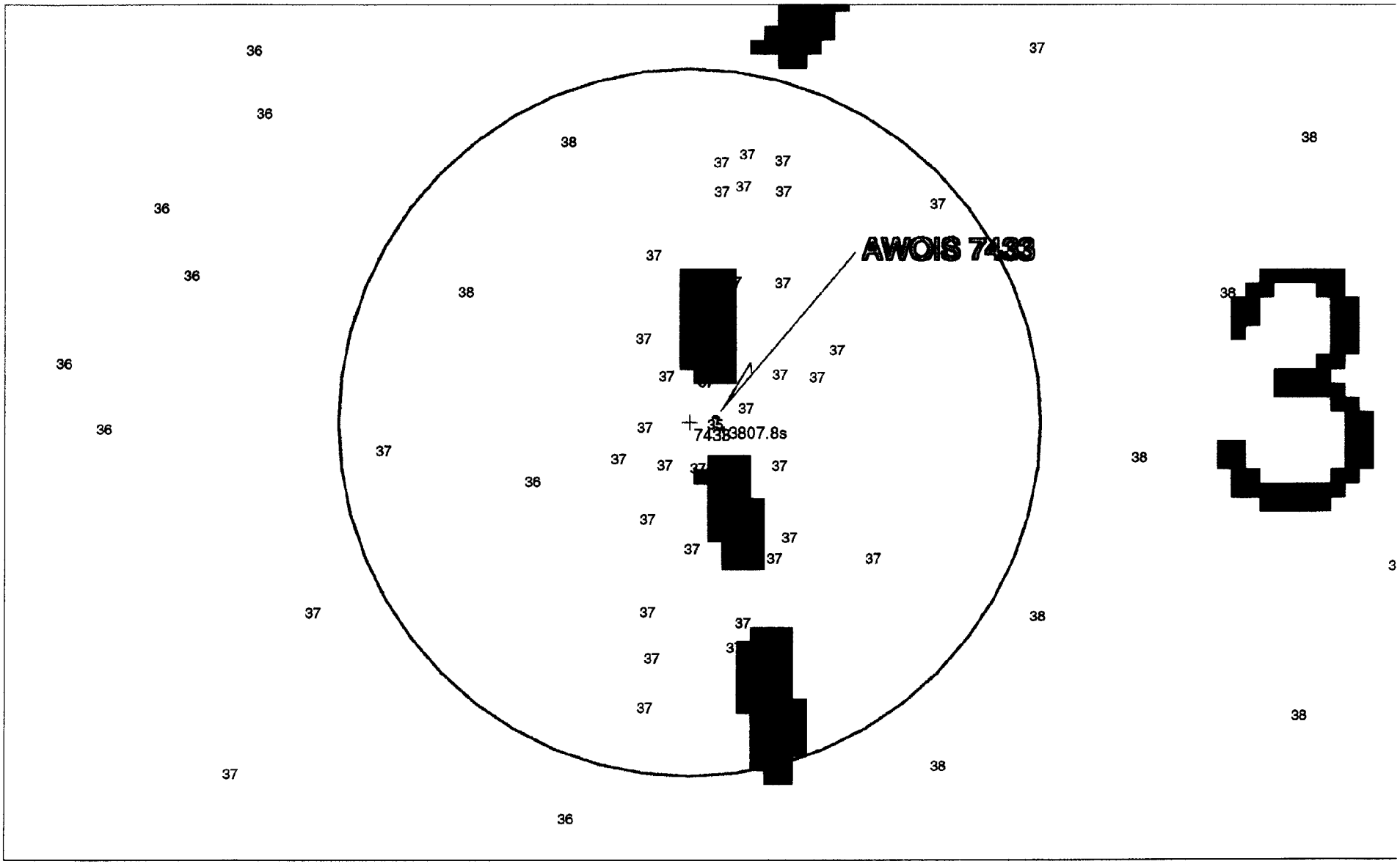
Investigation Summary: The investigation included the 200% side scan sonar coverage of the entire survey area as well as echo sounder development using 10-meter line spacing over the item area. This item is associated with contact 13087.8S. The echo sounder graphic record indicates a ~~predicted~~ tide corrected depth of 10.8 meters (35 feet) at Fix 18384.7.* The feature rises off the bottom 0.6 meters. Diver identification of the obstruction was not performed. The AWOIS target center is located 273° and 7.3 meters from the least depth position.

*LAT: 38-51-21.826N, LON: 76-25-38.619W

CHARTING RECOMMENDATION

The hydrographer recommends the snag be deleted from the charted because of the insignificant nature of this feature. CONCUR IN PART. ITEM IS NOT CHARTED

NO CHANGE IN CHARTING


AWOIS 7438
7438
3807.8s
3

AWOIS NO:7441

Item Description: OBSTRUCTION

Source: FE05SS/87—OPR-E609-RU/HE-87

AWOIS Position: **Lat** - 38°49'41.26"N **Lon** – 076°24'30.57"W

Required Investigation: SD, S2, DI **Radius:** 300m

Charts Affected: 12263, 12270

INVESTIGATION

Date(s)/DN(s): 10/29/97 (DN:302), 11/5/97 (DN:309)

Position Numbers: 18579-18626, 18871-18955 **Launch Number:** 1107

Investigation Used: S2/Echo Sounder **Water Visibility:** <2m

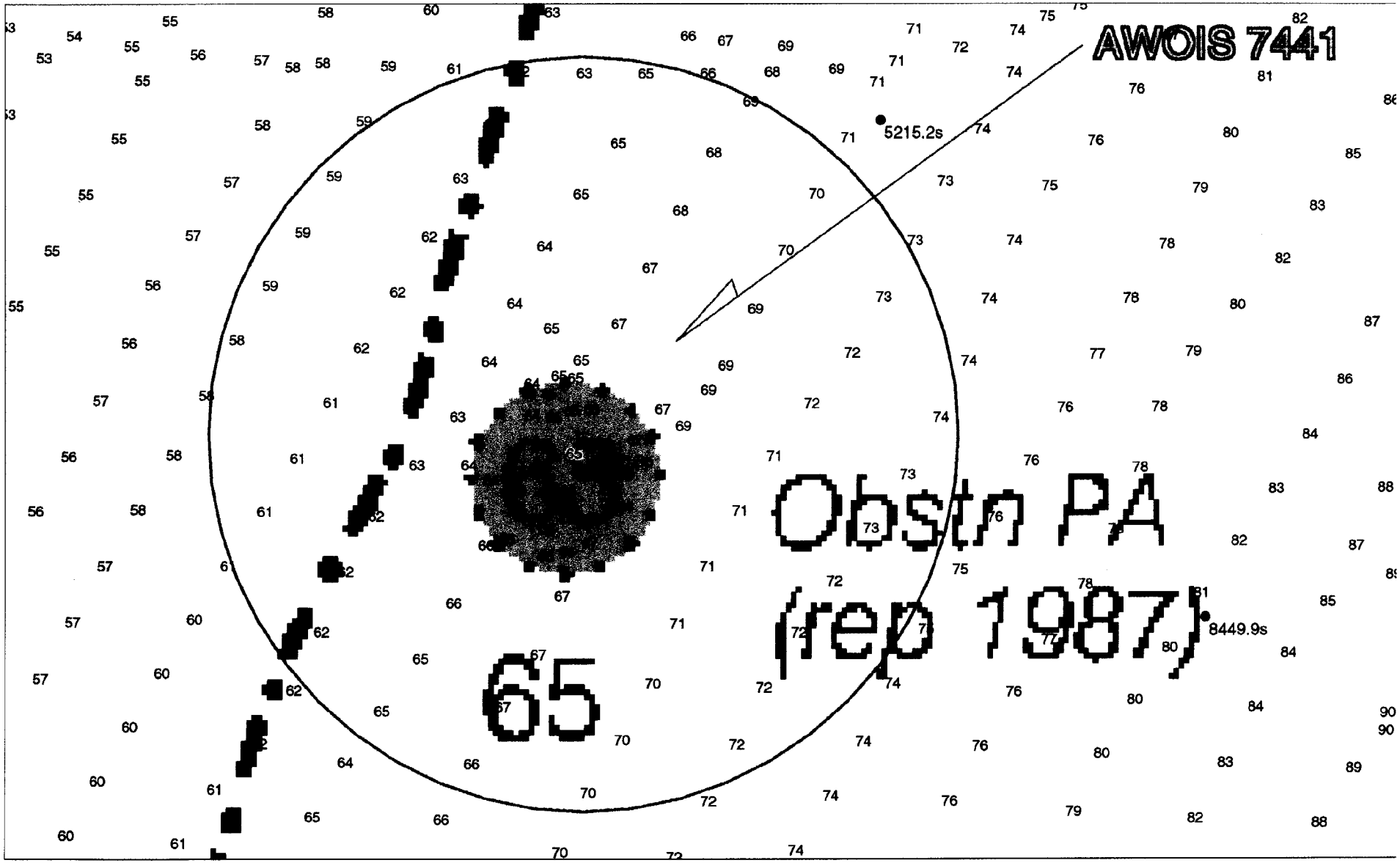
Position Determined By: DGPS

Investigation Summary: The investigation included the 200% side scan sonar coverage of the entire survey area as well as echo sounder development of the item (contact 5208.3) area using 10-meter line spacing over the item area. The echo sounder graphic records (Fix 18939) indicate a least depth of 20.0 meters (65 feet) corrected for MLLW Predicted Tides. The least depth is located 52.6° and 4.5 meters from the computed position of contact 5208.3S. The least depth is located 207° and 16.6 meters from the AWOIS target center. The height of this unidentified object rises 0.4 meters off the bottom and is deemed insignificant.

CHARTING RECOMMENDATION

The hydrographer recommends that the obstruction (PA) be deleted from the chart. Concur

DELETE (63) Obstn PA
(REP 1987)


AWOIS 7441
5215.2s
Obstn PA
(rep 1987)
8449.9s
65

AWOIS NO:9844

Item Description: OBSTRUCTION – Fish Trap , SUBM PILING PA

Source: CL1002/78--USPS

AWOIS Position: **Lat** – 38°48'36.41"N **Lon** – 076°28'31.83"W

Required Investigation: SD, S2, DI -- 500m radius

Charts Affected: 12263, 12270

INVESTIGATION

Date(s)/DN(s): 10/27/97 (DN:300), 11/05/97 (DN:309)

Position Numbers: 17854-17956, 19153-19216 **Launch Number:** 1107

Investigation Used: S2/Echo Sounder **Water Visibility:** <2m

Position Determined By: DGPS

Investigation Summary: The investigation included the 200% side scan sonar coverage of the entire survey area as well as echo sounder development using 10-meter line spacing over the item area. The survey data indicates contacts in two areas within the AWOIS search radius. Contacts 845.9S, 898.7S, and 15263.3S are associated with data collected on DN 300, positions 17854-17956. The echo sounder graphic record indicates a corrected least depth of 9.0 meters (29 feet) located at position 17909.8. Least depth at position 17909.8 is located 058° and 4.5 meters from contact 898.7S. Position 17909.8 is located 283° and 98 meters from the AWOIS target center. Contacts 1093.8P, 1095.2S, 15322.5P are associated with data collected on DN 309, positions 19153-19216. The survey data indicates a corrected least depth of 7.9 meters (26 feet) at position 19161, 171° and 5.8 meters from contact 1095.2S. Associated with contact 15322.5P is an 8.7 meter (28 feet) sounding located at position 19246. This sounding is 210° and 4.9 meters from contact 15322.5P. These contacts are considered to be insignificant for charting purposes by comparison of least depths with the surrounding soundings. The least depths acquired are in the range of 26 - 29 feet, which compares with the soundings collected during item development and main scheme hydrography. Side scan sonar records portray these piles randomly scattered on the bottom.

CHARTING RECOMMENDATION

The hydrographer recommends that the submerged ~~pile~~ PILING PA be deleted from the chart. CONCUR

SEE ALSO SECTION T.1. OF THIS REPORT AND SECTION N.1. OF THE EVALUATION REPORT

AWOIS NO: 9846

Item Description: OBSTRUCTION – FISH HAVEN

Source: CL1782/65; CL1235/66; LNM40/66; CL39/69; CL285/83; LNM18/83; NM20/83; CL285/83

AWOIS Position: Lat - 38°50'24.41"N **Lon** – 076°27'41.84"W

Required Investigation: SD, S2, DI -- 500m radius **Charts Affected:** 12263, 12270

INVESTIGATION

Date(s)/DN(s): 10/27/97 (DN:300), 11/10/97 (DN:314), 11/15/97 (DN:315)

Position Numbers: 17645-17853, 21474-21664 **Launch Number:** 1107

Investigation Used: S2/Echo Sounder **Water Visibility:** <2m

Position Determined By: DGPS

Investigation Summary: The investigation included the 200% side scan sonar coverage of the entire survey area as well as echo sounder development using 10-meter line spacing over the item area. This item is associated with contact 402.4S. The echo sounder development was conducted to determine the fish haven limits and least depths. The echo sounder graphic records indicate corrected least depths of 13 & 12 feet located at two geographic positions (numbers 21602 and 21657). Sounding data indicates that the fish haven's orientation and size is not charted correctly and needs revision. The fish haven's axis was determined to be north/south. The fish haven is marked by two white/orange buoys placed near the northern and southern limits and is labeled as "Fish Reef" on the buoy (positions 21881 and 21882).

CHARTING RECOMMENDATION

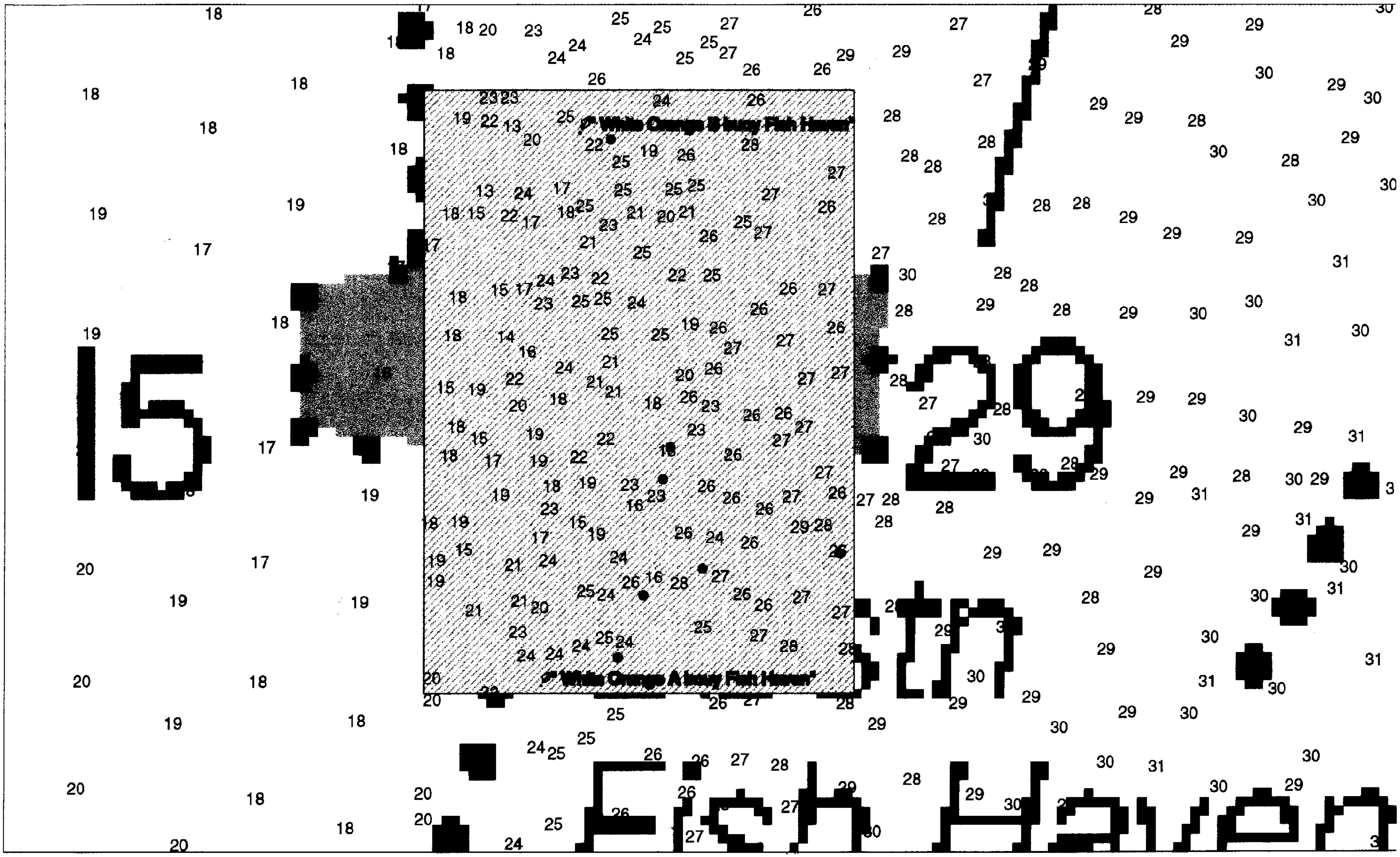
The hydrographer recommends that the charted fish haven remain on the chart with least depth and haven limit revisions. DO NOT CONCUR. SEE SECTION N. 2. OF THE EVALUATION REPORT.

Recommended Fish Haven Limit Positions: Starting in the NE corner proceeding clockwise:

Lat – 38°50'29.284"N **Lon** – 076°27'35.990"W
Lat – 38°50'20.519"N **Lon** – 076°27'35.990"W
Lat – 38°50'20.519"N **Lon** – 076°27'44.071"W
Lat – 38°50'29.284"N **Lon** – 076°27'44.071"W

Recommended Least Depth: ~~13~~ 12 ft MLLW ~~Predicted~~ APPROVED TIDES Tides

Least Depth Position: 38°50'27.81"N 076°27'42.98"W (Fix 21602) – 12 FT
38°50'28.76"N 076°27'42.43"W (Fix 21657) – 13 FT


White Orange B buoy Fish Haven
White Orange A buoy Fish Haven
Fish Haven

O. COMPARISON WITH THE CHART SEE ALSO THE EVALUATION REPORT.

O.1 Two charts are affected by this survey:

Chart 12263
"Chesapeake Bay, Cove Point to Sandy Point"
47th Ed. April 5, 1997
Scale: 1:80,000

Chart 12270
"Chesapeake Bay, Eastern Bay and South River"
28th Ed. July 19, 1997
Scale: 1:40,000

O.2 One danger to navigation letter was sent to the U.S. Coast Guard Fifth District concerning two uncharted obstructions and one uncharted wreck. These features are discussed further in Sections O.3.2, O.3.3, and O.3.4. THE DANGER TO NAVIGATION REPORT IS APPENDED TO THIS REPORT.

O.3.1 The correlation between the majority of the 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. Depths typically agreed within one to two feet, except where the bottom profile is sloping or irregular. Soundings which are not in agreement are discussed in this section.

O.3.2 Contact 12888.6S correlates with contact 3204.3S, which was investigated during development on DN 302 (positions 18510-18578). Development lines were conducted using 10-meter line spacing. The obstruction was relocated and a least depth acquired with the DSF-6000N echo sounder. Graphic records indicate a least depth of 9 2/3 meters (30 feet) corrected to MLLW using ~~predicted~~ APPROVED tides at position 18559. The height is 2.1 meters off the bottom. The hydrographer recommends charting an obstruction at the geographic position of 38°49'24.00"N, 076°26'22.70"W. CONCUR. SEE ALSO THE EVALUATION REPORT.

O.3.3 Contact 6500.9S was investigated during development on DN 304 (position 18735-18763). Development lines were conducted using 10-meter line spacing. The obstruction was relocated and a least depth taken with the DSF-6000N echo sounder. The sonargram indicates that the obstruction appears to be a wreck. A least depth of ~~12.2~~ 11 4/4 meters (~~40~~ 37 feet) corrected to MLLW using ~~predicted~~ APPROVED tides was acquired at position 18757. The echo sounder graphic record indicates the wreck rises 3.2 meters off the bottom. The hydrographer recommends charting a dangerous wreck at the geographic position of 38°48'33.71"N, 076°22'44.88"W. CONCUR. SEE ALSO THE EVALUATION REPORT

O.3.4 Contact 15566.6S was investigated during development on DN 315 (Fix 21674-21753). Development lines were conducted with 10-meter line spacing. The obstruction was relocated and a least depth acquired with the DSF-6000N echo sounder. Graphic records indicate a least depth of 5 4/8 meters (18 feet) corrected to MLLW by ~~predicted~~ APPROVED tides at position 21738. The obstruction rises 2.5 meters off the bottom. During the investigation the survey crew was able

to snag the obstruction with a small danforth anchor. The obstruction appeared to be well secured in the sediment as the anchor fluke began to separate from the anchor. Although this obstruction is located outside the survey limits, further dive investigation is recommended next field season. The hydrographer recommends charting an obstruction with a least depth of 18 feet at the geographic position of 38°49'15.24"N 076°28'18.08"W. CONCUR. SEE ALSO THE EVALUATION REPORT.

O.3.5 Chart 12270 shows a 55-foot sounding at 38°51'50.28"N, 076°23'08.52"W. Survey depths in the immediate area range from 43 feet to 46 feet corrected to MLLW by ~~predicted~~ tides. The hydrographer recommends revising the charted soundings and contours in this area with depths from this survey. CONCUR

O.3.6 Chart 12270 shows a 50-foot sounding at 38°51'19.49"N, 076°23'28.72"W. Survey depths range from 44 feet to 48 feet (corrected to MLLW by ~~predicted~~ tides) within a 120-meter radius of the 50-foot sounding. The hydrographer recommends revising the chart with depths from this survey. CONCUR

O.3.7 Chart 12270 shows a 29-foot sounding at 38°51'35.05"N, 076°26'32.37"W. Survey soundings range from 32 feet to 33 feet (corrected to MLLW by ~~predicted~~ tides) within a 120-meter radius of the charted 29-foot sounding. The hydrographer recommends revising the chart with depths from this survey. CONCUR.

O.3.8 Chart 12270 shows a 111-foot sounding at 38°48'24.75"N, 076°24'39.55"W. Survey soundings range from 101 feet to 105 feet (corrected to MLLW by ~~predicted~~ tides) within a 120-meter radius of the charted 111-foot sounding. The hydrographer recommends revising the chart with depths from this survey. CONCUR

O.3.9 Chart 12270 shows a 20-foot sounding at 38°48'40.05"N, 076°23'51.35"W. Survey soundings within a 100-meter radius range from 25 feet to 28 feet. The hydrographer recommends revising the chart with depths from this survey. DO NOT CONCUR. NO 20FT SOUNDING AT POSITION

O.3.10 Chart 12270 shows a 20-foot sounding at 38°48'47.88"N, 076°23'43.44"W. Survey soundings range from 26 feet to 31 feet within a 60-meter radius of the charted 20-foot sounding. The hydrographer recommends revising the chart with depths from this survey. CONCUR

O.3.11 Chart 12270 shows an 86-foot sounding at 38°48'53.0"N, 076°22'09.89"W. Survey soundings within a 40-meter radius of the charted sounding range from 70 feet to 75 feet. The hydrographer recommends revising the chart with depths from this survey. CONCUR

O.3.12 Chart 12270 shows a 75-foot sounding at 38°49'09.80"N, 076°21'32.59"W. Survey soundings range from 68 feet to 70 feet within a 100-meter radius of the charted 75-foot sounding. The hydrographer recommends revising the chart with depths from this survey. CONCUR

O.3.13 Two uncharted privately maintained navigational aids were identified and positioned during development of the fish haven at 38°50'25.53"N, 076°27'40.84"W. The buoys are white/orange in color and show "FISH REEF" painted on the side. Buoy "A," located at 38°50'20.718"N, 076°27'41.588"W (position 21881) is located near the southern edge of the

fish haven. Buoy "B," located at 38°50'28.667"N, 076°27'41.164"W (position 21882) is located near the northern edge of the fish haven. The hydrographer recommends charting these buoys CONCUR.

O.3.14 Chart 12270 shows a note "Shoaling to 5 ft rep 1977" located south-southeast of Kent Point at 38°49'22.87"N, 076°21'32.85"W. Sounding lines in this area were conducted on DN 300 (positions 17957-18210) at 50-meter line spacing. The survey data does not indicate any 5-foot depths in the immediate area where the note is shown. The bottom slope in this area is steep, rising from 30 feet to less than 10 feet in a 25 meters to 50 meters span. Survey data indicates that the 12-foot contour is farther offshore than shown on Chart 12270. The 12-foot contour appears to be migrating in a south-southeasterly direction. The hydrographer recommends revising the chart with depths from this survey and removing the "Shoaling to 5 ft rep 1977" notation. SEE NEXT PAGE FOR CHARTLET CONCUR

O.3.15 It is recommended that soundings from survey H-10752 should supersede the prior survey and charted soundings for compilation of the next chart edition. CONCUR

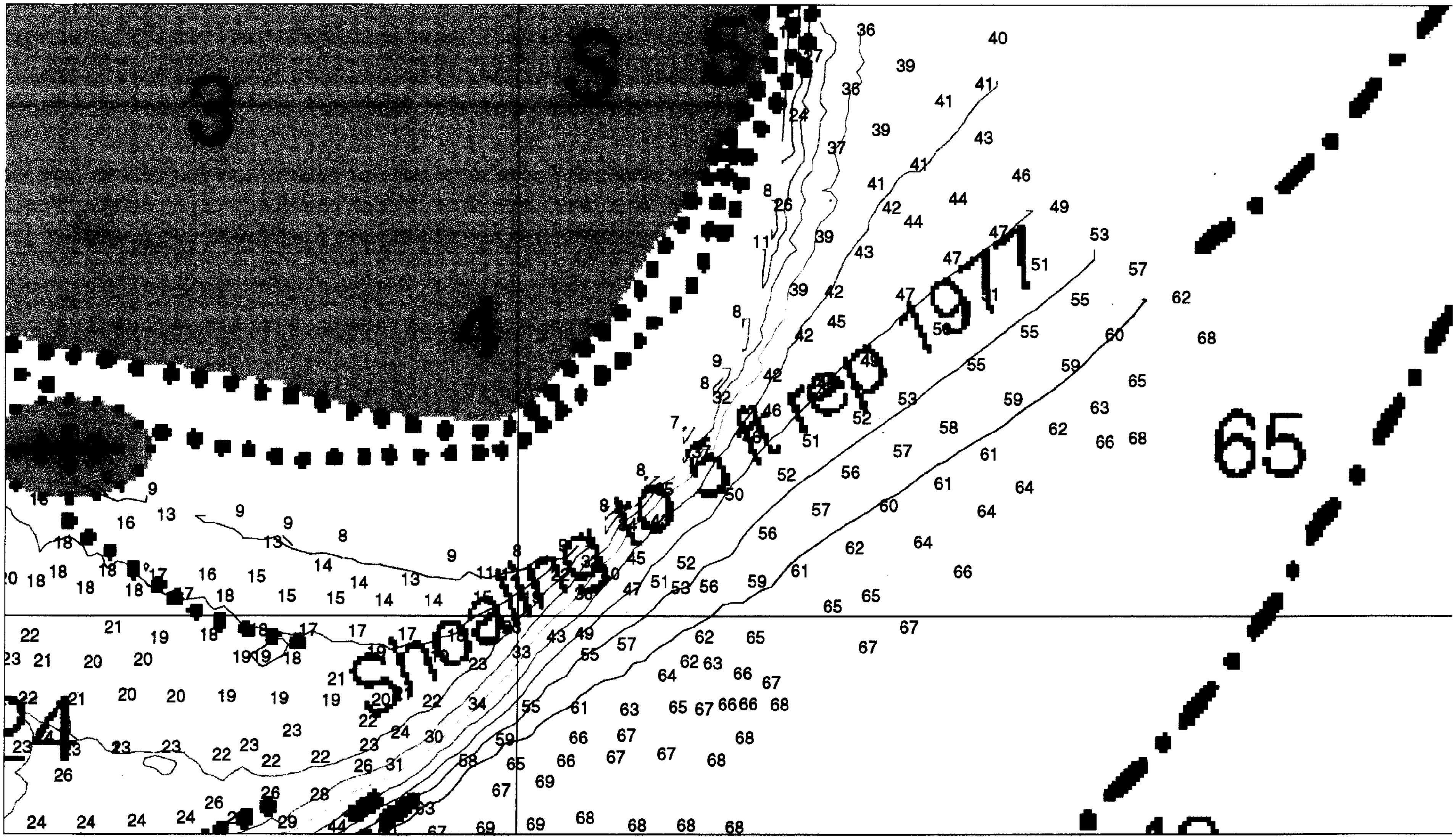
P. ADEQUACY OF SURVEY SEE ALSO THE EVALUATION REPORT

This survey is complete and fully adequate to supersede prior survey data in common areas.

Q. AIDS TO NAVIGATION

The navigable area for survey H-10752 contained 3 floating aids to navigation. All were positioned by maneuvering the *BAY HYDROGRAPHER* as close as practical and recording a detached position. These detached positions were then plotted on a raster image of the largest scale chart of the area using the MapInfo software. Plotted positions of aids to navigation were then checked for accuracy against their charted positions. The three floating aids to navigation were found to be within 50 meters of their charted position and found to be serving their intended purpose. Light characteristics were observed by field personnel and found to be charted correctly. CONCUR.

ATON	Light List Number	Latitude N	Longitude W
G "1" Fl G 4s Bell (lighted) Position 17642	26000	38°49'04.07"	076°22'06.4"
G C "85A" Position 17643	7747	38°49'56.19"	076°27'42.9"
G "1" Fl G 4s (lighted) Position 17644	19460	38°51'49.96"	076°26'58.8"



0.3.14

Q.2. No bridges were located with the survey limits of H-10752. No overhead cables, submarine cables, ferry routes, overhead pipelines, nor pipeline crossings exist within the survey limits.

R. STATISTICS

R.1	**a.**	Number of Positions. 21882
	b.	Lineal Nautical Miles of Sounding Lines:
		Nautical Miles of Survey With the Use of Side scan sonar Sonar 435.75
		Nautical Miles of Survey Without the Use of Side scan sonar Sonar . . 79.29
R.2	**a.**	Square Nautical Miles of Hydrography per 100% of Coverage 15.96
	b.	Days of Production 44
	c.	Detached Positions 5
	d.	Bottom Samples 54
	e.	Tide Stations 1
	f.	Velocity Casts. 13

S. MISCELLANEOUS *See also the Evaluation Report*

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 Fifty-four bottom samples were obtained during this survey. As directed by the Project Instructions, all bottom samples were inspected and recorded, but none were submitted to the Smithsonian Institution.

T. RECOMMENDATIONS *See also Section N. of the Evaluation Report.*

T.1 Additional field work is required for AWOIS 9844 to clarify positions, least depths, and identify the submerged piles. *Concur*

T.2 Further investigation of an obstruction (18 feet) at 38°49'15.24"N, 076°28'18.08"W (position 21738) is recommended. The hydrographer suggests a dive investigation next field season for positive identification and least depth determination utilizing the Diver Depth Gauge Mod III. *Concur*

T.3 Further investigation of an obstruction (30 feet) at 38°49'24.0"N, 076°26'22.7"W (position 18559) is recommended. The hydrographer suggests a dive investigation for positive identification and least depth determination utilizing the Diver Depth Gauge Mod III. *Concur*

T.4 Further investigation of a dangerous wreck at 38°48'33.71"N, 076°22'44.88"W (position 18757) is recommended. The hydrographer suggests a dive investigation for positive identification and least depth determination utilizing the Diver Depth Gauge Mod III. Concur

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 Shepard Smith, NOAA
Officer-in-Charge,
NOAA Survey Vessel *BAY HYDROGRAPHER*

Castle Eugene Parker
Survey Technician
NOAA Survey Vessel *BAY HYDROGRAPHER*

APPROVAL SHEET
Basic Hydrographic Survey
OPR-E346-AHP
AHP-10-4-97
H-10752
1997

This basic hydrographic survey was completed in accordance with the Project Instructions for OPR-E346-AHP, the Hydrographic Manual, the Hydrographic Survey Guidelines, and the Field Procedures Manual. All reports, records, and survey sheets were reviewed by Mr. Brian A. Link, Assistant Chief, AHP. Project reports were also reviewed by the Chief, AHP. The chief of party did not directly supervise any part of this survey.

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

LT James A. Illg, NOAA
Chief, Atlantic Hydrographic Party

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE, Office of Coast Survey
Atlantic Hydrographic Party
439 West York Street
Norfolk, VA 23510-1114

December 10, 1997

Commander (oan)
U.S. Coast Guard District Five
Federal Building
431 Crawford Street
Portsmouth, VA 23704-5004

Dear Sir:

While conducting a hydrographic survey of Upper Chesapeake Bay, Maryland, between Franklin Point and Bloody Point (registry H-10752, project OPR-E346-AHP), two uncharted obstructions and one uncharted wreck were found. I recommend this information be included in the Local Notice to Mariners. The positions are based on NAD 83 datum and the depths have been reduced to Mean Lower Low Water (MLLW) using predicted tides. These features were located using Differential GPS.

This information affects the following charts:

CHART NO.	EDITION	DATE
12663	47th	Apr. 5/97
12270	28th	Jul. 19/97

DESCRIPTION	NAD 83 POSITION	DEPTH (ft)
Obstruction	38°49'15.24"N 076°28'18.08"W	18
Obstruction	38°49'24.00"N 076°26'22.70"W	30
Wreck	38°48'33.71"N 076°22'44.88"W	40

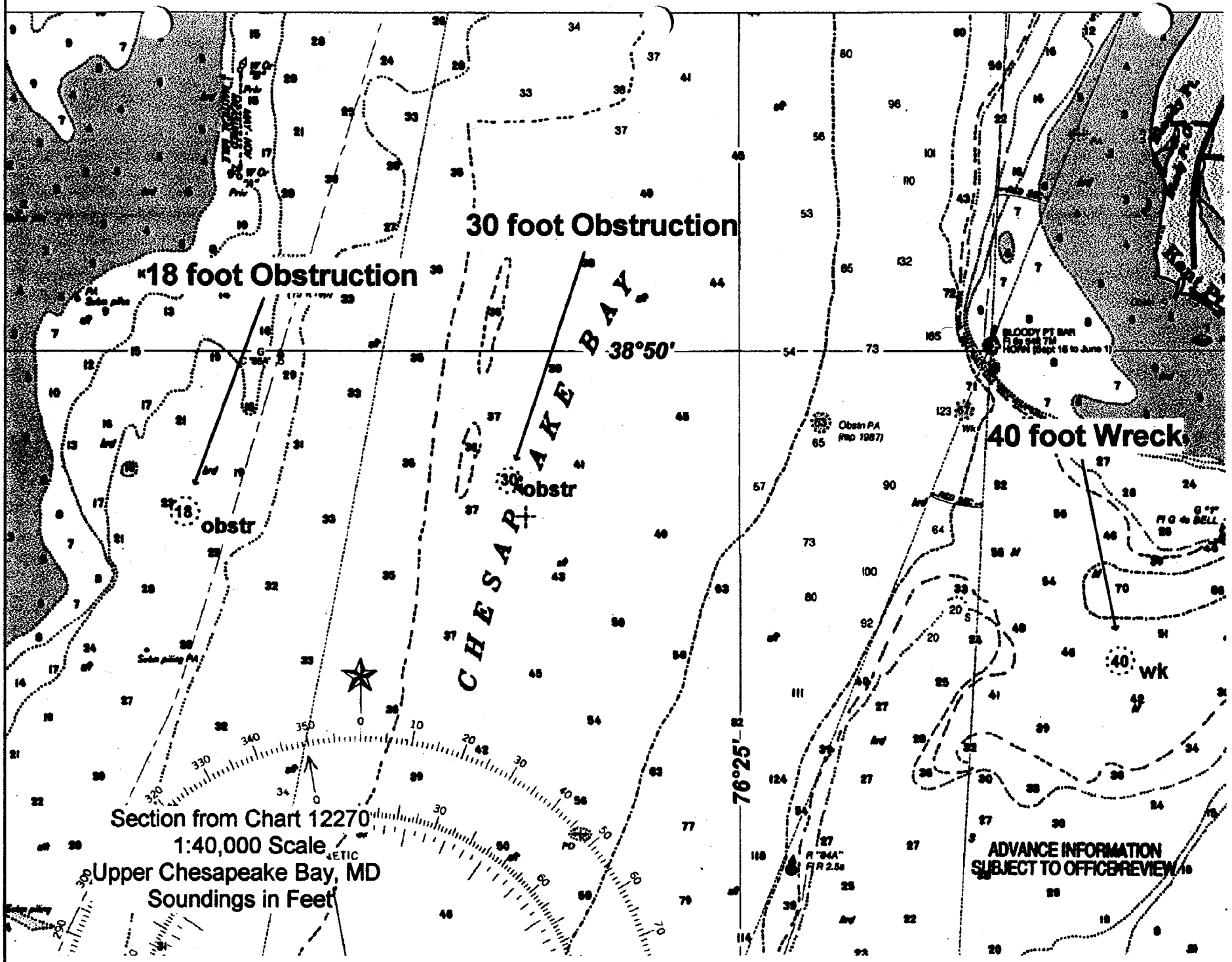
This is advance information which is subject to office review. A chart section, showing the location of these dangers, is attached. Questions concerning this report should be directed to me at (410) 437-9811.

Sincerely,

LT James A. Illg, NOAA
Chief, Atlantic Hydrographic Party

Attachment

cc: N/CS26
N/CS33
NIMA/NMD/STD44


18 foot Obstruction
30 foot Obstruction
40 foot Wreck
38°50'
76°25'
CHESAPEAKE BAY
18 obstr
30 obstr
40 wk
Section from Chart 12270
1:40,000 Scale
Upper Chesapeake Bay, MD
Soundings in Feet
ADVANCE INFORMATION
SUBJECT TO OFFICE REVIEW

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 beacocns used during this survey are as follows:

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

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: April 24, 1998

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-E346-AHP
HYDROGRAPHIC SHEET: H-10752

LOCALITY: Upper Chesapeake Bay, Franklin Point to Bloody Point

TIME PERIOD: May 27 - November 11, 1997

TIDE STATION USED: 857-2467 Kent Point Marina, Chesapeake Bay, MD
Lat. 38° 50.2'N Lon. 76° 22.4'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.400 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: CB65.
Refer to attachments for zoning information.

Note: Provided time series data are tabulated in metric units (Meters), relative to MLLW and on Greenwich Mean Time.

CHIEF, OPERATIONAL ANALYSIS BRANCH

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10752

Name on Survey	A ON CHART NO. 12270	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND McNALLY ATLAS	H U.S. LIGHT LIST	K	
BLOODY POINT (title)										1
CHESAPEAKE BAY	X		X							2
FRANKLIN POINT (title)										3
MARYLAND (title)										4
										5
										6
										7
										8
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										24
										25

Approved:

Dennis J. Rane[illegible]

Chief Geographer JAN 21 1998

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 61-29
(12-71)

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

LETTER TRANSMITTING DATA

REFERENCE NO.

N/CS33-94-98

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

☐ ORDINARY MAIL ☐ AIR MAIL

☐ REGISTERED MAIL ☒ EXPRESS

☐ GBL *(Give number)* _____

TO:

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

DATE FORWARDED

October 09, 1998

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.

H10752

Maryland, Chesapeake Bay, Franklin Pt to Bloody Pt

1 Box Containing:

1 **Original Descriptive Report for H10752**
1 Envelope with one (1) HISTORY OF CARTOGRAPHIC WORK (NOAA form 76-71) for H10769 for chart 12270

1 Tube Containing:

1 **Original Smooth Sheet for H10752**
1 Paper Composite plot of survey H10752 for chart 12270
1 Mylar H-Drawing of H10752 for chart 12270

FROM: *(Signature)* R. H. Whitfield

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

NOAA FORM 61-29 SUPERSEDES FORM C&GS 413 WHICH MAY BE USED.

☆U.S.GPO:1983-0-664-006/1192

10/08/98

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H10752

NUMBER OF CONTROL STATIONS	2
NUMBER OF POSITIONS	21882
NUMBER OF SOUNDINGS	21882

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	34	01/12/98
VERIFICATION OF FIELD DATA	49	07/29/98
EVALUATION AND ANALYSIS	4	
FINAL INSPECTION	20	09/25/98
COMPILATION	47	10/05/98
TOTAL TIME	158	

ATLANTIC HYDROGRAPHIC BRANCH APPROVAL 10/05/98

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H10752 (1997)

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.

A. AUTOMATED DATA ACQUISITION AND PROCESSING

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

Hydrographic Processing System
NADCON, version 2.1
SiteWorks, version 2.01
MicroStation 95, version 5.0
I/RAS B, version 5.01

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

H. CONTROL STATIONS

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 0.417 seconds (12.864 meters or 1.29 mm at the scale of the survey) north in latitude, and 1.164 seconds (28.070 meters or 2.81 mm at the scale of the survey) east in longitude.

L. JUNCTIONS

H10691 (1996) to the north

A standard junction could not be made with survey H10691. The smooth sheet for the junctional survey is archived at NOS headquarters, Silver Spring, Maryland. In this case the note "ADJOINS" has been shown on the present survey smooth sheet. Any adjustments to the depth curves in the junctional areas will have to be made on the chart during compilation.

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.

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

N. ITEM INVESTIGATIONS

1. Automated Wreck and Obstruction Information System (AWOIS) item #9844 is a charted submerged piling PA in Latitude 38°48'36.41"N, Longitude 76°28'31.83"W. This item was investigated by the hydrographer with a recommendation for further investigation for positive identification and least depth determination of obstructions found in the area. No indication of an obstruction can be found where the submerged piling is charted. An uncharted obstruction with a depth of 23 feet was located in Latitude 38°48'46.363"N, Longitude 76°28'38.736"W. It is recommended that the submerged piling PA be deleted from the chart. It is also recommended that an obstruction with a depth of 23 feet be charted as shown on the present survey.

2. AWOIS item #9846 is a charted Obstruction, Fish Haven in Latitude 38°50'24.41"N, Longitude 76°27'41.84"W. The fish haven was developed by the hydrographer. An obstruction with a depth of 12-ft was located in Latitude 38°50'27.81"N, Longitude 76°27'42.98"W, on the northern edge of the charted fish haven limits. Additional depths of 14 feet were located on obstructions within the limits of the fish haven with an authorized minimum depth of 15-ft reported. It is recommended that the obstruction with a depth of 12-ft be charted as shown on the present survey. It is also recommended that the Marine Chart Division, Source Data Unit determine the authorized minimum depth of the charted fish haven or revise the charted 15-ft reported to reflect the present survey depths.

O. COMPARISON WITH CHARTS 12263 (47th Edition, April 5,1997) 12270 (28th Edition, July 19,1997)

Hydrography

The charted hydrography originates with the prior surveys and requires no further consideration. The hydrographer makes an adequate chart comparison in section O.3.1. of the Descriptive Report. The following should be noted:

O.3.2. At the time of the survey, the hydrographer located an uncharted obstruction in Latitude 38°49'24.00"N, Longitude 76°26'22.70"W. This item was submitted as a danger to navigation. The obstruction is shown on the latest edition of chart 12270 as a dangerous submerged obstruction with a depth of 30-ft (Rep 1997). It is recommended that the

dangerous 30-ft obstruction be retained as charted. It is also recommended that the notation (Rep 1997) be deleted from the chart.

O.3.3. A danger to navigation report was submitted by the hydrographer on an uncharted wreck with a depth of 40 feet in Latitude 38°48'33.71"N, Longitude 76°22'44.88"W. A depth of 40 feet on the wreck was computed with predicted tides and is presently charted on the latest edition of charts 12270 and 12263. During office processing approved tides were applied to the present survey. The wreck is shown on the present survey as a dangerous sunken wreck with a revised depth of 37 feet. It is recommended that the charted dangerous sunken wreck with a depth of 40-ft (Rep 1997) be revised to a dangerous sunken wreck with a depth of 37-ft. It is also recommended that the notation *(Rep 1997)* shown on chart 12270 only, be deleted.

O.3.4. At the time of the survey, the hydrographer located an uncharted obstruction in Latitude 38°49'15.24"N, Longitude 76°28'18.08"W. This item was submitted as a danger to navigation. The obstruction is shown on the latest edition of chart 12270 as a dangerous submerged obstruction with a depth of 18-ft (Rep 1997). It is recommended that the dangerous 18-ft obstruction be retained as charted. It is also recommended that the notation *(Rep 1997)* be deleted from the chart.

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

P. ADEQUACY OF SURVEY

This is an adequate hydrographic/side scan sonar survey. Additional work is recommended and discussed in section T. of the Descriptive Report.

S. 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.

70 SJV 10/14/98

Nation Ocean Service Chart 12270 (29th Ed., May 2/98) was used for compilation of the present survey.

Robert Snow

Robert Snow
Cartographic Technician
Verification of Field Data
Evaluation and Analysis

APPROVAL SHEET
H10744

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 disapproval 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.

Richard H. Whitfield Date: 10/5/98

Richard H. Whitfield
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.

Andrew L. Beaver Date: 10/5/98

Andrew L. Beaver, LCDR, NOAA
Chief, Atlantic Hydrographic Branch

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Final Approval:

Approved: Andrew A. Armstrong Date: Nov 2, 1998

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

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. H-10752

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
12220	10/6/98	[illegible signature]	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
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SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.