

# 10212

Diagram No. 77-4

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

Type of Survey ... Hydrographic.....

Field No. .... HFP-10-1-83.....

Registry No. .... H-10212.....

### LOCALITY

State ..... Maryland.....

General Locality .. Chesapeake Bay.....

Sublocality ..... Craighill Channel Spoil Areas.....

19 83

CHIEF OF PARTY

LCDR R.W. Jones.....

### LIBRARY & ARCHIVES

DATE ..... March 16, 1988.....

# 10212

☆U.S. GOV. PRINTING OFFICE: 1985-566-054

*Area  
Chart*

12282  
12278  
12270  
12263  
12273  
12260

TO SIGN OFF, SEE  
"RECORD OF APPLICATION"

**HYDROGRAPHIC TITLE SHEET**

H-10212

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. HFP-10-1-83  
Chart 12278 & ~~12270~~

State Maryland

General locality Chesapeake Bay

CRAIGHILL CHANNEL SPOIL AREAS

Locality Northern Chesapeake Bay (Bay Bridge to Bodkin Point)

Scale 1:10000 Date of survey 18 May - 16 August 1983

Instructions dated 27 January 1982 Project No. OPR-E456-HSB-82

Vessel NOAA Launch 0519

Chief of party LCDR Ronald W. Jones, NOAA

Surveyed by Hydrographic Field Party #2

Soundings taken by echo sounder, ~~beam, and~~ Echo Sounder

Graphic record scaled by JWH, BAL, JMR, CSW, RFT

Graphic record checked by JWH, BAL

Protracted by ----- Automated plot by Xynetics 1201 PLOTTER (AMC) Field Sheet PDP/8e

Verification by HFPS Office J. B. WELSON

Soundings in fathoms feet at ~~MLW~~ ~~MLLW~~ Feet at ~~MLW~~ MLLW

REMARKS: John W. Humphrey Jr. LT(j.g.) OIC

Brian A. Link, Assistant OIC

James M. Robinett, ST

Charles S. Weisner, ST

Randy F. Trefethen, ST

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

SURF & Awaos check 2/8/89 mcr Ch+ 12278

12-9-96

I N D E X

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\* DATA REMOVED FROM ORIGINAL DESCRIPTIVE REPORT AND FILED WITH FIELD DATA.

DESCRIPTIVE REPORT  
 OPR-E456-HSB-82  
 Chart Evaluation Survey  
 Charts 12270 and 12278

A. PROJECT

This survey was conducted in accordance with Project Instructions for OPR-E456-HSB-82 dated 27 January 1982. Change No. 1 amended the time frame from April to August 1982 to April to August 1983. Change No. 2 amended the project instructions deleting item numbers 1, 5, 18 and assigning item priorities and is dated 2 March 1983. *SEE ALSO SECTION I.B. OF THE EVALUATION REPORT.*

B. AREA SURVEYED

Basic surveys were conducted on two separate discontinued spoil dumpsites and one discontinued dumping ground. These areas were surveyed at 1:10,000 scale running 50 meter line spacing with developments conducted as necessary to define the dumpsite floor characteristics.

The following geographic positions outlined each of the three items when connected in a clockwise manner:

<u>Item #2</u>	<u>Item #3</u>	<u>Item #4</u>
(1) <del>Ø 39°02'15"N</del> λ 76°23'18"W	(1) <del>Ø 39°02'30"</del> λ 76°22'26"21"	(1) <del>Ø 38°59'31.5"23"</del> λ 76°21'42.5"Ø8"
(2) <del>Ø 39°02'12"Ø1'56"</del> λ 76°23'32"37"	(2) <del>Ø 39°02'27.5"15"</del> λ 76°22'37"45"	(2) <del>Ø 38°59'43"48"</del> λ 76°21'58.5"22'Ø2"
(3) <del>Ø 39°02'37"54"</del> λ 76°23'42.5"24'ØØ"	(3) <del>Ø 39°04'14"15"</del> λ 76°23'25"38"	(3) <del>Ø 39°00'44"</del> λ 76°21'34.5"4Ø"
(4) <del>Ø 39°04'07.5"Ø3'16"</del> λ 76°24'10"35"	(4) <del>Ø 39°07'37"33"</del> λ 76°23'26"37"	(4) <del>Ø 39°00'42"Ø3'21"</del> λ 76°21'23"2Ø'36"
(5) <del>Ø 39°06'55"Ø5'58"</del> λ 76°24'10"38"	(5) <del>Ø 39°10'06"Ø9"</del> λ 76°25'18.5"37"	(5) <del>Ø 39°03'03"21"</del> λ 76°20'25"19'33"
(6) <del>Ø 39°08'20"</del> λ 76°24'50"25'Ø6"	(6) <del>Ø 39°10'11"18"</del> λ 76°25'08"Ø6"	<del>Ø 39°00'45"</del> λ 76°20'30"
(7) <del>Ø 39°08'25"3Ø"</del> λ 76°24'40"5Ø"	(7) <del>Ø 39°07'40"47"</del> λ 76°23'12"ØØ"	
(8) <del>Ø 39°06'55"Ø8'27"</del> λ 76°23'57.5"24'27"	(8) <del>Ø 39°04'15"Ø6'ØØ"</del> λ 76°23'11"22'48"	
(9) <del>Ø 39°06'08.5"Ø7'Ø3"</del> λ 76°23'57.5"45"		
(10) <del>Ø 39°06'08.5"Ø3'5Ø"</del> λ 76°23'52.0"3Ø"		

B. Area Surveyed (Continued)

Item #2

~~(11) 39°04'10"~~  
~~76°23'52"~~

~~(12) 39°04'10"~~  
~~76°23'52.5"~~

~~(13) 39°02'42"~~  
~~76°23'29"~~

Items number 2\* and 3\* were dumping sites for dredge spoil from the main shipping channel into the port of Baltimore.  
*ITEMS NO. 2 AND 3 LATER ASSIGNED AWOIS ITEM #'S 3172 AND 3173.*

C. SOUNDING VESSEL

NOAA launch 0519 was used to collect all survey data for this project.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Raytheon Model 719B fathometer S/N 7727 was used to obtain soundings for the period of Julian Day 138 thru and including Julian Day 167. The speed of sound calibration adjustment failed on this fathometer and it was replaced with a Raytheon 719C Model S/N 9955. This fathometer was used to gather data from Julian Day 173 to Julian Day 228. A static transducer depth of 1.2' is applied to all soundings. Predicted tides from Fort McHenry, Baltimore, MD (Tide Table No. 2117) with zone correctors from the project instructions were used to reduce all soundings on the final field sheets.

Velocity corrections were applied from two tables based on daily bar checks. Corrections from Table I were applied from Julian Day 138 to Julian Day 167. Corrections from Velocity Table II were applied from Julian Day 173 to Julian Day 228.  
*192 VELOCITY TABLE III USED FOR DAYS 193 THRU 228.  
SEE ALSO SECTIONS 4.6, 4.7, 4.8 OF THE EVALUATION REPORT.*

E. SURVEY SHEETS

This survey is plotted on four mylar field sheets broken down as follows:

Main Scheme, Items 2, 3.....1  
Splits, Crosslines, DP's.....1  
Bottom Samples, Items 2, 3  
Main Scheme, Crosslines  
Item 4.....1  
Bottom Samples, DP's Item 4 .....1

F. CONTROL STATIONS

A total of seven control stations were used to conduct this survey. All stations have a position accuracy of Third Order Class I. Positions of the following signals were obtained from existing NGS files: 003, 006, 009.

F. Control Stations (Continued)

All remaining control was set by the Field Support Party of the Hydrographic Field Parties Section to NGS Standards (Signal numbers 001, 002, 004, ~~045~~, <sup>006, 009</sup> 019, 020). <sup>021, 022, 023</sup>

G. HYDROGRAPHIC POSITION CONTROL

Positioning methods used during this survey were range/azimuth and range/range. Range/azimuth was used only on Julian Days 138 and 228. Del Norte positioning system was used to obtain all range data. The calibration of Del Norte units were checked daily over known baselines with calculated distances or Hewlett-Packard EDM measured distances. Baseline calibrations were conducted regularly throughout the survey in accordance with AMC Operations Order #79. Periodic failure of both remote and DMU's was experienced over the course of the survey. \*\*The following units were used during the survey:  
\*\* SEE ALSO SECTIONS 4, 9 & h. OF THE EVALUATION REPORT.

<u>DMU/Master</u>	<u>Remote</u> S/N code
395/263	222/74 253/78 251/76 251/78
Hewlett Packard Model 3810 Total Station	S/N 1723A00727
Wild T-1 Theodolite	S/N 14034

H. WATERFRONT PLANIMETRY VERIFICATION

No shoreline fell within the project limits of Item numbers 2, 3, and 4. Visual inspection of the shoreline in the immediate area of the survey during the course of survey operations, survey support operations and recreational transiting of the area proved the charted shoreline to be accurate. The following areas of shoreline were inspected: (1) The western shoreline of the Chesapeake Bay north of the William Lane Jr. Memorial Bridge to Bodkin Point, including the north and south shore of the Magothy River from the mouth to Hendersons Point, (2) The eastern shoreline of the Chesapeake Bay north of the William P. Lane Memorial Bridge to Love Point on the northern tip of Kent Island. \*ITEMS 2-4 LATER ASSIGNED AWOIS ITEM #'S 2172-2174.

I. HARBOR RECONNAISSANCE

No harbors were located within the survey limits of Items 2, 3, and 4.

J. DEFICIENCY INVESTIGATION

In accordance with Project Instructions OPR-E456-HSB-82, items 2, 3, and 4 are addressed in this survey. Investigations of these items were conducted as basic surveys. Item investigation reports are appended to this report. SEE ALSO SECTION 4.f. OF THE EVALUATION REPORT.  
\*ITEMS 2-4 LATER ASSIGNED AWOIS ITEM #'S 2172-2174.

K. CHANNEL AND SHOAL INVESTIGATIONS SEE SECTION 7.D. OF THE EVALUATION REPORT.

No major uncharted shoals were encountered within either dredge spoil area or the dumping area. Significant deeps and peaks were investigated through reduced line spacing.

Items 2 and 3 border on the main shipping channel (Craighill Channel) into Baltimore, MD. Hydrographic sounding lines were run well into the channel to delineate its limits and make comparison with charted limits as marked by navigational aids.

L. RECONNAISSANCE HYDROGRAPHY SEE SECTION 6. OF THE EVALUATION REPORT.

Reconnaissance hydrography is not applicable to items 2, 3, and 4 as the project instructions specified basic hydrography at 50 meter spacing.

Comparison of current soundings shows the following when compared with their corresponding prior surveys.

PRIOR SURVEY: Bodkin Creek and vicinity  
1938 Hydrographic Survey No. 6376

This survey was compared with the north end of Item 2 south to latitude 39°07'18"N and showed:

Item 2

- ° 18' contour on the current survey is an average 300 meters to the east of the 18' contour on the prior on the west side of Item 2.
- ° 12' contour on the current survey shows good agreement with the 12' contour on the prior side.
- ° On the west side of Item 2 depths between the 12' and 18' contour are shoaler on the current survey due to the eastward shift of the 18' contour.
- ° Soundings show good agreement from the 18' to 24' contour.

Item 3

PRIOR SURVEY: Eastward from Gibson Island  
Hydrographic Survey No. 5416, 1933

- ° Good agreement is seen between the 18' and 30' contour where sounding lines extend far enough to the east to allow an 18' contour. Discrepancies are noted below.
- ° The 18' contour on the current survey shows some agreement however in some areas, shoaler soundings have moved the 18' contour 150 to 200 meters to the east.
- ° Throughout the dumpsite there are isolated mounds shown within 18' contour lines where surrounding depths are 20-23'.  
\* ITEMS 2-4 LATER ASSIGNED AWOIS ITEM #5 2172-2174

#### L. Reconnaissance Hydrography (Continued)

On Item 2 the 30' contour shows good agreement with the prior. One area of the 30' contour from 39°04'57" to 39°06'00" shows the 30' contour on the current survey to be 50-75 meters west of the 30' contour on the prior, showing a widening of the channel. From 39°04'00" to the southern limit of the survey the 30' contour on the current survey is an average distance of 175 meters east of the prior 30' contour. Depths of up to 4' shoaler than the prior survey are recorded between the current and prior 30' contour.

#### Item 3

- ° From the north limit of the prior @39°06'42"N south to 39°04'12" the 30' contour of the current survey is an average distance of 100 meters east of the prior 30' contour.
- ° Sounding lines on Item 3 do not extend to the 18' contour on the east side of the spoil area.
- ° There are isolated mounds within the spoil area. These are defined with 18' contour lines and lie in areas of surrounding depths that are up to 5' deeper.

The soundings within the area compared on this prior show the current survey in the spoil area 2 to 7' shoaler than the prior.

Soundings on the eastern side of item 3 show good agreement with the charted soundings outside the spoil area to the east.

#### Item 4

PRIOR SURVEY: Chesapeake Bay: (Sandy Point to Mitchells Bluff)  
Register # 2345, 1896-7

The west edge of the dumpsite runs parallel to the 60' contour on the prior; current depths along this contour are 5' to 6' shoaler. Throughout Item 4 the current survey shows depths 21' to 31' shoaler than those on the prior survey.

Reconnaissance hydrography is not applicable to Items 2, 3, and 4 as the Project Instructions specified basic hydrography at 50 meter spacing.

#### M. LANDMARKS AND NONFLOATING AIDS VERIFICATION

The following landmarks are not located within the survey area but are on the adjacent western shore of the Chesapeake Bay and were verified as presently charted:



M. Landmarks and Nonfloating Aids Verification (Continued)

<u>Name</u>	<u>Latitude</u>	<u>Longitude</u>
Chesapeake Bay Bridge East Tower (NGS)	38°59'32.892"	76°22'47.409"
Chesapeake Bay Bridge West Tower (NGS)	38°59'37.434"	76°23'06.817"
Tank	39°00'27.4"	76°24'32.7"
Tank Elev Steel	39°00'36.5"	76°24'09.6"
Pavillion Peak (NGS)	39°03'36.691"	76°25'57.664"
Pinehurst Marine Radio Tower Antenna (NGS)	39°07'25.860"	76°26'06.559"
Tower Square Steel Skeleton	39°07'37.4" <sup>281"</sup>	76°25'58.7" <sup>836"</sup>

The following aids were verified as presently charted during the course of the survey:

1. Sandy Point Lighthouse 1898 (NGS)
2. Deep Creek DBn 4
3. Deep Creek Lt 3
4. Deep Creek DBn 1
5. Magothy River Lt (NGS)
6. Magothy River Entrance Lt 2
7. Magothy River DBn 5
8. Magothy River Entrance DBn 4
9. Baltimore Lighthouse 1918 (NGS)
10. Magothy River DBn 7
11. Magothy River Lt 9
12. Magothy River Lt 10
13. Magothy River DBn 11
14. Magothy River Lt 12
15. Sillery Bay Lt 1
16. Magothy River Lt 13
17. Magothy River Lt 14
18. Grey Creek Entrance DBn 2
19. Magothy River DBn 15
20. Grey Creek DBn 1
21. Grey Creek DBn 2
22. Grey Creek DBn 3
23. Grey Creek DBn 4
24. Sillery Bay Lt 3
25. Magothy River DBn 16
26. Sillery Bay Lt 4
27. Sevenfoot Knoll Lighthouse

N. AIDS TO NAVIGATION SEE SECTION 7.C. OF THE EVALUATION REPORT.

Floating aids to navigation within or immediately bordering the survey limits for items 2, 3, and 4 were located by range-range positioning using Del Norte equipment. On the final day of field operations three detached positions were obtained on private maintained floating aids immediately south of item 4. Two of the floating aids are spar buoys painted white with orange stripes and the notation "No Shellfishing". They are marked "A" and "D". The third detached position is a white and orange buoy also with the notation "No Shellfishing" and designated with the letter "C" (See Bottom Sample and Detached Position Final Field Sheet for Item 4).

O. COAST PILOT INSPECTION

The U.S. Coast Pilot (Volume 3, 21st Edition, July 1983) was inspected for descriptive accuracy. The hydrographer's Coast Pilot Report is appended to this descriptive report.

P. TIDE OBSERVATION

Predicted tides zoned from Baltimore (Ft. McHenry) were used to reduce soundings for this survey. Zone correctors were supplied to the field party from Tides Branch, Rockville, MD.

During survey operations, HFP-2 was informed by NOAA Ship "Ferrel", also working in the Northern Chesapeake Bay that they had installed a tide gage at North Point. Data from this gage may provide more accurate tide control, being closer to the survey area, than the gage at Ft. McHenry. The gage was installed on 6 June 1983 (Julian Day 157) and remained on line through the end of survey operations on 16 August 1983 (JD 228).

Comparison of actual tide vs. predicted tide was not made during the course of this survey because the field party was not directly responsible for handling the tide data for the gage controlling items 2, 3, and 4. General observations by the field party and from user input show predicted tides to be accurate for this area. SMOOTH TIDES WERE APPLIED DURING OFFICE PROCESSING AT AMC.

Q. USER EVALUATION

User evaluation was obtained in order to input on the accuracy of chart 12278. This survey was conducted under the chart evaluation concept. The items completed constituted a limited basic survey. User evaluation is based on coastal areas in the vicinity of Annapolis, South River and the Magothy River.

Contact was made with USCG Station Annapolis, USCG Auxillary Flotilla 16 (Annapolis), Flotilla 13 (Mill Creek), individual chart users and local marinas. Most discrepancies pointed out to the hydrographer are in reference to shoaling in smaller creeks off the Magothy and South Rivers.

All parties contacted are satisfied with the present layout and clarity of NOS charts for this area.

R. PUBLIC RELATIONS EFFORT

Listed are highlights of public relations activities in the survey area:

Newspaper Articles: "Charting the Waters, Modern Explorers Surveying Bay Bottom" - Gene Bisbee, Annapolis Capitol

Meetings:

- 7/25/83 OIC met with all coxswains from U.S. Coast Guard Station Annapolis to discuss chart accuracy and layout in the survey area and adjoining areas of the South and Magothy Rivers.
- 8/2/83 OIC met with the Commander of Annapolis Coast Guard Auxilliary, Flotilla 16.
- 8/6/83 OIC met with Commander and Vice-Commander of Mill Creek Coast Guard Auxilliary, Flotilla 13.

Prominent Contacts

Mr. Boswell J. Clark  
612 Delmar Road  
Edgewater, MD 21037

Commander U.S. Coast Guard  
Auxilliary, Flotilla 16  
Annapolis, MD

Mr. William A. Craig  
781 Creekview Road  
Severna Park, MD 21032

Commander, U.S. Coast Guard  
Auxilliary, Flotilla 13  
Mill Creek, MD

Mr. Michael B. Scavone  
1204 Severnview Drive  
Crownsville, MD 21032

Vice-Commander, U.S. Coast Guard  
Guard Auxilliary, Flotilla 13  
Mill Creek, MD

S. STATISTICS

Items Completed.....3  
Positions.....3833  
Miles of Sounding Line.....459  
Miles of Chain Sweep.....0  
Tide Gages Installed.....0

T. MISCELLANEOUS

No dangers to navigation letters were filed during the course of this survey.

Julian Days 138 and 228 were controlled with range/azimuth positioning. Velocity corrections are not applied on the final field sheet for these days due to idiosyncrasies in the automated range/azimuth plotting program (RK 216) which will not plot when velocity correctors are read into the computer. Change of scales on item 4 are noted in the sounding volume. "A" scale refers to the 0-55' scale and "B" scale refers to the 50'-105' scale. **VELOCITY CORRECTIONS WERE APPLIED DURING OFFICE PROCESSING.**

T. Miscellaneous (continued)

A crossline run on JD 201 depths one foot shallower where it crosses main scheme hydro on JD 193 at latitude 39°09'30", longitude 76°24'40". All applicable correctors and plotting accuracy were checked and found to be correct. It is believed the difference between predicted and actual tides is the reason for the discrepancy. The shallower depths from the crossline were used to draw the 18 foot contour in this area. *NO CONFLICTS AFTER APPLICATION OF SMOOTH TIDES.*

U. RECOMMENDATIONS

The hydrographer recommends that the "Discontinued Spoil Area" note on Items 2 and 3 and the "Discontinued Dumping Ground" note on Item 4 and the blue shaded area outlining these items be deleted from the chart. It is recommended that this survey supercede all prior surveys for charting of the Discontinued Dumping and Spoil Areas. *CONCUR.*

V. AUTOMATED DATA PROCESSING

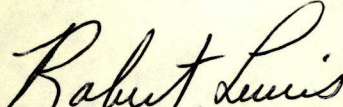
The following programs were used in conjunction with a PDP 8e Digital computer to process this survey:

<u>PROGRAM</u>	<u>VERSION</u>
RK201 Grid Signal and Lattice Plot	4/18/75
RK211 Non-Real Time Plot	2/02/81
RK212 Visual Table Load	4/01/74
RK216 R-Az Non-Real Time Plot	2/09/81
RK300 Utility Computations	2/05/76
RK330 Data Reformat and Check	5/04/76
AM407 Direct/Inverse Computation	9/25/78
AM602 ELINOR	5/20/75

W. REFERENCE TO REPORTS

None.

Respectfully Submitted,

  
John W. Humphrey  
Lt(jg), NOAA

SIGNAL LIST  
OPR-E456-HSB-82

001	7	39	01	58371	76	24	15361	250	0000	000000	PK Yacht
002	7	39	03	32815	76	23	57517	139	0000	000000	Light
003	7	39	03	18401	76	26	00673	139	0000	000000	Magothy River Light (NGS)
004	7	39	04	43457	76	25	19642	250	0000	000000	PK Gibson
005	7	39	07	11976	76	25	56200	250	0000	000000	Gresham
006	7	39	03	32673	76	23	57550	139	0000	000000	Baltimore Lighthouse 1918 (NGS)
009	7	39	00	56835	76	23	05632	139	0000	000000	Sandy Point Lighthouse 1898 (NGS)
019	7	39	02	11397	76	18	34896	250	0000	000000	Walters
020	7	38	59	12226	76	20	00604	250	0000	000000	Bridge
021		39	05	05354	76	25	22690	139			Gibson Island Causeway Flag 1983
022		39	07	37281	76	25	58836	139			Bodkin Point Tower, 1983
023		39	08	10450	76	25	04900	200			Bodkin Point <del>Signal</del> Light 3

Replaces C&GS Form 567.

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

**NON-EXISTING AIDS OR LANDMARKS FOR CHARTS**

**ORIGINATING ACTIVITY**

HYDROGRAPHIC PARTY  
 GEODETIC PARTY  
 PHOTO FIELD PARTY  
 COMPILATION ACTIVITY  
 FINAL REVIEWER  
 QUALITY CONTROL & REVIEW GRP.  
 COAST PILOT BRANCH

(See reverse for responsible personnel)

REPORTING UNIT (Field Party, Ship or Office)  
Hydro Fld. Party 2

STATE  
Maryland

LOCALITY  
Northern Chesapeake Bay

DATE  
8/83

The following objects **HAVE**  **HAVE NOT**  been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO. E456-HSB-82

JOB NUMBER -----

SURVEY NUMBER (CES 12278)  
H-10212

DATUM N.A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	LATITUDE		LONGITUDE		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED
		° /	// D.M. Meters	° /	// D.P. Meters	OFFICE	FIELD	
Flagpole	Gibson Island Causeway Flagpole	39 05	05.354	76 25	22.690		April 1983 F-3-6-L	12278 12282
Tower	Tower Sq. Steel Skeleton (Bodkin Point Tower)	39 07	37.281	76 25	58.836		April 1983 F-3-6-L	12278

RESPONSIBLE PERSONNEL		ORIGINATOR	
TYPE OF ACTION	NAME	<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)	
OBJECTS INSPECTED FROM SEAWARD	John W. Humphrey Jr., OIC HFP 2	FIELD ACTIVITY REPRESENTATIVE	
POSITIONS DETERMINED AND/OR VERIFIED	R. DeCroix, HFPS Support Section	OFFICE ACTIVITY REPRESENTATIVE	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'			
(Consult Photogrammetric Instructions No. 64,			
OFFICE IDENTIFIED AND LOCATED OBJECTS	FIELD (Cont'd)		
I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	B. Photogrammetric field positions* require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982		
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75		
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods. **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.			

CHART # 12278

ITEM # 2

ITEM DESCRIPTION: Discontinued Disposal Area

AWOIS 3172

SOURCE: Chart Letter 63/72

INVESTIGATION DATE: 5/18-6/14/83 TIME:

VESSEL: 0519

OIC: LTj.g. John W. Humphrey Jr.

REFERENCE:

Position No: 001-952 Volume: 1-5 Page:

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude Longitude

Observed:

See Attached Sheet with area ~~PAGE 2 OF THIS REPORT FOR AREA LIMITS.~~

outline

POSITION DETERMINED BY: Del Norte (Range - Range)

METHOD OF ITEM INVESTIGATION: Basic hydrographic survey was conducted over the specified area at 50 meter spacing. Line spacing was reduced to develop <sup>SIGNIFICANT</sup> bottom features (25M). Bottom samples were obtained and crosslines run in the survey area.

CHARTING RECOMMENDATIONS: Recommend that soundings from this survey supercede all prior soundings for charting; The notation of "Discontinued Spoil Area" and the blue shaded area designating the discontinued spoil area should be deleted from the chart and replaced with current soundings.

-----  
Compilation Use Only

CHART

APPLIED AS



CHART # 12278

ITEM # 3

ITEM DESCRIPTION: Discontinued Spoil Area

AWOIS 3173

SOURCE: Chart Letter 63/72

INVESTIGATION DATE: 6/15-8/3/83

TIME:

VESSEL: 0519

OIC: LTj.g. John W. Humphrey Jr.

REFERENCE:

Position No: 953-2913 Volume: 6-14 Page:

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude Longitude

Observed:

See Attached Sheet with area <sup>PAGE 2. OF THIS REPORT FOR AREA LIMITS.</sup>  
~~outline~~

POSITION DETERMINED BY: Del Norte (Range-Range)

METHOD OF ITEM INVESTIGATION: A basic hydrographic survey including crosslines and bottom samples was conducted over the specified area at 50 meter spacing. Line spacing was reduced to 25 meters to develop significant bottom features. This survey included no shoreline.

CHARTING RECOMMENDATIONS: It is recommended that soundings from this survey supercede all prior soundings for charting. The notation of "Discontinued Spoil Area" and the blue shaded area designating the discontinued spoil area should be deleted from the chart and replaced with current soundings.

-----  
Compilation Use Only

CHART

APPLIED AS

CHART # 12278

ITEM # 4

ITEM DESCRIPTION: Discontinued Dumping Ground

AWOIS 3174

SOURCE: Chart Letter 1090/77

INVESTIGATION DATE: 8/4-8/16/83

TIME:

VESSEL: 0519

OIC: LTj.g. John W. Humphrey Jr.

REFERENCE:

Position No: 2914-3833 Volume: 14-19 Page:

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude Longitude

Observed:

See Attached Sheet with area ~~Outline~~ *PAGE 2 OF THIS REPORT FOR AREA LIMITS.*

POSITION DETERMINED BY: Del Norte Range-Range; Del Norte-Wild T-1, Range-Azimuth

METHOD OF ITEM INVESTIGATION: A basic hydrographic survey including crosslines and bottom samples was conducted over the specified area at 50 meter spacing. Line spacing was reduced to 25 meters to develop significant bottom features. This survey included no shoreline.

CHARTING RECOMMENDATIONS: It is recommended that soundings from this survey supercede all prior soundings for charting. The notation of "Discontinued Dumping Ground" and the blue shaded area designating the discontinued dumping ground should be deleted and replaced with current soundings.

-----  
Compilation Use Only

CHART

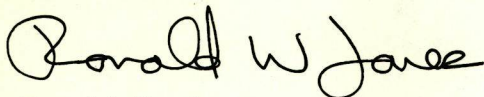
APPLIED AS

APPROVAL SHEET  
CHART EVALUATION SURVEY  
OPR-E456-HSB-82

The hydrographic data submitted with this report is adequate to justify the recommendations made by the Officer-in-Charge.

Daily supervision was not made by me during the survey. The field position plotting, fathogram scanning, and application of correctors were checked for plotting accuracy.

Approved and forwarded,



Ronald W. Jones  
Lt. Cdr., NOAA  
Chief, Hydrographic Field Parties Section

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

DATE: 12/03/85

Marine Center: Hydrographic Surveys Branch

OPR: E456

Chart Evaluation Survey: OPR E456-HSB-82, Chart #12278

Locality: Northern Chesapeake Bay

Time Period: May 18 - August 16, 1983

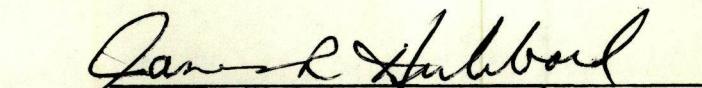
Tide Station Used: 857-4680 Baltimore, MD  
857-4857 North Point, MD

Plane of Reference (Mean Lower Low Water): 857-4680 = 3.87 ft.  
857-4857 = 4.88 ft.

Height of Mean High Water Above Plane of Reference:  
857-4680 = 1.3 ft.  
857-4857 = 1.3 ft.

Remarks: Recommended Zoning:

See Page 2

  
Chief, Tidal Datum Quality  
Assurance Section

GEOGRAPHIC NAMES

H-10212

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP ATLAS	GRAND MCNALLY	U.S. LIGHT LIST			
BELVIDERE SHOAL	X										1
CHESAPEAKE BAY	X										2
MARYLAND (title)	X										3
SEVENFOOT SHOAL <b>KNOLL</b>	X										4
											5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25

Approved:

*Charles E. Harrington*  
Chief Geographer - N/CG2x5

JUL 28 1987

NOAA FORM 61-29  
(12-71)

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

REFERENCE NO.

MOA23-17-88

LETTER TRANSMITTING DATA

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

- ORDINARY MAIL
- REGISTERED MAIL
- GBL (Give number) \_\_\_\_\_
- AIR MAIL
- EXPRESS

TO:

Chief, Data Control Branch, N/CG243  
 Room 151, WSC-1  
 National Ocean Service - NOAA  
 Rockville, MD 20852

DATE FORWARDED

5 Feb 1988

NUMBER OF PACKAGES

Three (3) 2 BOXES 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.

H-10212 (HFP-10-1-83)  
OPR-E456-HSB-82, Maryland, Chesapeake Bay  
Craighill Channel Spoil Area

- PKG. 1 (TUBE)
  - 1 SMOOTH SHEET
  - 1 FINAL SMOOTH POSITION OVERLAY
  - 2 FINAL EXCESS OVERLAYS
  - 4 FINAL FIELD SMOOTH SHEETS
  - 1 ORIGINAL DESCRIPTIVE REPORT
- PKG. 2 (BOX)
  - 1 CAHIER containing FINAL POSITION PRINTOUT
  - 1 CAHIER containing FINAL SOUNDING PRINTOUT and L-FILE
  - 1 ENVELOPE containing SUPPLEMENTAL DATA from PRINTOUT
- PKG. 3 (BOX)
  - 19 NOAA FORM 77-44 (SOUNDING VOLUMES)
  - 1 ENVELOPE containing DATA REMOVED FROM ORIGINAL DESCRIPTIVE REPORT

FROM: (Signature)

NORRIS A. WIKE

RECEIVED THE ABOVE  
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,  
 N/MOA23  
 Atlantic Marine Center  
 439 W. York Street  
 Norfolk, VA 23510-1114

NOAA FORM 61-29  
(12-71)

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

REFERENCE NO.

MOA23-17-88

LETTER TRANSMITTING DATA

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

- ORDINARY MAIL
- AIR MAIL
- REGISTERED MAIL
- EXPRESS
- GBL (Give number) \_\_\_\_\_

TO:

Chief, Data Control Branch, N/CG243  
 Room 151, WSC-1  
 National Ocean Service - NOAA  
 Rockville, MD 20852

DATE FORWARDED

5 Feb 1988

NUMBER OF PACKAGES

THREE (3)

**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.

H-10212 (HFP-10-1-83)  
OPR-E456-HSB-82, Maryland, Chesapeake Bay  
Craighill Channel Spoil Area

PKG. 3 (BOX) CONT:

- 1 ENEVELOPE containing VELOCITY CORRECTION DATA
- 1 ACCORDION FILE containing MASTER TAPE PRINTOUTS, CORRECTOR TAPE PRINTOUTS, and FATHOGRAMS following JD,s: VESNO 519: 138, 143-145, 153, 157, 159, 164-167, 173-175, 179, 181, 192-193, 195, 201, 206-210, 213-216
- 1 ACCORDION FILE containing MASTER TAPE PRINTOUTS, CORRECTOR TAPE PRINTOUTS, and FATHOGRAMS following JD,s: VESNO 519: 217, 220-221, 223-224, 227-228
- 1 slot supplemental field data

FROM: (Signature)

NORRIS A. WIKE

*Norris A. Wike*

RECEIVED THE ABOVE  
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,  
 N/MOA23  
 Atlantic Marine Center  
 439 W. York Street  
 Norfolk, VA 23510-1114

12/09/87

HYDROGRAPHIC SURVEY STATISTICS  
REGISTRY NUMBER: H-10212

NUMBER OF CONTROL STATIONS	4
NUMBER OF POSITIONS	3806
NUMBER OF SOUNDINGS	20625

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	46	04/25/86
VERIFICATION OF FIELD DATA	324	05/05/87
QUALITY CONTROL CHECKS	98	
EVALUATION AND ANALYSIS	48	08/25/87
FINAL INSPECTION	21	08/21/87
TOTAL TIME	537	
MARINE CENTER APPROVAL		08/31/87



ATLANTIC MARINE CENTER  
EVALUATION REPORT

SURVEY NO.: H-10212

FIELD NO.: HFP-10-1-83

Maryland, Chesapeake Bay, Craighill Channel Spoil Areas

SURVEYED: 18 May through 16 August 1983

SCALE: 1:10,000 and  
2 1:10,000 Insets

PROJECT NO.: OPR-E456-HSB-82

SOUNDINGS: RAYTHEON DE-719B Fathometer, RAYTHEON DE-719C  
Fathometer

CONTROL: DEL-NORTE (Range/Range), DEL-NORTE/WILD T-1 Theodolite  
(Range/Azimuth)

Chief of Party.....R. W. Jones

Surveyed by.....J. W. Humphrey Jr.  
.....B. A. Link  
.....J. M. Robinett  
.....C. S. Weisner  
.....R. F. Trefethen

Automated Plot by.....XYNETICS 1201 Plotter (AMC)

1. INTRODUCTION

a. No unusual problems were encountered during office processing.

b. This survey was originally intended to be a Chart Evaluation Survey. After discussions with personnel in headquarters it was decided that a registry number be assigned and the survey processed as a basic hydrographic survey.

c. Notes in the Descriptive Report were made in red during office processing.

d. The digital records for this survey contain multiple header records identifying three (3) digital files. The main sheet and insets one and two.

2. CONTROL AND SHORELINE

a. Control is adequately discussed in sections F. and G. of the Descriptive Report.

b. There is no shoreline within the limits of this survey.

3. HYDROGRAPHY

a. Soundings at crossings are in excellent agreement and

comply with the criteria found in sections 4.6.1 and 6.3.4.3. of the HYDROGRAPHIC MANUAL.

b. The standard twelve (12) foot depth curve was not drawn in its entirety because sections of the curve fall outside the survey area. The eighteen (18) and thirty (30) foot curves were drawn in their entirety. Supplemental twenty-four (24) and thirty-six (36) foot curves were drawn to show additional bottom relief. Some brown and dashed curves were also drawn to delineate bottom relief.

c. The development of the bottom configuration and determination of least depths is considered adequate with the following exception:

The following shoals/features found by the present survey were not developed.

<u>Shoal</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Surrounding Depths</u>
17	39°04'37.32"N	76°23'59.31"W	20-22
14	39°05'01.77"N	76°23'56.27"W	18-23
18	39°05'10.57"N	76°23'19.34"W	22-23
14	39°06'22.64"N	76°23'54.96"W	17-20
14	39°08'00.34"N	76°24'26.81"W	15-19
10	39°09'38.94"N	76°25'06.28"W	13-15
31 obstr	39°02'48.97"N	76°23'20.16"W	34-36

Complete coverage of the area to be surveyed was not achieved. Holidays exist in the vicinity of the following areas:

<u>Latitude</u>	<u>Longitude</u>
39°04'11"N	76°23'33"W
39°04'46"N	76°23'48"W

Additional lines of hydrography in the vicinity of the items discussed above would have provided a better delineation of the bottom. The lack of developments of items discussed above does not significantly degrade the overall quality of this survey.

#### 4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the HYDROGRAPHIC MANUAL with the following exceptions:

a. The field unit did not submit signal, TC/TI, or velocity tapes with the data package and the raw master data tapes did not indicate the type of position control (range/range, range/azimuth, etc.) used.

b. The field unit did not take twice daily bar check as required by sections 1.5.2. and 4.9.5.1.1. of the HYDROGRAPHIC MANUAL. Forty-six (46) out of a possible sixty-eight (68) bar check were taken. Five (5) days of Hydrography were run without bar checks. The number of bar checks was sufficient for determination of velocity correctors; however, additional bar checks would have provided a better data base for the determination of correctors.

c. The field unit produced two (2) velocity tables from the bar check data. It was determined during office processing that three (3) velocity tables would provide more accurate data for this survey. A third velocity table was generated and the velocity data was applied to the sounding data during office processing.

d. Fathograms were poorly scanned by the field unit - peaks and deeps were noted by the field unit on the records and not on the correct tapes. Twenty-eight (28) hours were spent on this phase during office processing.

e. The settlement and squat applied to the survey was confusing. The field unit determined a settlement and squat of 0.0 feet at 2500 rpm but applied a corrector of +0.4 feet. This problem was resolved during office processing.

f. Discussions of the items investigated during the present survey operation in the Descriptive Report were not adequate. Hydrographic Guideline No. 21 outlines the necessary information to be provided in the Descriptive Report.

g. The field unit did not submit an "Abstract of Corrections to Electronic Position Control" as required by section 5.3.5.(E). of the HYDROGRAPHIC MANUAL. The only electronic correctors submitted with the present survey were abstract of Del-Norte daily calibrations.

h. The electronic control equipment used for the present survey did not operate consistently while the survey was conducted. As a result final baseline calibrations were not performed. Daily system checks were performed by the field unit and are satisfactory. Therefore, the final electronic control correctors for this survey were derived from the daily systems checks. The daily systems checks are in substantial agreement the the baseline correctors.

i. The field unit did not submit a "Geographic Names" report in the Descriptive Report as required by section 4.2.4. of the Project Instructions and sections 5.3.5. and 5.7. of the HYDROGRAPHIC MANUAL. A geographic names form, NOAA Form 76-155, report was placed in the Descriptive Report during office processing.

## 5. JUNCTIONS

There are no contemporary junctional surveys, and there are

no junctional requirements in the Project Instructions for this survey. Charted hydrography within the junctional areas is in harmony with the present survey.

6. COMPARISON WITH PRIOR SURVEYS

H-2345 (1897) 1:20,000  
 H-2346 (1897) 1:10,000  
 H-2347 (1897) 1:10,000  
 H-5237 (1933) 1:20,000  
 H-5416 (1933) 1:10,000  
 H-6376 (1938) 1:10,000

The six (6) prior surveys listed above cover the present survey with the exception of the extreme northwest corner of the main sheet in the vicinity of Latitude 39°10'00"N, Longitude 76°25'30"W and a portion of Inset #2 south of Latitude 39°00'10"N.

Prior survey H-2345 (1897) depths do not compare favorably with the present survey soundings. The prior survey depths are three (3) to thirty (30) feet deeper than present survey depths.

Prior survey H-2346 (1897) depths compares favorably with the present survey depths and shows a general trend of being one (1) to two (2) feet deeper. Soundings from prior survey H-2346 (1897) in the Craighill Channel are seven (7) to twenty (20) feet shoaler than soundings from the present survey.

The following shoals soundings from prior survey H-2346 (1897) were neither verified nor disproved by the present survey and were brought forward to supplement the present survey.

<u>Prior Depths</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depths</u>
13.5	39°06'07.6"N	76°24'00.5"W	20-21
15	39°05'20.5"N	76°24'03.5"W	19-21
14	39°05'20.0"N	76°24'01.0"W	21-23

Prior survey H-5237 (1933) depths compare favorably with present survey depths and show a general trend of being three (3) to six (6) feet deeper. A partial line of soundings from prior survey H-5237 (1933) between Latitude 39°02'43.2"N, Longitude 76°20'00.0"W and Latitude 39°02'29.0"N, Longitude 76°20'11.7"W is eleven (11) to twenty (20) feet deeper than present survey depths.

Prior survey H-5416 (1933) depths compare favorably with present survey depths and show a general trend of being one (1) to three (3) feet deeper. Soundings shown on the prior survey south of Latitude 39°03'30"N, and east of Longitude 76°23'35"W

are four (4) to six (6) feet deeper than present survey soundings.

The following shoals soundings from prior survey H-5416 (1933) were neither verified nor disproved by the present survey and were brought forward to supplement the present survey.

<u>Prior Depths</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depths</u>
14	39°06'17.8"N	76°24'11.0"W	17-19
17	39°05'32.2"N	76°23'14.1"W	21-23
11	39°05'20.4"N	76°24'02.5"W	19-21
17	39°05'27.3"N	76°23'10.4"W	21-22

Prior survey H-6376 (1938) depths compare favorably with the present survey depths and show a general trend of being one (1) to five (5) feet deeper. Soundings from the prior survey H-6376 (1938) along the Craighill Channel are ten (10) to twenty (20) feet shoaler than present survey depths. The difference in depths may be attributed to dredging operations in the present survey area.

The difference between the present and prior surveys can be attributed to the dredging of a deep water channel to the Port of Baltimore, deposit of dredge spoil in areas adjacent to the channel and improved hydrographic surveying methods and equipment.

Except as noted above the present survey is adequate to supersede the above prior surveys within the common area.

7. COMPARISON WITH CHART NO. (12270 21st Ed., 28 Nov. 1981)  
(12278 53rd Ed., 13 June 1981)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys. The following should be noted:

1) A charted Obstr, rep, PA in Latitude 39°03'38"N, Longitude 76°23'50"W was neither verified nor disproved by the field unit. This obstruction originates from Notice to Mariner 28 of 1970 NM 28/70. The fathograms were examined during office processing and no indication of the obstruction was observed. It is recommended the charted Obstr, rep, PA be retained as charted.

2) A charted dangerous sunken wreck in Latitude 39°03'35"N, Longitude 76°23'58"W was neither verified nor disproved by the field unit. This wreck originates from Notice to Mariners 32 of 1964 NM 32/64. The fathograms were examined during office processing and no indication of the obstruction

was observed. It is recommended the charted dangerous sunken wreck be retained as charted. EDM

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

b. Controlling Depths

There are no conflicts between the present survey depths and the tabulation for Craighill Channel shown on the chart.

c. Aids to Navigation

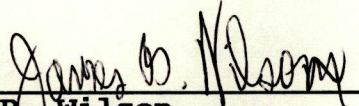
The hydrographer located eight (8) floating aids to navigation in the survey area. These aids appear adequate to serve their intended purpose.

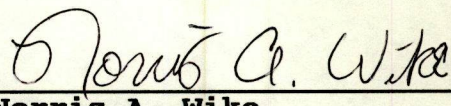
8. COMPLIANCE WITH INSTRUCTIONS

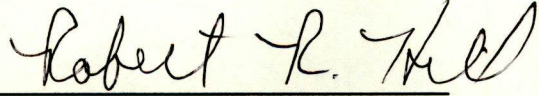
This survey complies with the Project Instructions except as noted in section 4. of this report.

9. ADDITIONAL FIELD WORK

This is an adequate basic survey. Additional work at an opportune time is requested for items discussed in section 7. of this report.

  
\_\_\_\_\_  
James B. Wilson  
Cartographic Technician  
Verification of Field Data

  
\_\_\_\_\_  
Norris A. Wike  
Cartographer  
Evaluation and Analysis

for   
\_\_\_\_\_  
Leroy G. Cram  
Senior Cartographic Technician  
Verification Check

ADDENDUM TO ACCOMPANY SURVEY H-10212

The average values for shifting surveyed NAD 1927 positions to NAD 1983 positions for this survey are as follows:

Position shifts (NAD 1983 minus NAD 1927):

Average latitude shift = 0.400 seconds = 12.3 meters

Average longitude shift = -1.146 seconds = -27.6 meters

Inspection Report  
H-10212

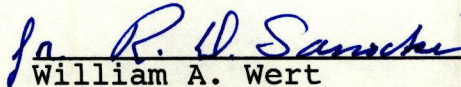
The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey complies with National Ocean Service requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected



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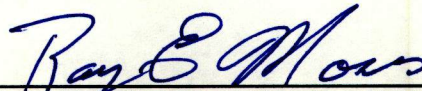
Robert G. Roberson  
Chief, Evaluation and Analysis Group  
Hydrographic Surveys Branch



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William A. Wert  
Chief Hydrographic Surveys Branch

Approved: 31 August 1987



---

Ray E. Moses, RADM, NOAA  
Director, Atlantic Marine Center



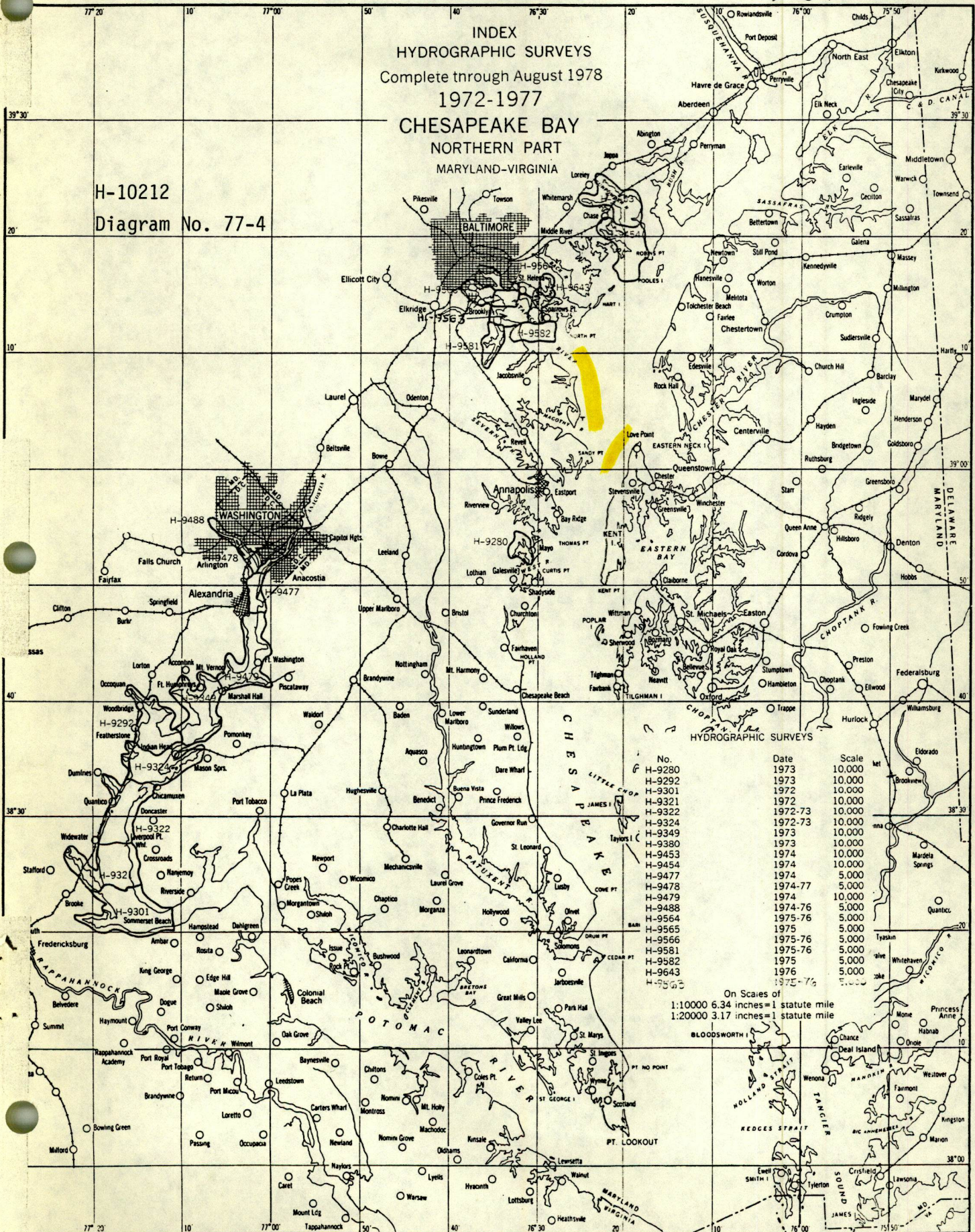
DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Ocean Survey  
Rockville, Maryland

Hydrographic Index No. 68 J

INDEX  
HYDROGRAPHIC SURVEYS  
Complete through August 1978  
1972-1977

CHESAPEAKE BAY  
NORTHERN PART  
MARYLAND-VIRGINIA

H-10212  
Diagram No. 77-4



MARINE CHART BRANCH  
**RECORD OF APPLICATION TO CHARTS**

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10212

**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
12282	7-14-89	Ernest V. Monti	Full <del>Part Before</del> After Marine Center Approval Signed Via Drawing No. 40
12270	7-21-89	Ernest V. Monti	Full <del>Part Before</del> After Marine Center Approval Signed Via Drawing No. 50
12278	9-26-89	Kenny O'Dell	Full <del>Part Before</del> After Marine Center Approval Signed Via Drawing No. 73
12263	4-30-90	R. Rose	Full <del>Part Before</del> After Marine Center Approval Signed Via Drawing No. 69 thru 12278, 12270
12260	7/9/90	J. Black	Full <del>Part Before</del> After Marine Center Approval Signed Via Drawing No. 45 (thru above after) 12278, 12270
12273	8-28-90	Ed Martin	Full <del>Part Before</del> After Marine Center Approval Signed Via Drawing No. 68 thru 12278
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.

applied to TDS 2-18-88 per