H12200

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey: Navigable Area

Registry Number: H12200

LOCALITY

State: Virginia

General Locality: Approaches to Chesapeake Bay

Sub-locality: 19 NM East of Cape Henry

2010

CHIEF OF PARTY
CDR Shepard M.Smith
NOAA

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 (11-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H12200**

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

State:	**Virginia**
General Locality:	**Approaches to Chesapeake Bay**
Sub-Locality:	**19 NM East of Cape Henry**
Scale:	**1:40,000** Date of Survey: **9 September to 15 October 2010**
Instructions Dated:	**3 August 2010** Project Number: **OPR-D304-TJ-10**
Vessel:	**NOAA Ship *Thomas Jefferson***
Chief of Party:	**CDR Shepard M. Smith, NOAA**
Surveyed by:	***Thomas Jefferson* Personnel**
Soundings by:	**Reson 7125 multibeam echosounder**
Graphic record scaled by:	**N/A**
Graphic record checked by:	**N/A**
Protracted by:	**N/A** Automated Plot: **N/A**
Verification by:	***Atlantic Hydrographic Branch***
Soundings in:	**Meters at MLLW**
HCell Compilation units in:	***Feet at MLLW***

Remarks:
1) All Times are in UTC.
2) This is a Navigable Area Hydrographic Survey.
3) Projection is NAD83, UTM Zone 18.

Red, bold, italic notes were made during office processing.

Table of Contents

List of Tables

List of Figures

Descriptive Report to Accompany Hydrographic Survey H12200

Project OPR-D304-TJ-10
Approaches to Chesapeake Bay
19 NM East of Cape Henry
Scale 1:40,000
9 September – 15 October 2010
NOAA Ship *Thomas Jefferson*

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-D304-TJ-10, dated 3 August, 2010.

Northern Limit	Southern Limit	Western Limit	Eastern Limit
36° 56’ 07” N	36° 48’ 44” N	075° 40 31” W	075° 34’ 32” W

Data acquisition was conducted from 9 September – 15 October 2010

This is an ongoing project begun in 1999 that responds to requests from the Maryland and Virginia Pilots Associations. The movement of commercial shipping in the southern portion of the Chesapeake Bay increasingly relies on modern bathymetric surveys and object detection in this active area. Over the next several years, there are plans for vessels with increasingly deeper drafts to be transiting the area. These plans have created a critical need for updated bathymetry and object detection in the approaches to Chesapeake Bay. This survey specifically responds to a request (H080013) made by Virginia Pilots Association to address shoaling regions upon approaching the southern entrance channel.

	Linear Nautical Miles
Single beam mainscheme only	N/A
Multibeam splits over sand waves	44.96
Lidar mainscheme only	N/A
Side Scan Sonar mainscheme only	N/A
Lineal nautical miles of any combination of the above techniques (SSS 200%, MBES)	744.18
Crosslines singlebeam and multibeam combined	62.82
Lidar Crosslines	N/A
Development lines non mainscheme	1.91
Shoreline/nearshore investigations	N/A

Number of Bottom Samples	11
Number of items investigated that required additional time/effort in the field beyond the above survey operations	N/A
Total number of square nautical miles	31

Table 1: Hydrographic Survey Statistics

Survey limits of H12200 (Figure 1) are shown below.

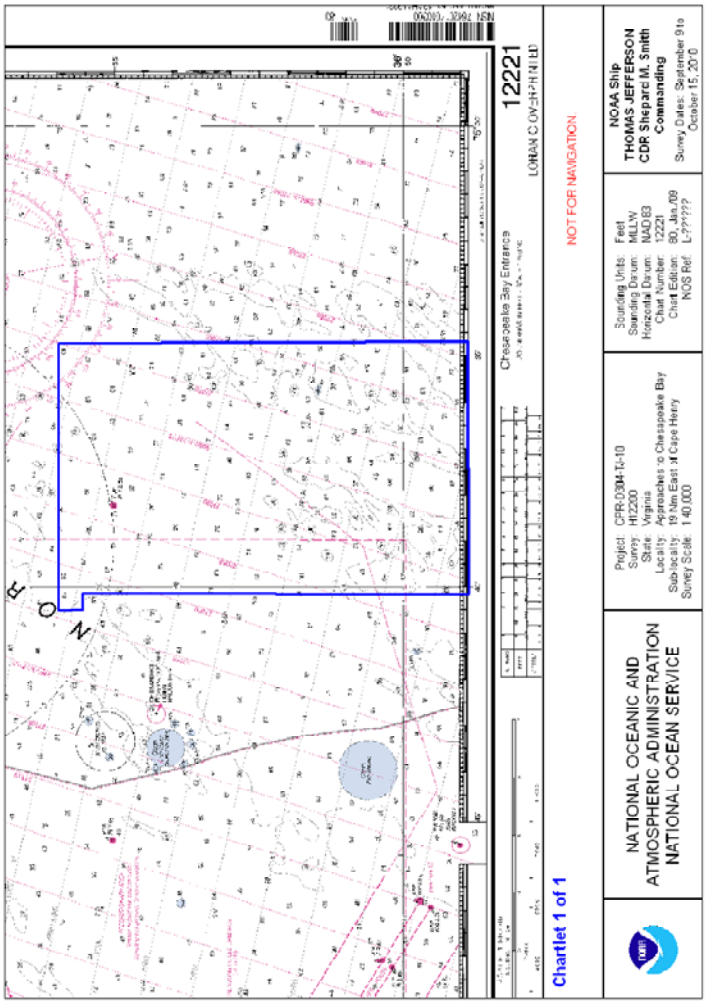


Figure 1: Survey Limits

Calendar Date	Julian Day
9 September 2010	252
10 September 2010	253
11 September 2010	254

16 September 2010	259
17 September 2010	260
25 September 2010	268
26 September 2010	269
27 September 2010	270
28 September 2010	271
6 October 2010	279
7 October 2010	280
15 October 2010	288

Table 2: Dates of Acquisition in Calendar and Julian Day

B. DATA ACQUISTION AND PROCESSING

Refer to ***OPR-D304-TJ-10 Data Acquisition and Processing Report (DAPR)**** for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR* are included in this descriptive report. ***Concur.***
Submitted with HCell Deliverable

B 1. EQUIPMENT AND VESSELS

Data were acquired by NOAA Ship *Thomas Jefferson* and Hydrographic Survey Launches 3101 and 3102. NOAA Ship *Thomas Jefferson* acquired Reson 7125 multibeam echosounder soundings, Klein 5000 Side Scan Sonar, and sound velocity profiles. Launches 3101 and 3102 acquired bottom samples. Vessel configurations, equipment operation, and data acquisition and processing were consistent with specifications described in OPR-D304-TJ-10_DAPR.pdf* submitted with this survey.
Submitted with HCell Deliverable

B 2. QUALITY CONTROL

B 2.1 System Certification and Calibration

Refer to NOAA Ship *Thomas Jefferson* DAPR* and Hydrographic Systems Readiness Report (HSRR) for a complete description of system integration and initial calibration results for equipment and sensors used for this survey.
Submitted with HCell Deliverable

B.2.2 Sounding Coverage

As per the Letter Instructions*, this survey was conducted using 200% SSS coverage with concurrent MBES bathymetry and object detection MBES developments over navigationally significant features. ***Concur.***

B 2.3 Crosslines

Multibeam echosounder cross-lines totaling 62.82 lineal nautical miles, comprising 8.44% of hydrography, were acquired during the course of the survey. Three crosslines were acquired without proper timing fed to the Reson 7125 (discussed in Section 2.5 below). These crosslines were not used in the final comparison. Therefore, only crosslines totaling 6.63 percent of hydrography were used for crossline comparisons. As per the email dated 10 September 2009 from AHB, the quality control check was performed using the standard deviation layer of the survey's CUBE surface (See Appendix 5 Supplemental Survey Records and Correspondence for further details). Areas of unusually high standard deviation were investigated and resolved in processing, except where caused by areas of high bathymetric relief or as described in Section 2.5 Systematic Errors. The crossline comparison for H12200 indicates that no significant systematic issues exist in the survey data, and that this survey meets IHO Order 1 survey specifications. ***Concur.***

B 2.4 Junctions and Prior Surveys

The following surveys junction with H12200, see figure 2.

Registry #	Scale	Date	Field Party	Junction side
H11302	1:10,000	2003	*Thomas Jefferson*	Northwest
H11303	1:10,000	2006	*Thomas Jefferson*	West
H11568	1:10,000	2006	*Thomas Jefferson*	Southwest
H12201	1:40,000	2010	*Thomas Jefferson*	East
H12202	1:40,000	2010	*Thomas Jefferson*	South
H12203	1:40,000	2010	*Thomas Jefferson*	Southeast

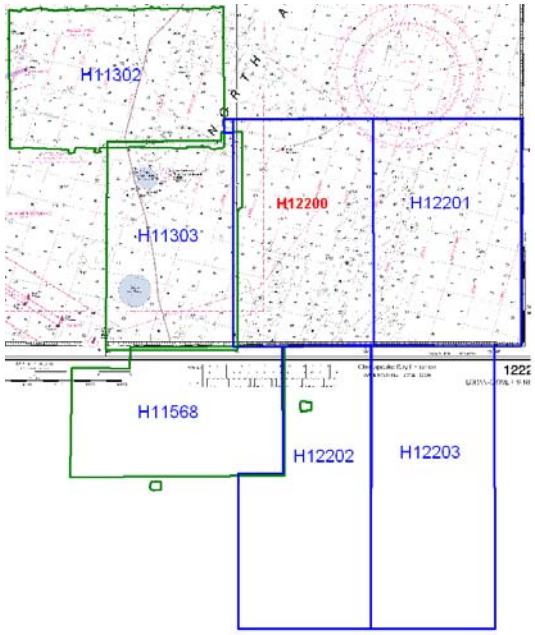


Figure 2: Junction Surveys

Survey H11302 junctions with this survey in the northwest corner of the sheet. There is not enough overlap to make a good comparison. See figure 3 below (H12200 has black soundings and H11302 has purple soundings).

Figure 3: H12200 H11302 Junction

Survey H11303 junctions with H12200 in the West. The difference in soundings between the two surveys is within one to two feet. ***Concur.***

Survey H11568 junctions with H12200 in the Southwest. The difference in soundings between the two surveys is within one to two feet. ***Concur.***

Survey H12201 junctions with H12200 in the East. The difference in soundings between the two surveys is within one to two feet. ***Concur.***

Survey H12202 junctions with H12200 in the South. The difference in soundings between the two surveys is within one to two feet. ***Concur.***

Survey H1203 junctions with H12200 in the Southeast. The difference in soundings between the two surveys is within one to two feet. ***Concur.***

B 2.5 Systematic Errors

On DN 252 the Reson 7125 multibeam lost timing from 0755 to midnight. This resulted in motion artifacts in the data. Lines that had an error value greater than 0.2 meters were not used in the surface (see table 3). Splits were acquired on DN 288 over the sand waves where these lines were removed. Final tides were requested prior to DN288, but surveys H12201, H1202, and H1203 were active during this time period and zoning did not change, so acquiring data on H12200 after the final tides request did not have a negative impact. ***Concur.***

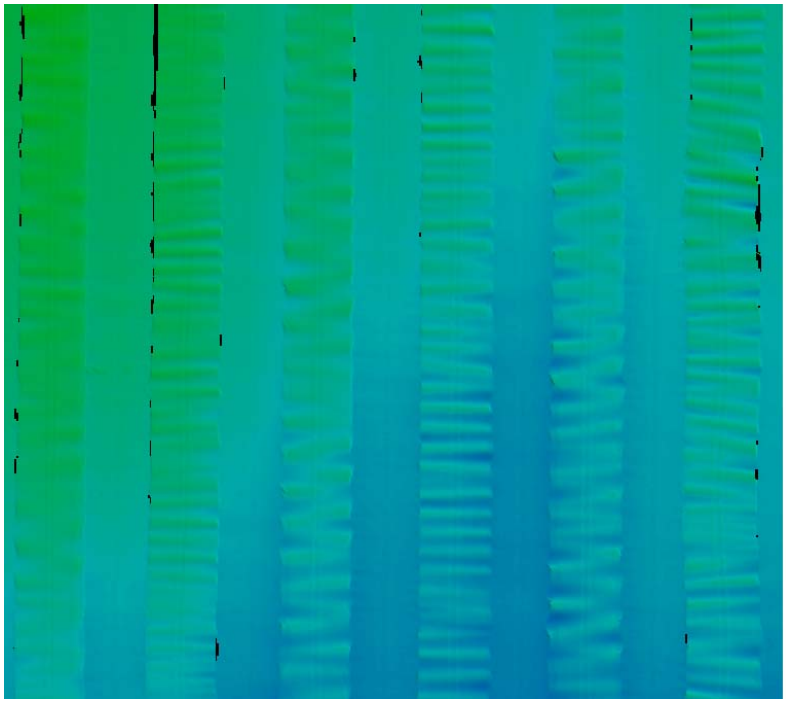


Figure 4: Motion artifacts resulting from timing issue.

104_1253	109_1850
104_1318	110_1915
105_1416	110_1940
105A1351	111_2006
106_1443	111_2031
106_1444	112_2058
106_1509	112_2123
107_1541	113_2151
107_1606	114_2310
108_1634	900_1005
108_1659	900_1030
108_1809	901_0916

109_1825	902_0852

Table 3: DN 252 lines excluded from surface

The highest standard deviation value observed in H12200 was 0.26 meters. This occurs on the west side of the survey area, in an area of sand waves, between lines of bathy acquired on different dates. The crosslines differ from the mainscheme due primarily to the difficulty in acquiring a consistently reliable waterline measurement for the ship, especially in rough weather. See Section B – Additional Data Processing for further details. This survey fully meets IHO Specifications for Order 1 surveys, and therefore no additional effort was made to further reduce the observed standard deviation. ***Concur.***

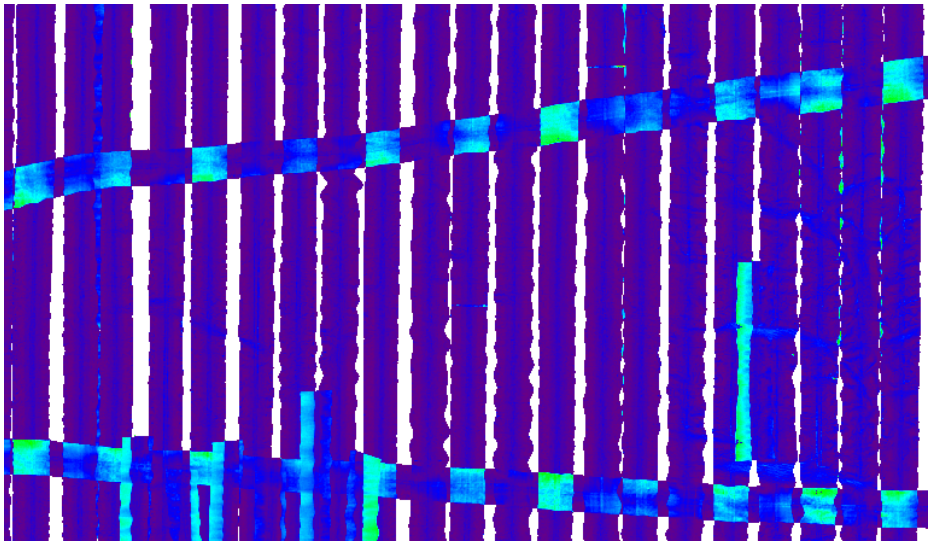


Figure 5: Crossline to mainscheme on DN 288 (Std Dev layer)

B 3. CORRECTIONS TO ECHO SOUNDING

HDCS sounding data were reduced to mean lower-low water (MLLW) using verified water levels from Duck, NC (8651370) and applied using final approved discrete zoning provided by CO-OPS and illustrated in figure 8. ***Concur.***

Figure 6: Final Tide Zoning

All other datum reduction procedures conform to those outlined in the DAPR*.

All methods and instruments used for sound velocity correction were as described in the DAPR*. A table detailing all sound velocity casts is located in Separate II of this Descriptive Report.

B 4. DATA PROCESSING

SVP casts were applied to HDCS data using the nearest in time option in CARIS. ***Concur.***

B 4.1 Total Propagated Error

For the 2010 field season, Total Propagated Error (TPE) parameters for sound speed and tides are calculated separately for each project. The TPE values in table 3 below were applied to Survey H12200:

Vessel	Tide Values		Sound Speed Values		
	Measured	Zoning	Measured	Surface	
S222	0.00	0.08m	1m/s	0.2m/s	MVP
S222	0.00	0.08m	4m/s	0.2m/s	CTD

Table 4: TPE Parameters

These values were used as inputs to the TPE calculation for all MBES data immediately following CARIS Merge.

B 4.2 BASE Surfaces and Mosaics

The following table describes all BASE Surfaces submitted as part of Survey H12200:

Name of Surfaces and /or Mosaics	Resolution	Type	Purpose
H12200_Dev1_Cube_NOAA_50cm_Final	0.5m	CUBE	Object Detection
H12200_Dev2_Cube_NOAA_50cm_Final	0.5m	CUBE	Object Detection
H12200_Dev3_Cube_NOAA_50cm_Final	0.5m	CUBE	Object Detection
H12200_Dev4_Cube_NOAA_50cm_Final	0.5m	CUBE	Object Detection
H12200_Dev5_Cube_NOAA_50cm_Final	0.5m	CUBE	Object Detection
H12200_Dev6_Cube_NOAA_50cm_Final	0.5m	CUBE	Object Detection
H12200_MB_CUBE_NOAA_2m_Final	2m	CUBE	Sounding Coverage
H12200_SSS_100_1m	1m	SSS Mosaic	100% Side Scan Coverage
H12200_SSS_200_1m	1m	SSS Mosaic	200% Side Scan Coverage

Table 5: Field Sheets

This survey was processed using the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm. The CUBE configurations were set to NOAA_0.5m, and NOAA_2m, as required for each of the various surface resolutions. Refer to the 2010 Data Acquisition and Processing Report*, 2010 Field Procedures Manual, and CARIS HIPS and SIPS 7.0 manual for further discussion. ***Concur.***

B 4.3 Data Cleaning

The survey data were cleaned using the swath and subset editor tools in CARIS. All areas of the BASE surface that indicated a high standard deviation were examined and cleaned as required such that no residual errors exist in the surface that exceed the IHO Order 1 depth accuracy requirements. ***Concur.***

C. HORIZONTAL AND VERTICAL CONTROL

As per FPM section 5.2.3.2.3 a HVCR report was not filed as no horizontal and vertical control stations were established by the field party for this survey. A summary of horizontal and vertical control for this survey follows. ***Concur.***

C 1.1 Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacon at Driver, VA (289 kHz), were used during this survey. ***Concur.***

No horizontal control stations were established by the field party for this survey.

C 1.2 Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at Duck, NC (8651370) is the datum control for H12200. A request for delivery of final approved (verified) tides for this survey was forwarded to N/OPS1 on 10 October 2010 in accordance with the FPM and project letter instructions. Final smooth tide letter was received 25 October 2010, and states preliminary zoning is accepted as the final zoning. ***Concur.***

D. RESULTS AND RECOMMENDATIONS*

See also HCell Report and Appendix II

D.1 Chart Comparison

Survey H12200 was compared to Charts 12221, (80th Ed., January 2009, 1:80,000), chart 12207 (22nd Ed., October 2009, 1:80,000), and ENCs US4NC32M, US4VA12M, and US5VA11M. ***Concur.***

D 1.1 Chart 12221 Comparison

In general the soundings agree within 1 or 2 feet. Minor changes in bottom characteristics in the survey area were observed. H12200_Bottom_Samples.hob documents the results of bottom samples acquired with this survey and can be found in Appendix V – Supplemental Survey Records and Correspondence, of this Descriptive Report. ***Concur.***

D 1.2 Chart 12207 Comparison

In general the soundings agree within 1 or 2 feet. Minor changes in bottom characteristics in the survey area were observed. H12200_Bottom_Samples.hob documents the results of bottom samples acquired with this survey and can be found in Appendix V – Supplemental Survey Records and Correspondence*, of this Descriptive Report. ***Concur.***

D 1.3 ENC US4NC32M Comparison

In general the soundings agree to within 1 meter. ***Concur.***

D 1.4 ENC US4VA12M Comparison

In general the soundings agree to within 1 meter. ***Concur.***

D 1.5 ENC US5VA11M Comparison

In general the soundings agree to within 1 meter. ***Concur.***

D.2 Additional Results

D.2.1 Automated Wreck and Obstruction Information Service (AWOIS) Items

One AWOIS item was investigated for this survey. The investigated AWOIS item is described in detail in Appendix II of this report. ***Concur.***

D.2.4 Shoreline

There is no shoreline within the sheet limits of survey H12200. A limited shoreline verification was assigned for this survey in the form of a Composite Source File (CSF), which was included with the project instructions. The only feature in the CSF that pertains to this survey is the Y ”A” buoy which is addressed in the ATONs section below. No additional “shoreline” is addressed. ***Concur.***

D.2.5 Charted Features

D.2.6 Charted Pipelines and Cables

There are no charted cables or pipelines within survey area.

D.2.7 Bridges, Ferry Routes, and Overhead Cables

There are no ferry routes, bridges, or overhead cable crossings within the limits of the survey.

D 2.8 Platform Structures

There are no platform structures within the survey area.

D.3 Dangers to Navigation and Shoals

D 3.1 Dangers to Navigation

One danger to navigation was found and reported to the NOAA's Office of Coast Survey, Marine Chart Division (MCD) for verification and final submission. A copy of the Danger to Navigation Report is included in Appendix I, and a copy of the DTON email to MCD is located in Appendix V of this Descriptive Report. ***Concur.***

A table of all Dangers to Navigation identified in this survey, with their submission date to MCD, is included below.

DTON Number	Description	Latitude	Longitude	Date Submitted
1	Wreck	36° 51' 40.4" N	075° 36' 18.6" W	5 October 2010

Table 6: Dangers to Navigation

D 3.2 Shoals

There are no shoals within the survey limits of H12200. ***Concur.***

D.4 Aids to Navigation

There is one Aid to Navigation (ATON) within the limits of H12200. ***Concur.***

The Aid to Navigation was found to be on station and severing its intended purpose, The hydrographer has no recommendations regarding this ATON. ***Concur.***

D.5 Coast Pilot Information

The relevant Coast Pilot sections were reviewed and no changes were noted. A memo detailing this finding was written on 11/29/2010 and submitted to NSD's Coast Pilot Branch via email on 12/15/2010 in accordance with FPM Section 5.2.3.2.5. See Appendix V* for correspondence.

D.6 Miscellaneous

Bottom Samples

Bottom samples were collected throughout the survey area. A total of 11 bottom samples were acquired. While the survey area is not specifically designated as an anchorage, large container and tanker vessels have been observed anchoring in the area. Spacing between bottom samples for this survey exceed the 1200m maximum spacing between samples as specified in HSSD 7.1 for potential anchorage areas, and therefore depending on interpretation of the HSSD, bottom sample spacing may not be adequate to meet spec. Minor changes in the seabed characterization were observed in the survey area. ***Concur.***

A list of bottom samples and H12200_Bottom_Samples.hob are contained in Appendix V*.

Environmental Conditions and Notes

No unusual environmental condition occurred.

D.7 Adequacy of Survey

This survey is considered complete and adequate to supersede charted depths and features within the common area except as noted in this report.

Summary and Recommendations for Additional Work

No additional work is needed to complete this survey. No changes significant to navigation have been noted and it is recommended that this survey receive normal processing priority.

E . APPROVAL

As Lead Hydrographer, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the Office of Coast Survey Hydrographic Surveys Division's *Field Procedures Manual*, and NOS *Hydrographic Surveys Specifications and Deliverables*. Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy.

All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to N/CS33, Atlantic Hydrographic Branch.

The Data Acquisition and Processing Report for OPR-D304-TJ-10 is submitted separately and contains additional information relevant to this survey.

Approved and Forwarded:

Mark Blankenship
2011.02.14
15:27:40 -05'00'

Digitally signed by Shepard Smith
Date: 2011.02.15 09:45:30 -05'00'

LT Mark A. Blankenship, NOAA
Field Operations Officer

CDR Shepard M. Smith, NOAA
Commanding Officer

In addition, the following individuals were also responsible for overseeing data acquisition and processing of this survey:

Survey Managers:

Kim Glomb
2011.02.14
15:29:12 -05'00'

ST Kimberly Glomb
Sheet Manager

Appendix I

Dangers to Navigation

One reported

H12200 Danger to Navigation

Registry Number: H12200
State: Virginia
Locality: Approaches to Chesapeake Bay
Sub-locality: 19 NM East of Cape Henry
Project Number: OPR-D304-TJ-10
Survey Date: 09/27/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12207	22nd	10/01/2009	1:80,000 (12207_1)	USCG LNM: 1/11/2011 (5/17/2011) NGA NTM: 6/9/2007 (5/21/2011)
12221	81st	04/01/2011	1:80,000 (12221_1)	USCG LNM: 5/31/2011 (5/31/2011) NGA NTM: 10/30/2010 (6/11/2011)
12200	49th	06/01/2007	1:419,706 (12200_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	46 ft Dangerous Wreck	Wreck	14.02 m	36° 51' 40.4" N	075° 36' 18.6" W	11448

1.1) 46 ft Dangerous Wreck

DANGER TO NAVIGATION

Primary Feature for AWOIS Item #11448

Search Position:	36° 51' 28.6" N, 075° 35' 41.9" W
Historical Depth:	[None]
Search Radius:	200
Search Technique:	[None]
Technique Notes:	[None]

History Notes:

LNM43/74--5TH CGD; 77 FOOT FISHING VESSEL GULF HUSTLER HAS BEEN REPORTED SUNK IN APPROXIMATELY 66 FEET OF WATER IN POSITION LATITUDE 36°51'48" NORTH, LONGITUDE 75°30'30" WEST (NAD 27).

CL1404/74--SP-AMC-6-RU/HE/74; 77 FOOT FISHING VESSEL WITH A 12.6 FOOT DEPTH AND 24 FOOT BEAM REPORTED SUNK SEPTEMBER 9, 1974, IN LATITUDE 36°51.8N, LONGITUDE 75°30.4W (NAD 27). POSITION DETERMINED BY LORAN FIX. SOURCE IS USCG 5TH DIST. NO SOUNDINGS TAKEN DURING USCG INVESTIGATION. COMANDING OFFICER OF USCG INVESTIGATING WRECK ESTIMATED THE POSITION 0.5 TO 1.0 NM NORTHWEST OF CHESAPEAKE BAY ENTRANCE APPROACH BUOY (BW) IN THE AREA. MARKER BUOYS CONSISTING OF RED AND WHITE CLOROX BOTTLES WERE SET NEAR THE SITE OF THE WRECK, HOWEVER THE BUOYS MAY NO LONGER BE PRESENT. FOR FURTHER INFORMATION CONCERNING THE WRECK'S POSITION CONTACT C.O. LTJG SUGIMOTO PHONE: 804-464-6930 LITTLE CREEK, VIRGINIA.

CL732/82--US DEPT. OF COMMERCE; COMMERCIAL FISHERMAN/DIVER INDICATES THAT THE CHARTED POSITION OF THE WRECK GULF HUSTLER AT LAT 36-51-48N, LONG 75-30-30 ISW (NAD 27) IS INCORRECT. SALVAGE ATTEMPTS HAVE SHIFTED THE WRECK TO LAT 36-51-28.1N, LONG 75-35-43.2W (NAD 27) G.P. VIA LORAN. DIVERS HAVE VERIFIED WRECK IDENTITY. IT IS RECOMMENDED THAT THE WRECK SYMBOL BE REPOSITIONED.

WRECK CURRENTLY APPEARS ON CHART IN BOTH POSITIONS. IN ORIGINAL POSITION AS SUBMERGED WRECK ED (AWOIS NO. 11449) , AND IN NEW POSITION AS SUBMERGED WRECK PA. (ENT 03/02, PSH)

Survey Summary

Survey Position:	36° 51' 40.4" N, 075° 36' 18.6" W
Least Depth:	14.02 m (= 46.01 ft = 7.668 fm = 7 fm 4.01 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.006 m ; **TVU (TPEv)** ±0.246 m
Timestamp:	2010-270.19:34:47.262 (09/27/2010)
Survey Line:	h12200 / tj_s222_reson7125_stbd / 2010-270 / 601_1934

Profile/Beam: 398/432

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

Dangerous wreck found with 200% Klein 5000 side scan sonar. A least depth of 14.05 meters (46.11 feet) was acquired with Reson 7125 multibeam. Soundings were corrected to MLLW with observed tides and preliminary tide zoning. Wreck is located about 960 meters from charted wreck PA.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12200/tj_s222_reson7125_stbd/2010-270/601_1934	398/432	0.00	000.0	Primary
OPR-D304-TJ-10 AWOIS	AWOIS # 11448	975.87	291.8	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous wreck.

Cartographically-Rounded Depth (Affected Charts):

46ft (12207_1, 12221_1)

7 ½fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 2:dangerous wreck

CONVIS - 2:not visual conspicuous

OBJNAM - Dangerous Wreck

QUASOU - 6:least depth known

SORDAT - 20101015

SORIND - US,US,graph,H12200

STATUS - 1:permanent

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 14.024 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Dangerous wreck was charted during DtoN processing.

COMPILATION NOTES: Concur with clarification. Submitted as DToN #1 for H12200. Feature is shown on chart 12207; 22nd Ed., 10/ 2009 and smaller scale charts as a dangerous wreck, least depth 46 feet. DToN feature is also AWOIS Item #11448 “F/V Gulf Hustler” and should also be referred to in Appendix II section 3 of this report. Retain dangerous wreck, least depth 46 ft as charted at 36°51'40.378" , -075°36'18.570". Delete dangerous wreck, least depth unknown in 36°51'28.642" , -075°35'41.888" and update AWOIS database.

Feature Images

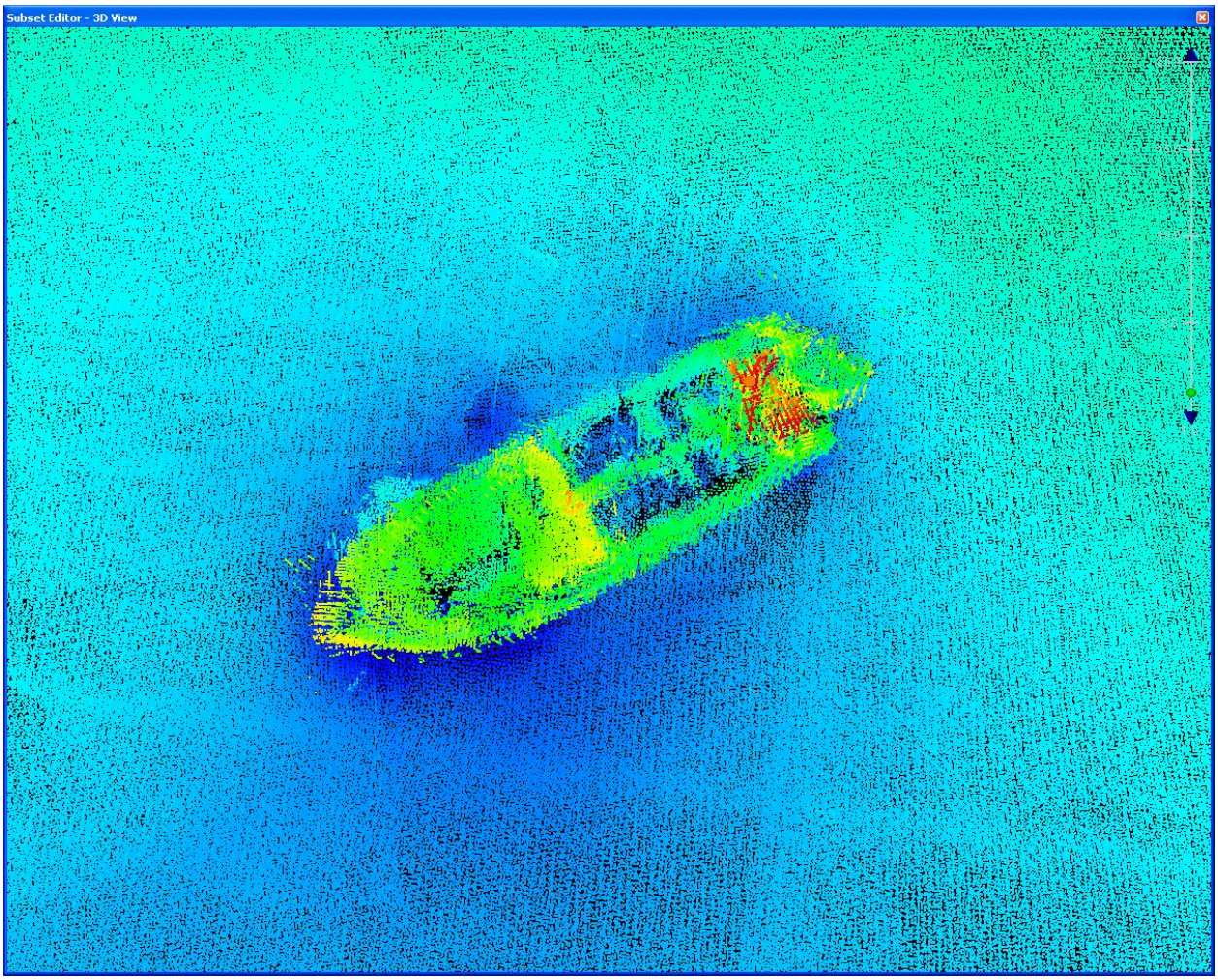


Figure 1.1.1

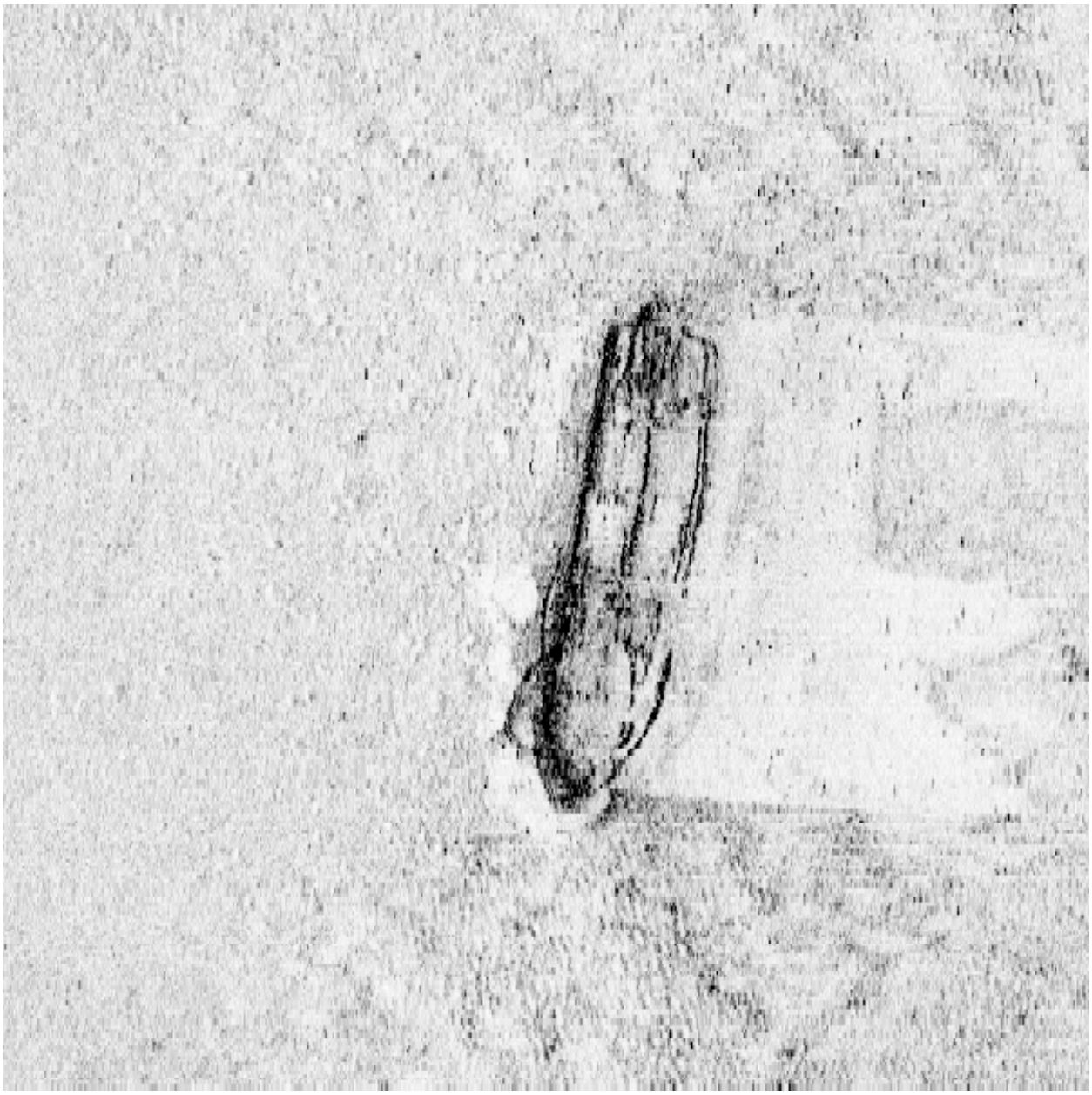


Figure 1.1.2

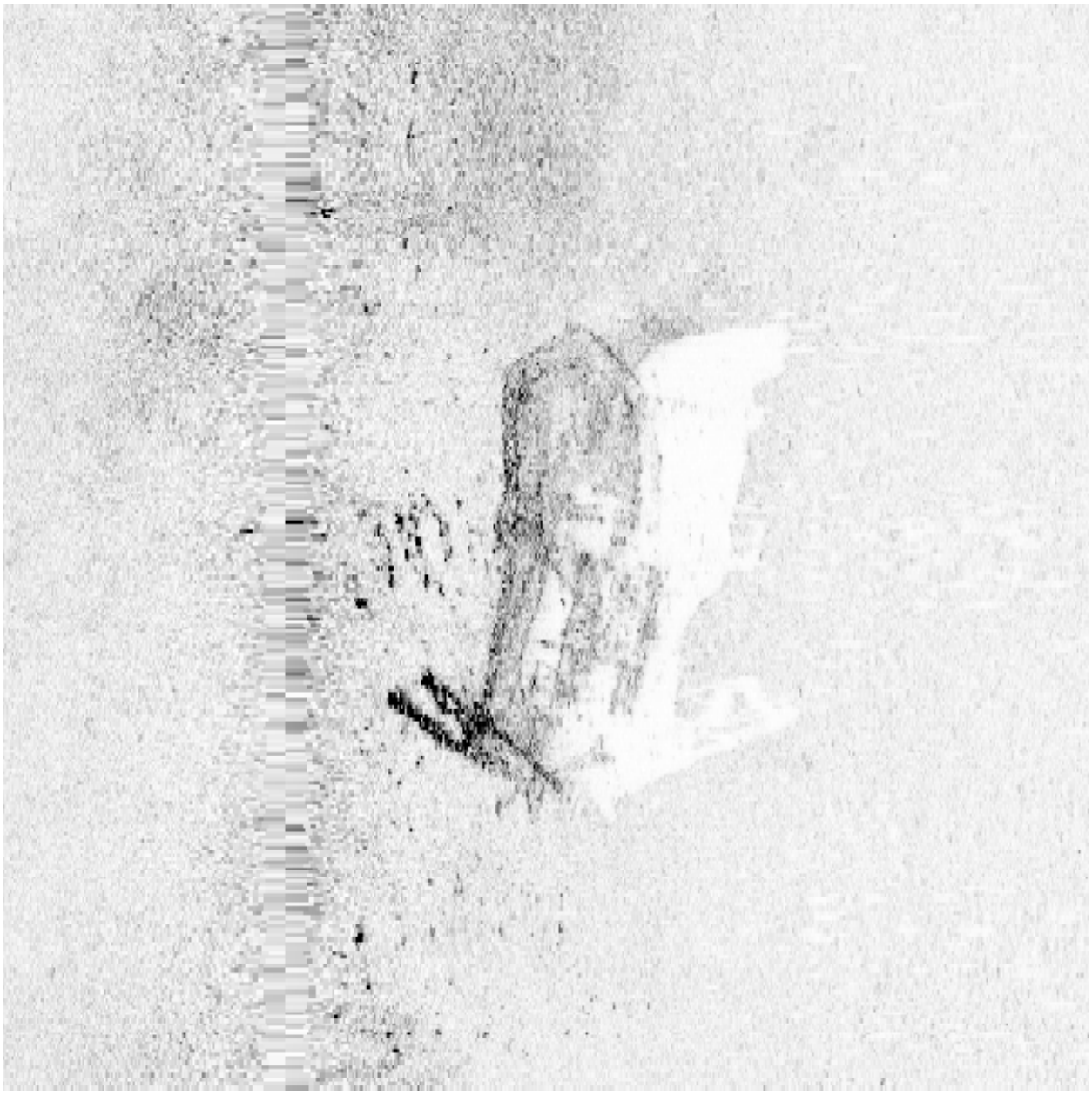


Figure 1.1.3

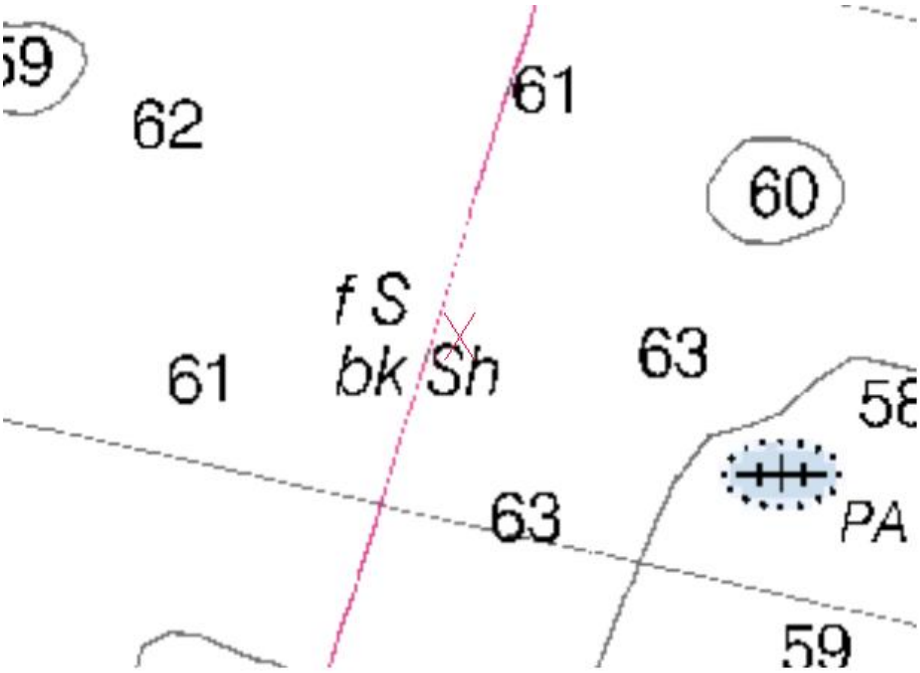


Figure 1.1.4

Appendix II

Survey Features Report

1. **Charted Features**

   -N/A

2. **Uncharted Features**

   -Two

3. **AWOIS Items**

   -One

4. **Bottom Samples**

   -Eleven

5. **Bluenote Disprovals**

   -Twelve

1. Charted Features

-N/A

2. Uncharted Features

-Two

H12200 Uncharted Features

Registry Number: H12200
State: Virginia
Locality: Approaches to Chesapeake Bay
Sub-locality: 19 NM East of Cape Henry
Project Number: OPR-D304-TJ-10
Survey Date: 10/07/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12207	22nd	10/01/2009	1:80,000 (12207_1)	USCG LNM: 1/11/2011 (5/17/2011) NGA NTM: 6/9/2007 (5/21/2011)
12221	81st	04/01/2011	1:80,000 (12221_1)	USCG LNM: 5/31/2011 (5/31/2011) NGA NTM: 10/30/2010 (6/11/2011)
12200	49th	06/01/2007	1:419,706 (12200_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	54 ft Obstruction	Obstruction	16.67 m	36° 51' 43.2" N	075° 35' 30.9" W	---
1.2	51 ft Obstruction	Obstruction	15.76 m	36° 49' 13.0" N	075° 35' 18.7" W	---

1.1) 54 ft Obstruction

Survey Summary

Survey Position:	36° 51' 43.2" N, 075° 35' 30.9" W
Least Depth:	16.67 m (= 54.69 ft = 9.114 fm = 9 fm 0.69 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.006 m ; **TVU (TPEv)** ±0.256 m
Timestamp:	2010-280.02:11:03.831 (10/07/2010)
Survey Line:	h12200 / tj_s222_reson7125_stbd / 2010-280 / 508_0210
Profile/Beam:	418/289
Charts Affected:	12207_1, 12221_1, 12200_1, 13003_1

Remarks:

Obstruction found with 200% Klein 5000 side scan sonar. A least depth of 16.67 meters (54.69 feet) was acquired with Reson 7125 multibeam. Soundings were corrected to MLLW with verified tides and final tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12200/tj_s222_reson7125_stbd/2010-280/508_0210	418/289	0.00	000.0	Primary
h12200/tj_s222_klein5000_sss100/2010-253/146_100910220800	0001	6.18	017.4	Secondary
h12200/tj_s222_klein5000_sss200/2010-271/246_100928015100	0002	6.70	286.6	Secondary

Hydrographer Recommendations

Chart obstruction.

Cartographically-Rounded Depth (Affected Charts):

54ft (12207_1, 12221_1)

9fm (12200_1, 13003_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	OBJNAM - Obstruction
	QUASOU - 6:least depth known
	SORDAT - 20101015
	SORIND - US,US,graph,H12200

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 16.668 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Concur, chart obstruction at survey position, 36°51'43.210" , -075°35'30.865."

COMPILATION NOTES: Concur with clarification. Chart dangerous obstruction, least depth 54 ft, at survey position.

Feature Images

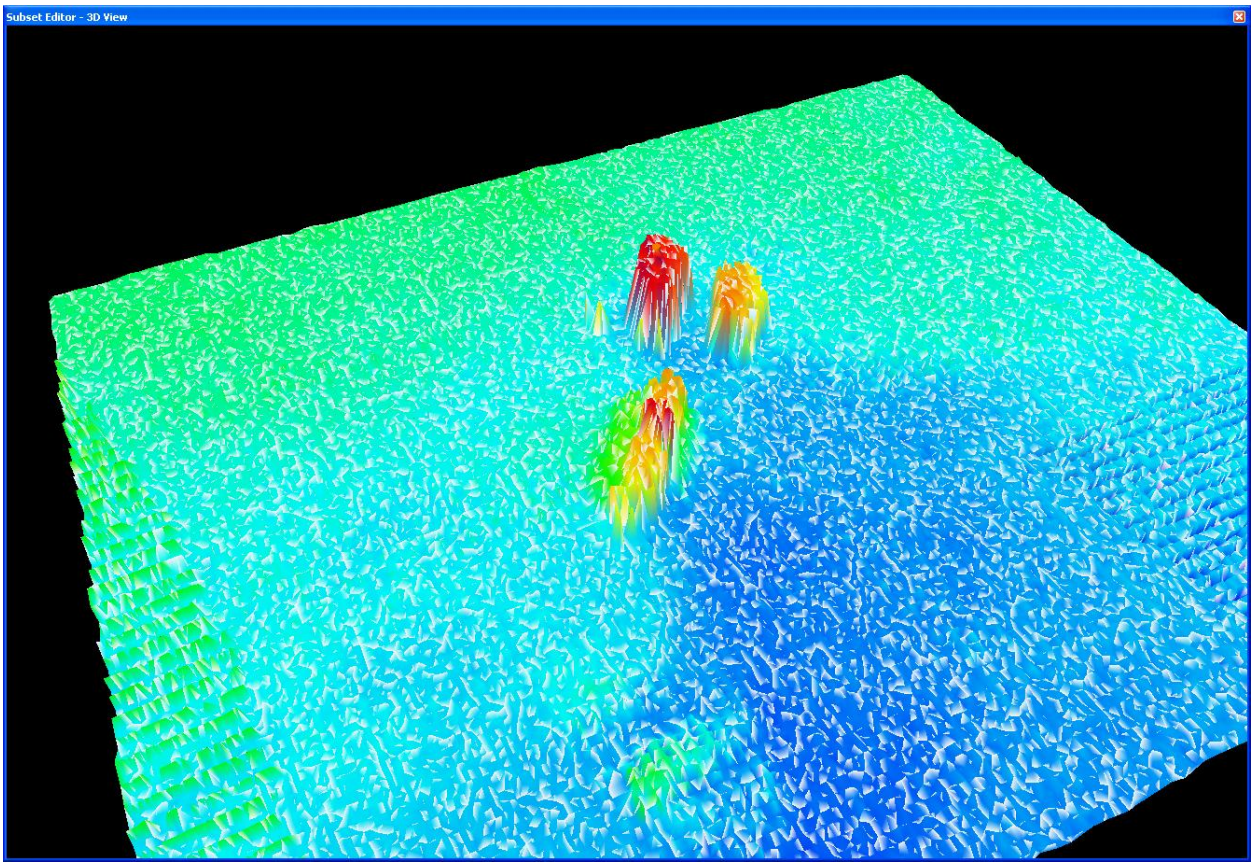


Figure 1.1.1

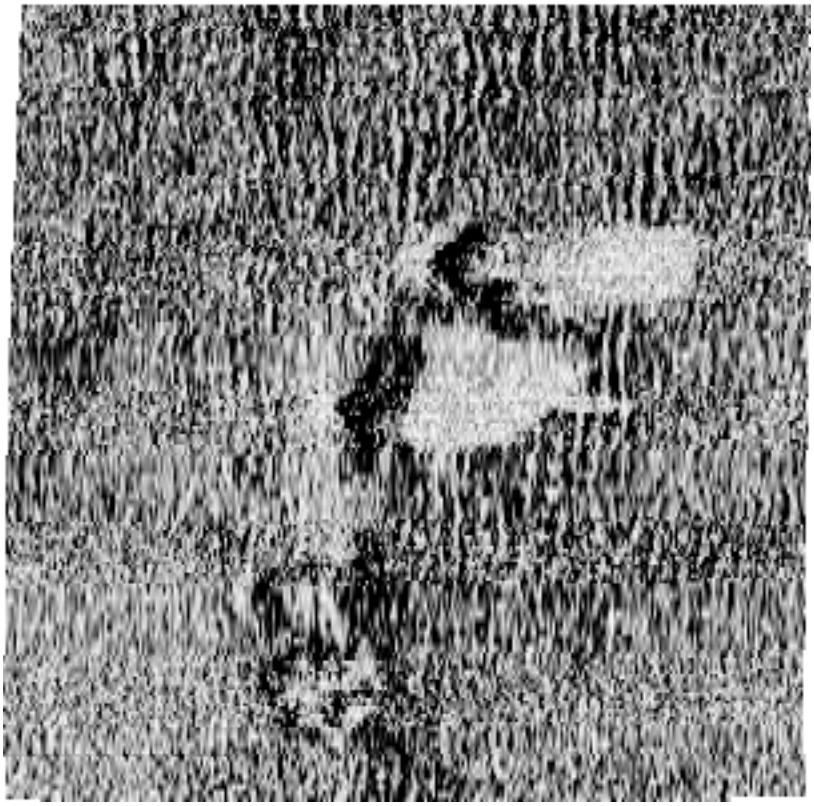


Figure 1.1.2

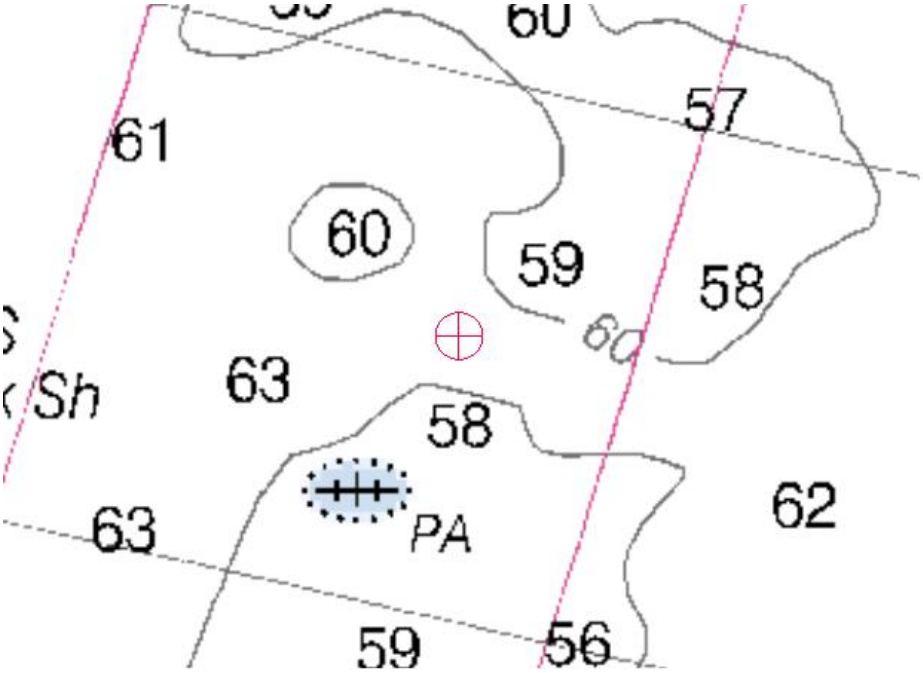


Figure 1.1.3

1.2) 51 ft Obstruction

Survey Summary

Survey Position: 36° 49' 13.0" N, 075° 35' 18.7" W

Least Depth: 15.76 m (= 51.72 ft = 8.620 fm = 8 fm 3.72 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.006 m ; **TVU (TPEv)** ±0.256 m

Timestamp: 2010-280.03:10:46.205 (10/07/2010)

Survey Line: h12200 / tj_s222_reson7125_stbd / 2010-280 / 519_0309

Profile/Beam: 505/185

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

Obstruction found with 200% Klein 5000 side scan sonar. A least depth of 15.76 meters (51.72 feet) was acquired with Reson 7125 multibeam. Soundings were corrected to MLLW with verified tides and final tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12200/tj_s222_reson7125_stbd/2010-280/519_0309	505/185	0.00	000.0	Primary
h12200/tj_s222_klein5000_sss200/2010-254/248_100911062400	0001	6.79	167.6	Secondary
h12200/tj_s222_klein5000_sss100/2010-253/148_100910202700	0001	6.86	181.6	Secondary

Hydrographer Recommendations

Chart obstruction.

Cartographically-Rounded Depth (Affected Charts):

51ft (12207_1, 12221_1)

8 ½fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: OBJNAM - Obstruction

QUASOU - 6:least depth known

SORDAT - 20101015

SORIND - US,US,graph,H12200

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 15.764 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Concur, chart obstruction at survey position, 36°49'13.006" , -075°35'18.702."

COMPILATION NOTES: Concur with clarification. Chart dangerous obstruction, least depth 51 ft, at survey position.

Feature Images

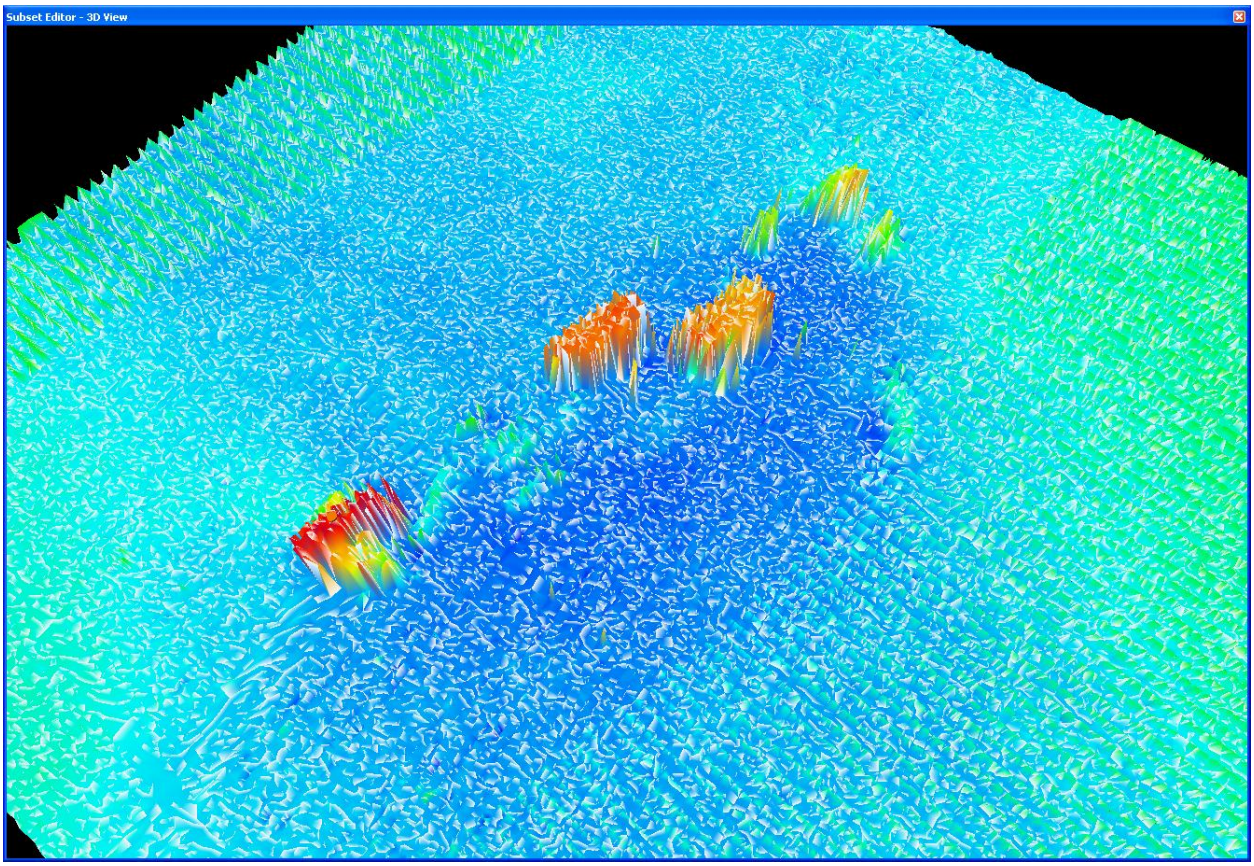


Figure 1.2.1

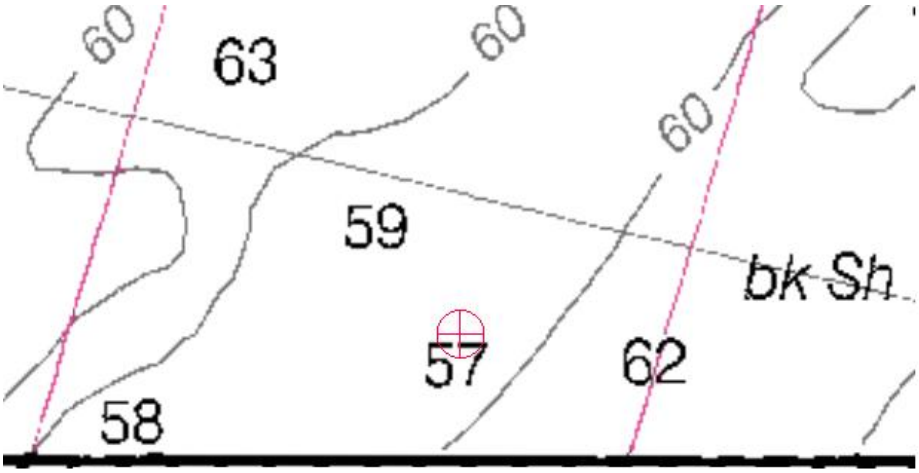


Figure 1.2.2

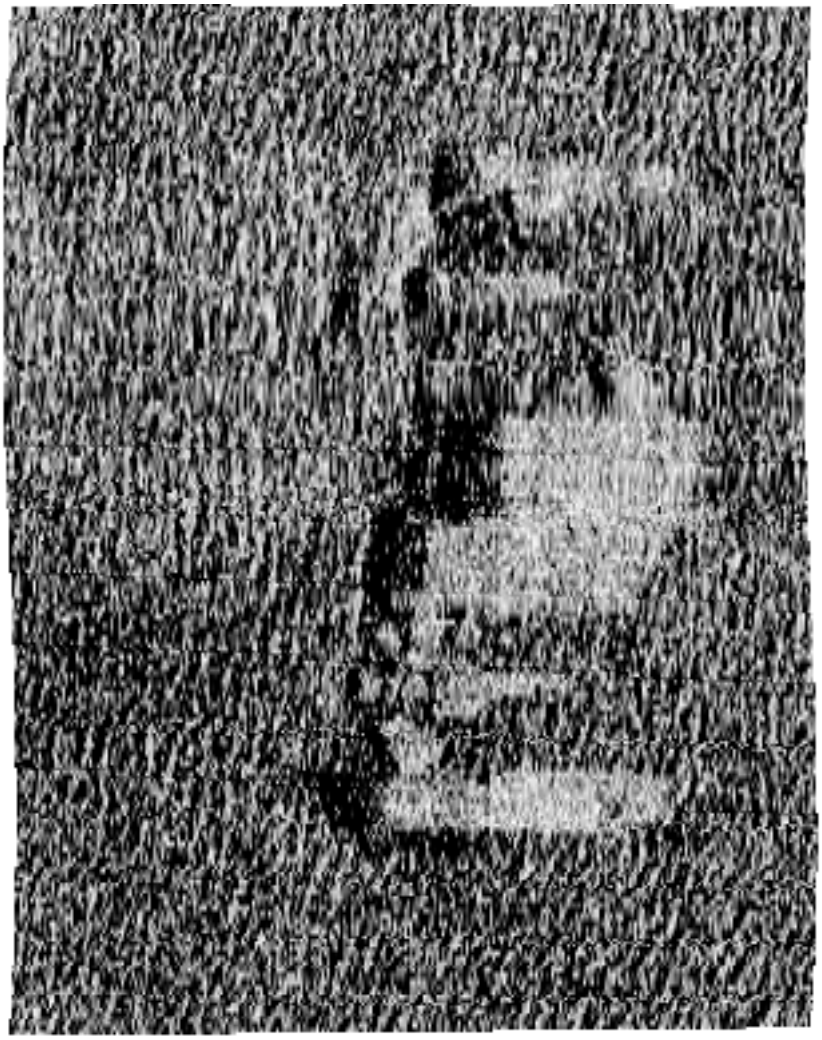


Figure 1.2.3

3. AWOIS Items

-One

H12200 AWOIS Item

Registry Number: H12200
State: Virginia
Locality: Approaches to Chesapeake Bay
Sub-locality: 19 NM East of Cape Henry
Project Number: OPR-D304-TJ-10
Survey Date: 09/27/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12207	22nd	10/01/2009	1:80,000 (12207_1)	USCG LNM: 1/11/2011 (5/17/2011) NGA NTM: 6/9/2007 (5/21/2011)
12221	81st	04/01/2011	1:80,000 (12221_1)	USCG LNM: 5/31/2011 (5/31/2011) NGA NTM: 10/30/2010 (6/11/2011)
12200	49th	06/01/2007	1:419,706 (12200_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	46 ft Dangerous Wreck	AWOIS	14.02 m	36° 51' 40.4" N	075° 36' 18.6" W	---

1.1) AWOIS #11448 - AWOIS #11448 GULF HUSTLER

DANGER TO NAVIGATION

Primary Survey Feature is Profile/Beam - 398/432 from h12200 / tj_s222_reson7125_stbd / 2010-270 / 601_1934

Search Position:	36° 51' 28.6" N, 075° 35' 41.9" W
Historical Depth:	[None]
Search Radius:	200
Search Technique:	[None]
Technique Notes:	[None]

History Notes:

LNM43/74--5TH CGD; 77 FOOT FISHING VESSEL GULF HUSTLER HAS BEEN REPORTED SUNK IN APPROXIMATELY 66 FEET OF WATER IN POSITION LATITUDE 36°51'48" NORTH, LONGITUDE 75°30'30" WEST (NAD 27).

CL1404/74--SP-AMC-6-RU/HE/74; 77 FOOT FISHING VESSEL WITH A 12.6 FOOT DEPTH AND 24 FOOT BEAM REPORTED SUNK SEPTEMBER 9, 1974, IN LATITUDE 36°51.8N, LONGITUDE 75°30.4W (NAD 27). POSITION DETERMINED BY LORAN FIX. SOURCE IS USCG 5TH DIST. NO SOUNDINGS TAKEN DURING USCG INVESTIGATION. COMANDING OFFICER OF USCG INVESTIGATING WRECK ESTIMATED THE POSITION 0.5 TO 1.0 NM NORTHWEST OF CHESAPEAKE BAY ENTRANCE APPROACH BUOY (BW) IN THE AREA. MARKER BUOYS CONSISTING OF RED AND WHITE CLOROX BOTTLES WERE SET NEAR THE SITE OF THE WRECK, HOWEVER THE BUOYS MAY NO LONGER BE PRESENT. FOR FURTHER INFORMATION CONCERNING THE WRECK'S POSITION CONTACT C.O. LTJG SUGIMOTO PHONE: 804-464-6930 LITTLE CREEK, VIRGINIA.

CL732/82--US DEPT. OF COMMERCE; COMMERCIAL FISHERMAN/DIVER INDICATES THAT THE CHARTED POSITION OF THE WRECK GULF HUSTLER AT LAT 36-51-48N, LONG 75-30-30 ISW (NAD 27) IS INCORRECT. SALVAGE ATTEMPTS HAVE SHIFTED THE WRECK TO LAT 36-51-28.1N, LONG 75-35-43.2W (NAD 27) G.P. VIA LORAN. DIVERS HAVE VERIFIED WRECK IDENTITY. IT IS RECOMMENDED THAT THE WRECK SYMBOL BE REPOSITIONED.

WRECK CURRENTLY APPEARS ON CHART IN BOTH POSITIONS. IN ORIGINAL POSITION AS SUBMERGED WRECK ED (AWOIS NO. 11449) , AND IN NEW POSITION AS SUBMERGED WRECK PA. (ENT 03/02, PSH)

Survey Summary

Survey Position:	36° 51' 40.4" N, 075° 36' 18.6" W
Least Depth:	14.02 m (= 46.01 ft = 7.668 fm = 7 fm 4.01 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.006 m ; **TVU (TPEv)** ±0.246 m
Timestamp:	2010-270.19:34:47.262 (09/27/2010)

Survey Line: h12200 / tj_s222_reson7125_stbd / 2010-270 / 601_1934

Profile/Beam: 398/432

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

Dangerous wreck found with 200% Klein 5000 side scan sonar. A least depth of 14.05 meters (46.11 feet) was acquired with Reson 7125 multibeam. Soundings were corrected to MLLW with observed tides and preliminary tide zoning. Wreck is located about 960 meters from charted wreck PA.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12200/tj_s222_reson7125_stbd/2010-270/601_1934	398/432	0.00	000.0	Primary
OPR-D304-TJ-10 AWOIS	AWOIS # 11448	975.87	291.8	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous wreck.

Cartographically-Rounded Depth (Affected Charts):

46ft (12207_1, 12221_1)

7 ½fm (12200_1, 13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 2:dangerous wreck

CONVIS - 2:not visual conspicuous

OBJNAM - Dangerous Wreck

QUASOU - 6:least depth known

SORDAT - 20101015

SORIND - US,US,graph,H12200

STATUS - 1:permanent

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 14.024 m

WATLEV - 3:always under water/submerged

Office Notes

SAR NOTES: Dangerous wreck was charted during DtoN processing.

COMPILATION NOTES: Concur with clarification. Submitted as DToN #1 for H12200. Feature is shown on chart 12207; 22nd Ed., 10/ 2009 and smaller scale charts as a dangerous wreck, least depth 46 feet. DToN feature is also AWOIS Item #11448 “F/V Gulf Hustler” and should also be referred to in Appendix II section 3 of this report. Retain dangerous wreck, least depth 46 ft as charted at 36°51'40.378" , -075°36'18.570". Delete dangerous wreck, least depth unknown in 36°51'28.642" , -075°35'41.888" and update AWOIS database.

Feature Images

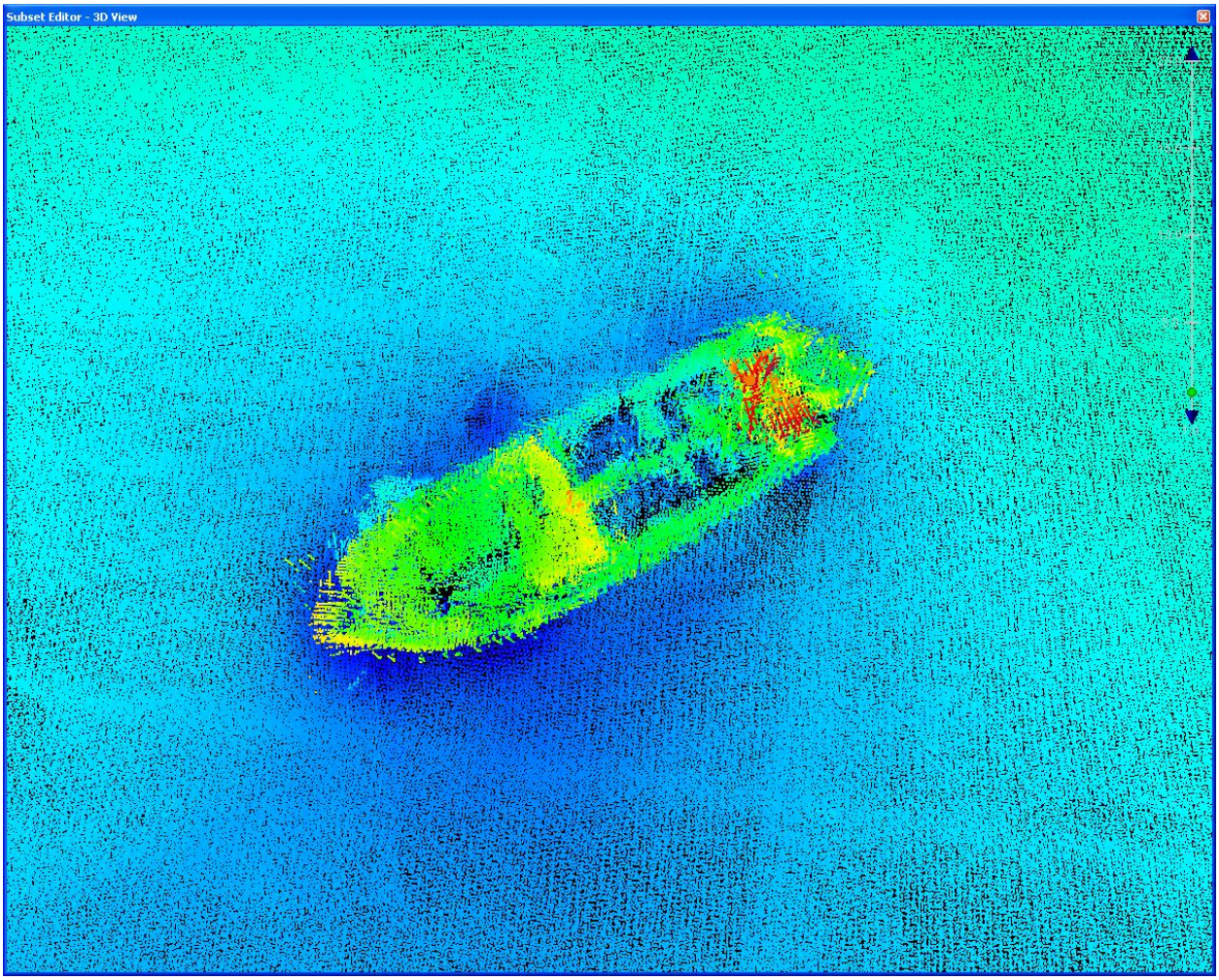


Figure 1.1.1

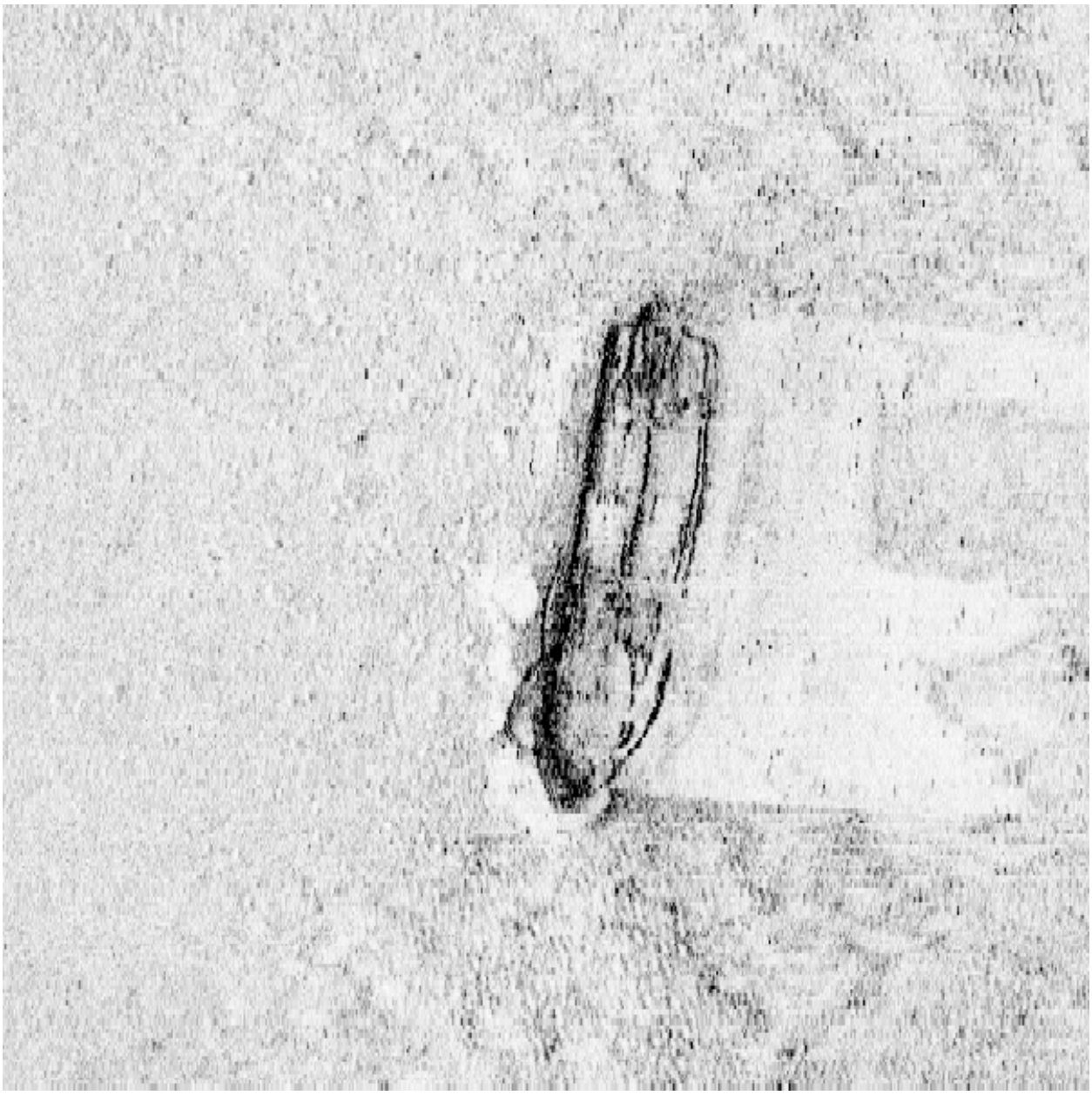


Figure 1.1.2

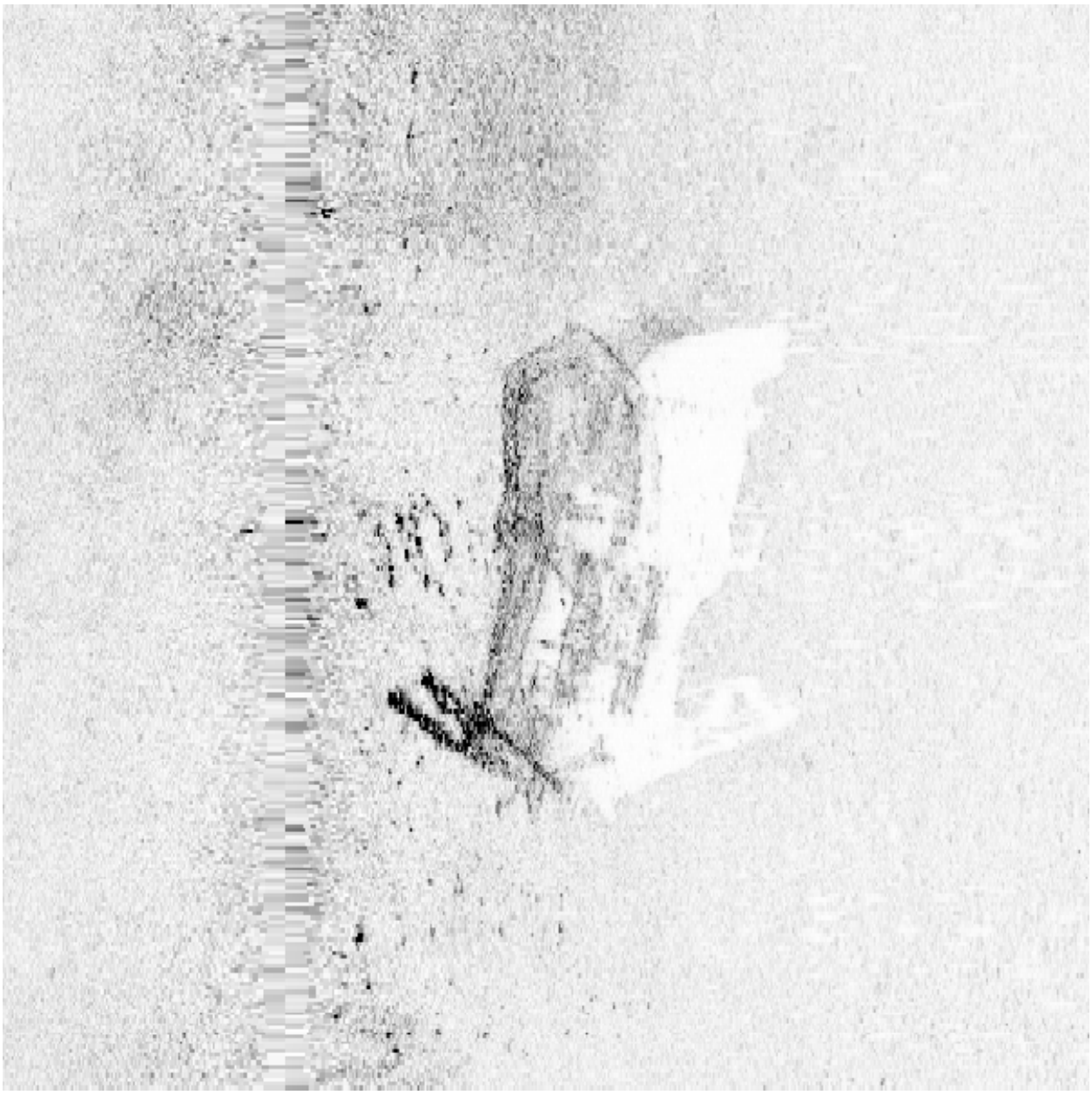


Figure 1.1.3

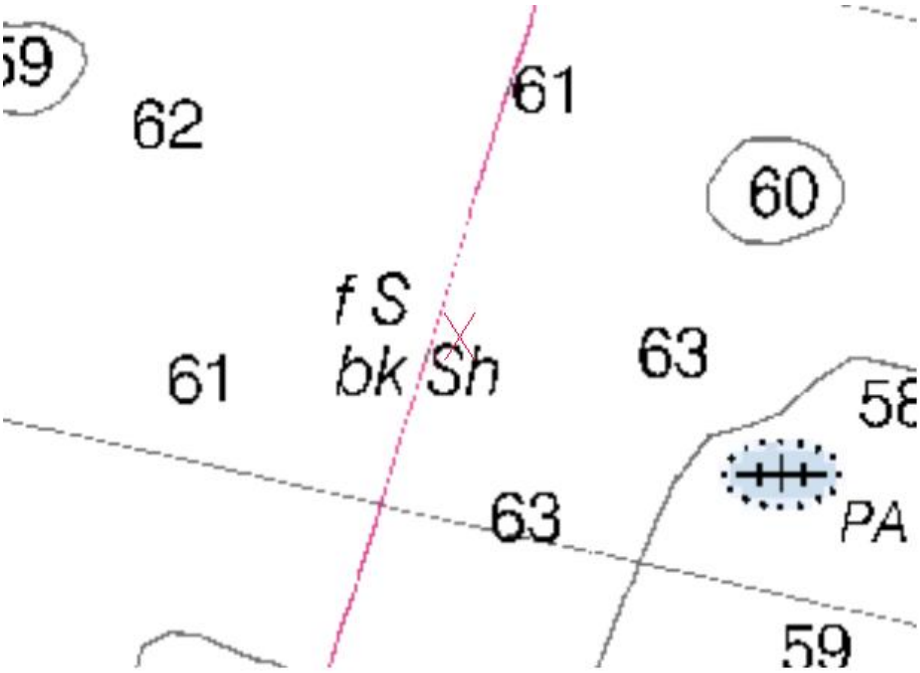


Figure 1.1.4

4. Bottom Samples

-Eleven

H12200 Bottom Samples

Registry Number: H12200
State: Virginia
Locality: Approaches to Chesapeake Bay
Sub-locality: 19 NM East of Cape Henry
Project Number: OPR-D304-TJ-10
Survey Dates: 09/01/2008 - 10/15/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12208	13th	08/01/2008	1:50,000 (12208_1)	[L]NTM: ?
12221	81st	04/01/2011	1:80,000 (12221_1)	USCG LNM: 5/31/2011 (5/31/2011) NGA NTM: 10/30/2010 (6/11/2011)
12207	22nd	10/01/2009	1:80,000 (12207_1)	USCG LNM: 1/11/2011 (5/17/2011) NGA NTM: 6/9/2007 (5/21/2011)
12280	8th	03/01/2008	1:200,000 (12280_2)	[L]NTM: ?
12200	49th	06/01/2007	1:419,706 (12200_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Bottom Sample	GP	[None]	36° 55' 42.0" N	075° 40' 24.1" W	---
1.2	Bottom Sample	GP	[None]	36° 54' 24.1" N	075° 38' 58.9" W	---
1.3	Bottom Sample	GP	[None]	36° 50' 31.0" N	075° 38' 39.0" W	---
1.4	Bottom Sample	GP	[None]	36° 52' 51.7" N	075° 38' 20.7" W	---
1.5	Bottom Sample	GP	[None]	36° 55' 47.9" N	075° 37' 14.4" W	---
1.6	Bottom Sample	GP	[None]	36° 49' 20.0" N	075° 37' 04.0" W	---
1.7	Bottom Sample	GP	[None]	36° 51' 40.0" N	075° 36' 34.0" W	---
1.8	Bottom Sample	GP	[None]	36° 53' 51.7" N	075° 36' 25.9" W	---
1.9	Bottom Sample	GP	[None]	36° 54' 42.1" N	075° 35' 21.1" W	---
1.10	Bottom Sample	GP	[None]	36° 50' 37.0" N	075° 35' 19.0" W	---

1.11	Bottom Sample	GP	[None]	36° 52' 31.0" N	075° 35' 01.0" W	---

1.1) Bottom Sample

Survey Summary

Survey Position: 36° 55' 42.0" N, 075° 40' 24.1" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E3640001

Charts Affected: 12208_1, 12207_1, 12221_1, 12280_2, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E3640001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATSUR - 4,17:sand,shells
NINFOM - Add SBDARE
SORDAT - 20101015
SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.2) Bottom Sample

Survey Summary

Survey Position: 36° 54' 24.1" N, 075° 38' 58.9" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E36A0001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E36A0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATSUR - 1,4:mud,sand
NINFOM - Add SBDARE
SORDAT - 20101015
SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.3) Bottom Sample

Survey Summary

Survey Position: 36° 50' 31.0" N, 075° 38' 39.0" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E3660001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E3660001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATQUA - 2:medium
NATSUR - 4:sand
NINFOM - Add SBDARE
SORDAT - 20101015
SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.4) Bottom Sample

Survey Summary

Survey Position: 36° 52' 51.7" N, 075° 38' 20.7" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E3670001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E3670001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATSUR - 4,7:sand,pebbles

NINFOM - Add SBDARE

SORDAT - 20101015

SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.5) Bottom Sample

Survey Summary

Survey Position: 36° 55' 47.9" N, 075° 37' 14.4" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E36B0001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E36B0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATSUR - 4,17:sand,shells

NINFOM - Add SBDARE

SORDAT - 20101015

SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.6) Bottom Sample

Survey Summary

Survey Position: 36° 49' 20.0" N, 075° 37' 04.0" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E36C0001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E36C0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATQUA - 1:fine

NATSUR - 4:sand

NINFOM - Add SBDARE

SORDAT - 20101015

SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.7) Bottom Sample

Survey Summary

Survey Position: 36° 51' 40.0" N, 075° 36' 34.0" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E3690001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E3690001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATSUR - 6:gravel
NINFOM - Add SBDARE
SORDAT - 20101015
SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.8) Bottom Sample

Survey Summary

Survey Position: 36° 53' 51.7" N, 075° 36' 25.9" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E3650001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E3650001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATSUR - 4,17:sand,shells

NINFOM - Add SBDARE

SORDAT - 20101015

SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.9) Bottom Sample

Survey Summary

Survey Position: 36° 54' 42.1" N, 075° 35' 21.1" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2008-245.00:00:00.000 (09/01/2008)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E37A0001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E37A0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATSUR - 1,4:mud,sand

NINFOM - Retain SBDARE

SORDAT - 20080900

SORIND - US,US,graph,chart 12221

Office Notes

Retain SBDARE

1.10) Bottom Sample

Survey Summary

Survey Position: 36° 50' 37.0" N, 075° 35' 19.0" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E36D0001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E36D0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATQUA - 2:medium
NATSUR - 4:sand
NINFOM - Add SBDARE
SORDAT - 20101015
SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

1.11) Bottom Sample

Survey Summary

Survey Position: 36° 52' 31.0" N, 075° 35' 01.0" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2010-288.00:00:00.000 (10/15/2010)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_SBDARE.000

GP No.: 02260002E3680001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_SBDARE.000	02260002E3680001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: NATSUR - 4,17:sand,shells

NINFOM - Add SBDARE

SORDAT - 20101015

SORIND - US,US,graph,H12200

Office Notes

Add SBDARE

4. Bottom Samples

-Twelve

H12200 Bluenote Disproval

Registry Number: H12200
State: Virginia
Locality: Approaches to Chesapeake Bay
Sub-locality: 19 NM East of Cape Henry
Project Number: OPR-D304-TJ-10
Survey Date: 01/01/1981

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12207	22nd	10/01/2009	1:80,000 (12207_1)	USCG LNM: 1/11/2011 (5/17/2011) NGA NTM: 6/9/2007 (5/21/2011)
12221	81st	04/01/2011	1:80,000 (12221_1)	USCG LNM: 5/31/2011 (5/31/2011) NGA NTM: 10/30/2010 (6/11/2011)
12200	49th	06/01/2007	1:419,706 (12200_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Delete SBDARE	GP	[None]	36° 54' 19.9" N	075° 38' 59.5" W	---
1.2	Delete SBDARE	GP	[None]	36° 48' 56.8" N	075° 38' 57.8" W	---
1.3	Delete SBDARE	GP	[None]	36° 55' 55.2" N	075° 38' 44.9" W	---
1.4	Delete SBDARE	GP	[None]	36° 52' 44.4" N	075° 38' 18.5" W	---
1.5	Delete SBDARE	GP	[None]	36° 49' 17.2" N	075° 37' 44.1" W	---
1.6	Delete SBDARE	GP	[None]	36° 50' 21.1" N	075° 37' 41.0" W	---
1.7	Delete SBDARE	GP	[None]	36° 51' 56.9" N	075° 36' 28.2" W	---
1.8	Delete SBDARE	GP	[None]	36° 53' 58.4" N	075° 36' 16.7" W	---
1.9	Delete H12202 junction SOUNDG	GP	[None]	36° 48' 52.5" N	075° 35' 41.6" W	---
1.10	Delete SBDARE	GP	[None]	36° 50' 32.0" N	075° 35' 18.7" W	---
1.11	Delete H12201 junction SOUNDG	GP	[None]	36° 52' 36.3" N	075° 34' 41.2" W	---
1.12	Delete H12201 junction SOUNDG	GP	[None]	36° 54' 51.6" N	075° 34' 36.6" W	---

1.1) Delete SBDARE

Survey Summary

Survey Position: 36° 54' 19.9" N, 075° 38' 59.5" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E3700001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E3700001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.2) Delete SBDARE

Survey Summary

Survey Position: 36° 48' 56.8" N, 075° 38' 57.8" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E3ED0001

Charts Affected: 12207_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E3ED0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.3) Delete SBDARE

Survey Summary

Survey Position: 36° 55' 55.2" N, 075° 38' 44.9" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E3E90001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E3E90001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.4) Delete SBDARE

Survey Summary

Survey Position: 36° 52' 44.4" N, 075° 38' 18.5" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E3710001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E3710001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.5) Delete SBDARE

Survey Summary

Survey Position: 36° 49' 17.2" N, 075° 37' 44.1" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E4080001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E4080001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.6) Delete SBDARE

Survey Summary

Survey Position: 36° 50' 21.1" N, 075° 37' 41.0" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E3EE0001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E3EE0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.7) Delete SBDARE

Survey Summary

Survey Position: 36° 51' 56.9" N, 075° 36' 28.2" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E3730001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E3730001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.8) Delete SBDARE

Survey Summary

Survey Position: 36° 53' 58.4" N, 075° 36' 16.7" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E3740001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E3740001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.9) Delete H12202 junction SOUNDG

Survey Summary

Survey Position: 36° 48' 52.5" N, 075° 35' 41.6" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 022600031F1F0001

Charts Affected: 12207_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	022600031F1F0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete H12202 junction SOUNDG

Office Notes

Delete H12202 junction SOUNDG

1.10) Delete SBDARE

Survey Summary

Survey Position: 36° 50' 32.0" N, 075° 35' 18.7" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 02260002E3720001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	02260002E3720001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete SBDARE

Office Notes

Delete SBDARE

1.11) Delete H12201 junction SOUNDG

Survey Summary

Survey Position: 36° 52' 36.3" N, 075° 34' 41.2" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 022600031F0F0001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	022600031F0F0001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete H12201 junction SOUNDG

Office Notes

Delete H12201 junction SOUNDG

1.12) Delete H12201 junction SOUNDG

Survey Summary

Survey Position: 36° 54' 51.6" N, 075° 34' 36.6" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: H12200_D304_TJ / AHB_H12200 / PSS / H12200_DisprovalBluenotes.000

GP No.: 022600031EF20001

Charts Affected: 12207_1, 12221_1, 12200_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
H12200_D304_TJ/AHB_H12200/PSS/H12200_DisprovalBluenotes.000	022600031EF20001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

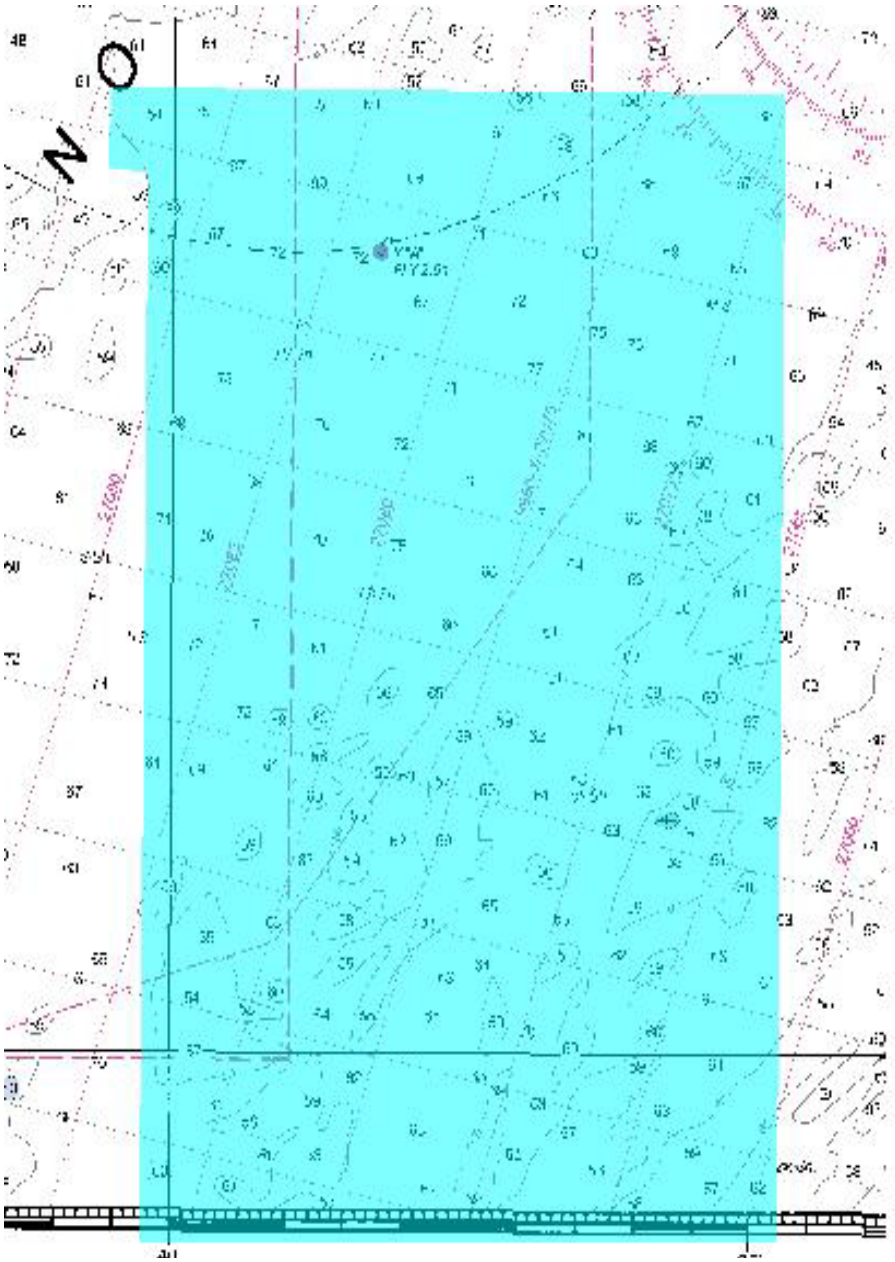
Attributes: NINFOM - Delete H12201 junction SOUNDG

Office Notes

Delete H12201 junction SOUNDG

Appendix III

Progress Sketch



OPS					FIELD						
Project Number and Name	Sheet Identifier	Registry Number	HQ Estimated SNM	SNM Completed Survey Outline	Date Field Work Began	Date Field Work Completed	Final Tides Request Date	Final Tides Received Date	September Cumulative % Complete	October Cumulative % Complete	November Cumulative % Complete
OPR-D304, App to Chesapeake Bay, VA	1	H12200	31		9/8/10	10/15/10	10/10/10	10/27/10	95%	100%	
	2	H12201	33		9/10/10	10/24/10	10/26/10		33%	100%	
	3	H12202	31		10/5/10	10/20/10	10/26/10	10/27/10		100%	
	4	H12203	34		10/12/10	10/26/10	10/27/10			100%	

Appendix IV

Tides and Water Levels

1. **Request for Approved Tides**

2. **Final Tide Notes**

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Ship THOMAS JEFFERSON (MOA-TJ)
439 West York St
Norfolk, VA 23510-1145

October 08, 2010

MEMORANDUM FOR: Chief, Requirements and Development Division, N/OPS1

FROM: CDR Shepard M. Smith, NOAA Ship THOMAS JEFFERSON (MOA-TJ)

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final TCARI grid
3. Final zoning in MapInfo and .MIX format
4. Six Minute Water Level data (Co-ops web site)

Transmit data to the following:

NOAA/NOS/Atlantic Hydrographic Branch
N/CS33, Building #2
439 West York Street
Norfolk, VA 23510
ATTN: Chief AHB

These data are required for the processing of the following hydrographic survey:

Project No.:	OPR-D304-TJ-10
Registry No.:	H12200
State:	Virginia
Locality:	Approaches to Chesapeake Bay
Sublocality:	19 Nm East of Cape henry

Attachments containing:

1) an Abstract of Times of Hydrography,
2) digital MID MIF files of the track lines from Pydro

cc: N/CS33

Year_DOY	Min Time	Max Time
2010_252	01:19:33	23:33:39
2010_253	00:53:27	23:56:03
2010_254	00:12:45	06:42:07
2010_259	19:46:49	23:59:56
2010_260	00:12:23	07:11:18
2010_268	03:26:26	23:56:56
2010_269	00:16:28	23:57:45
2010_270	00:10:53	23:40:12
2010_271	00:05:58	03:31:52
2010_279	19:28:11	23:58:28
2010_280	00:15:30	06:20:26

UNITED STATES DEPARMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : October 25, 2010

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-D304-TJ-10
HYDROGRAPHIC SHEET: H12200

LOCALITY: Approaches to Chesapeake Bay, VA
TIME PERIOD: September 9 - October 7, 2010

TIDE STATION USED: 865-1370 Duck, NC
Lat. 36° 11.0'N Long. 75° 44.8'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.027 meters

REMARKS: RECOMMENDED ZONING

Preliminary zoning is accepted as the final zoning for project OPR-D304-TJ-10, H12200, during the time period between September 9 to October 7, 2010.

Please use the zoning file "D304TJ2010CORP" submitted with the project instructions for OPR-D304-TJ-10. Zones SA46 and SA55 are the applicable zones for Registry No. H12200.

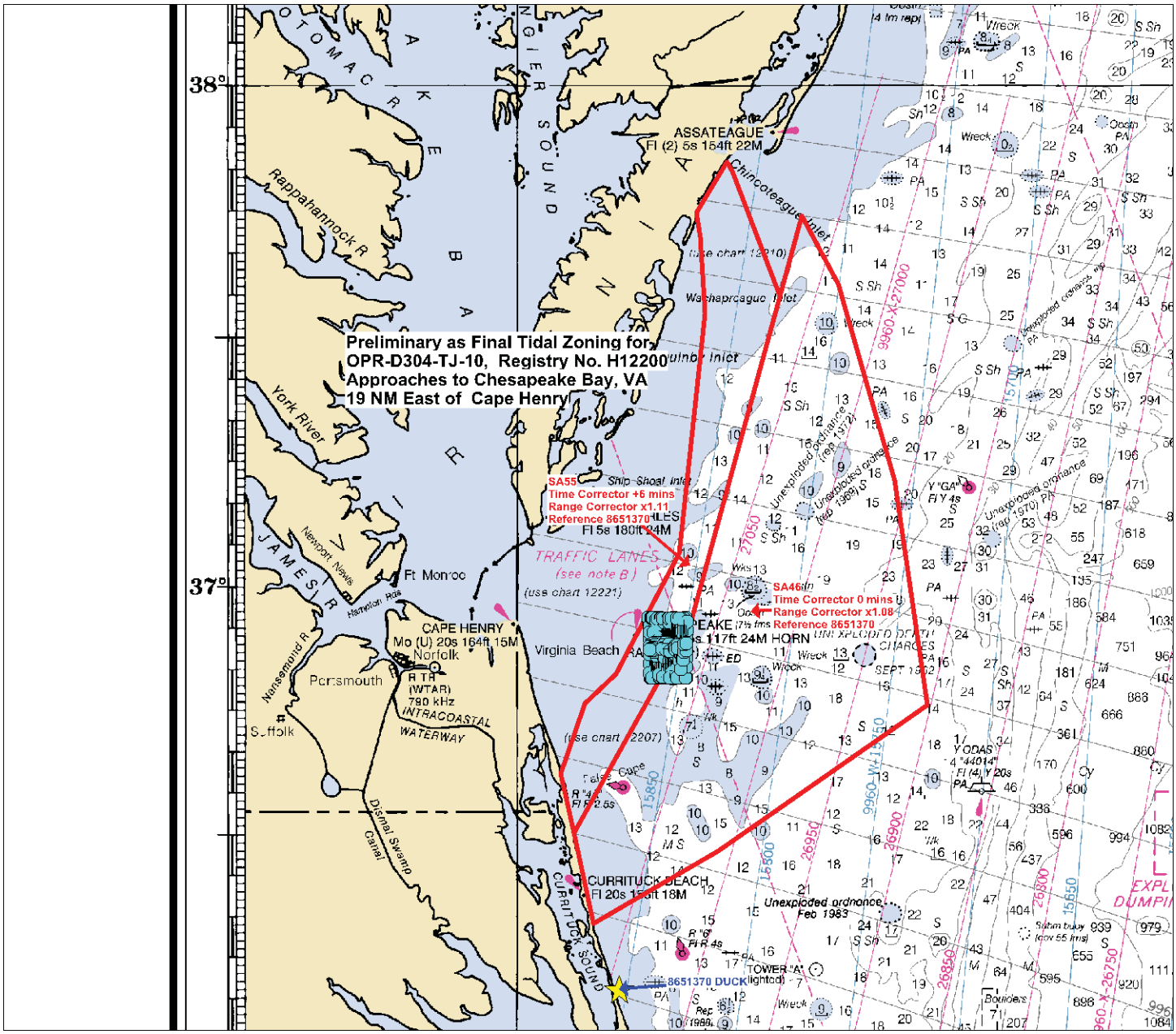
Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

Peter J. Stone

Digitally signed by Peter J. Stone
DN: cn=Peter J. Stone, o=NOAA/NOS/CO-OPS, ou=Oceanographic Division, email=peter.stone@noaa.gov, c=US
Date: 2010.10.27 13:28:13 -04'00'

CHIEF, OCEANOGRAPHIC DIVISION


Preliminary as Final Tidal Zoning for
OPR-D304-TJ-10, Registry No. H12200
Approaches to Chesapeake Bay, VA
19 NM East of Cape Henry
SA55
Time Corrector +6 mins
Range Corrector x1.11
Reference 8651370
SA46
Time Corrector 0 mins
Range Corrector x1.08
Reference 8651370
8651370 DUCK
ASSATEAGUE
Fl (2) 5s 154ft 22M
CAPE HENRY
Mo (U) 20s 164ft 15M
CURRITUCK BEACH
Fl 20s 159ft 18M
TRAFFIC LANES
(see note B)
Virginia Beach
Norfolk
Portsmouth
Suffolk
Ft Monroe
Chincoteague Inlet
Wachapreague Inlet
Ship Shoal Inlet
Rappahannock R
York River
James R
Nansemund R
Hampton Rds
Newport News
Dismal Swamp Canal
Currituck Sound
INTRACOASTAL WATERWAY
TOWER "A"
Unexploded ordnance
Fed 1983
Unexploded ordnance
(rep 1972)
Unexploded ordnance
(rep 1969)
Unexploded ordnance
(rep 1970)
38°
37°

Appendix V

Supplemental Survey Records & Correspondence

Subject: RE: Some More XML DR questions
From: Janice Eisenberg <Janice.Eisenberg@noaa.gov>
Date: Mon, 01 Nov 2010 17:53:13 -0400
To: "'kimberly.glomb'" <Kimberly.Glomb@noaa.gov>
CC: '_NOS OCS HSD XML Descriptive Reports' <xml.dr@noaa.gov>, '_NMAO MOA OPS Thomas Jefferson' <OPS.Thomas.Jefferson@noaa.gov>, _OMAO MOA ChiefST Thomas Jefferson <ChiefST.Thomas.Jefferson@noaa.gov>

Hi Kim,

The "Field Comments" section will not show up in the DR. It is not for archival purposes.

We will change the wording in the Charted Shoals and Hazardous Features section – thanks for finding our typo.

I sent an email last week to Dan Wright asking for a copy of TJ's current hydrographic systems inventory (presumably an Excel spreadsheet). We'll be using it to develop an Access database, which can then be uploaded directly into the XML DAPR. Can someone from TJ's survey department forward this to me? We are hoping to have a beta system operational in the next few weeks.

Thanks again.
Janice

Janice Eisenberg
Hydrographic Systems and Technology Programs
Coast Survey Development Laboratory
Office of Coast Survey
NOAA
Tel: 301-713-2653 x153
Fax: 301-713-4580
Janice.Eisenberg@noaa.gov

From: kimberly.glomb [mailto:Kimberly.Glomb@noaa.gov]
Sent: Friday, October 29, 2010 8:58 AM
To: Janice.Eisenberg@noaa.gov
Subject: Some More XML DR questions

Janice, The XML Dr for H12200 is getting closer to finished. Here are more questions.

Do field comments show up in the DR or is it just a place to make notes?

In the Charted Shoals and Hazardous Features section the not addressed default reads
There were no shoals **of** hazardous features addressed in this survey area.
Should the word **of** be changed to **or**?

Thanks
Kimberly

Subject: Re: Crossline comparison
From: Chris van Westendorp <Christiaan.VanWestendorp@noaa.gov>
Date: Thu, 10 Sep 2009 13:00:35 -0400
To: "mark.blankenship" <Mark.Blankenship@noaa.gov>
CC: LCDR Rick Brennan <Richard.T.Brennan@noaa.gov>, Castle Parker <Castle.E.Parker@noaa.gov>, Edward Owens <Edward.Owens@noaa.gov>, LT Jasper Schaer <jasper.schaer@noaa.gov>, CDR Shep Smith <Shep.Smith@noaa.gov>, Daniel Wright <Daniel.Wright@noaa.gov>

Mark,

Per 5.1.4.3 of the HSSD, AHB authorizes TJ to use the Standard Deviation layer to conduct surface difference comparison and analysis on future survey submissions of multibeam data. This meets the crossline comparison requirement laid out in HSSD.

Please let me know if you have any questions or need for further clarification.

R/
LCDR Chris van Westendorp, NOAA

mark.blankenship wrote:

> Chris,
> You mentioned in the meeting today that AHB was not going to require the multiple CUBE surface comparison, instead allowing us to use a single surface standard deviation layer to do our checks with. Is there any memo coming out for that?
> Mark

LCDR Chris van Westendorp <christiaan.vanwestendorp@noaa.gov>
Atlantic Hydrographic Branch
NOAA OCS

Subject: Re: Bottom Sample submission
From: Gene Parker <Castle.E.Parker@noaa.gov>
Date: Mon, 31 Jan 2011 11:47:48 -0500
To: "ops.thomas.jefferson" <OPS.Thomas.Jefferson@noaa.gov>

Good day Mark,
Submit both. HSSD specifies both in two areas of the document. First one needs to comply with HSSD; if the TJ wants to make the Hob file, then they have gone beyond the minimum requirements. If the TJ doesn't do it, then AHB would have to as long as the BS is within the Pydro PSS. Reference HSSD Section 8.2 S57 Feature File, paragraph 6:

> The S-57 feature file contains all the attributed information on specific objects that cannot be portrayed in a simple depth grid. Features to include in the S-57 feature file include; wrecks, obstructions, shoreline, rocks, islets, oil platforms, nature of seabed (bottom samples) and all other objects that may need to be compiled to a navigational product and require additional information that cannot be included in the BAG.

The Pydro PSS is in lieu of the S57 format file.

We could make the hob from the table, but since the TJ has done this, submit both the Hob file and the table contained in DR Appendix 5. Place the Hob file in the PSS directory which has contained all features in NOAA PSS format as in the past. If the TJ is going to submit the hob file, the source would be the table, so HSSD specifies delivery of both. If the TJ only submitted the table, AHB would have to generate the feature objects. If the TJ creates the hob file, then submit it.
gene

ops.thomas.jefferson wrote:

> Gene,
> We will be submitting .HOB files for the bottom samples in addition to the summary table found in the supplemental survey records and correspondence section of the DR. It is my understanding that the table is only used to create the .HOB anyways. A recommendation will need to be made that either the table either be omitted or be used in place of the .hob file. Only the summary table is mention in the HSSD april 2010 version. If there are any other issues with this idea please let us know.
> Mark

Castle Eugene Parker <castle.e.parker@noaa.gov>
Physical Scientist - Hydrographic Team Lead
Atlantic Hydrographic Branch
NOAA Office of Coast Survey

UNITED STATES DEPARTMENT COMMERCE
National Oceanic and Atmospheric Administration
Office of Marine and Aviation Operations
NOAA Ship *Thomas Jefferson* S-222
439 West York Street
Norfolk, VA 23510-1114

December 14, 2010

Memorandum For: Coast Pilot Branch and Nautical Data Branch

From: CDR Shepard M. Smith, NOAA
Commanding Officer, NOAA Ship *Thomas Jefferson*

Subject: OPR-D304-TJ-10 Coast Pilot Report
Surveys: H12200, H12201, H12202, and H12203

The relevant Coast Pilot sections for these surveys have been reviewed, and no additions or corrections have been noted.

UNITED STATES DEPARTMENT COMMERCE
National Oceanic and Atmospheric Administration
Office of Marine and Aviation Operations
NOAA Ship *Thomas Jefferson* S-222
439 West York Street
Norfolk, VA 23510-1114

November 3, 2010

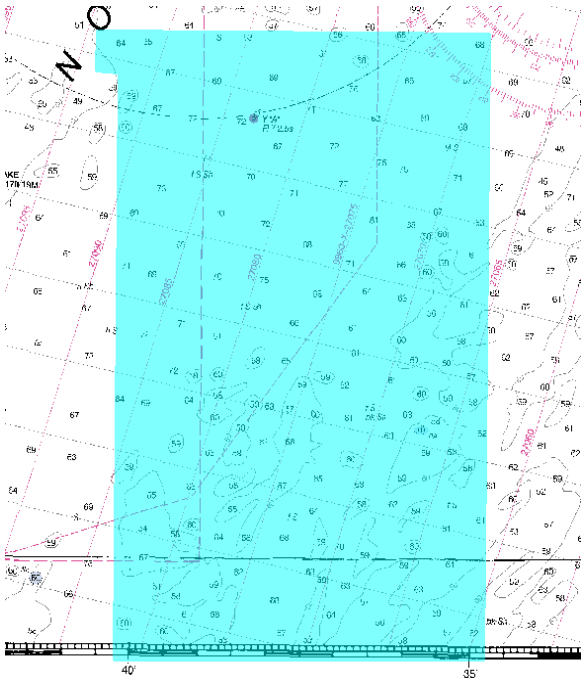
Memorandum For: Approaches to Chesapeake Bay Navigation Interests

From: CDR Shepard M. Smith, NOAA
Commanding Officer, NOAA Ship *Thomas Jefferson*

Subject: Preliminary Survey Results, H12200

The NOAA Ship Thomas Jefferson has completed survey H12200, Approaches to Chesapeake Bay, 19 NM East of Cape Henry, VA, and has conducted a preliminary analysis of the results. This survey will be further analyzed ashore, and depths, features and properties of those features may change significantly before the final chart is issued. These preliminary products should not be relied upon for navigation.

This survey is shown in the diagram below.



Survey H12200

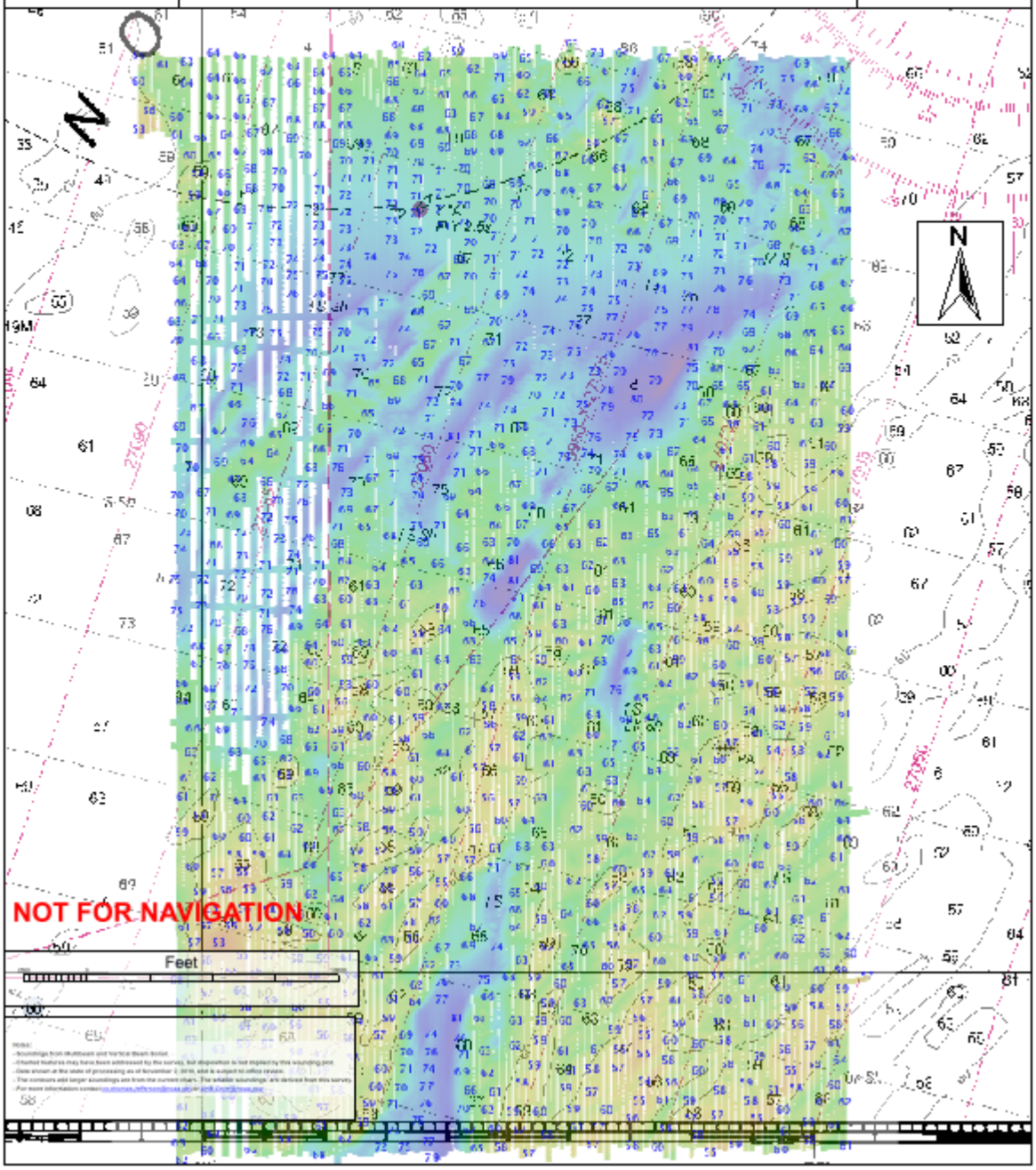
The following page contains a sounding plot in chart units overlaid on the current NOAA chart.

In addition, the soundings are attached as an S-57 (ENC format) file and .hob (CARIS EZ View) file. The NOAA Navigation manager for this area can help with interpretation and some additional data processing as necessary.

The *Thomas Jefferson* will complete processing, analysis, and documentation of this survey and send it ashore for review and application to the chart on or about December 15, 2010. It will be available for charting within 2-4 months thereafter, and will be on the next edition chart. If the findings are deemed to be particularly significant, parts of the survey may be issued as Notices to Mariners, and a new edition of the chart may be issued ahead of the regular print cycle.

National Oceanic and Atmospheric Administration
Office of Coast Survey

Survey:	H12208	Soundings:	Feet	NOAA Ship Thomas Jefferson	
State:	Virginia	Sounding Datum:	MLLW	CDR Shepard M. Smith, Commanding	
Locality:	Approaches to Chesapeake Bay	Horizontal Datum:	NAD 83		
Sub-Locality:	19 NM East of Cape Henry	Chart Number:	12221	Survey Dates:	
Survey Scale:	1:40,000	Chart Edition:	2009.01	September 9 - October 15, 2010	



From	<Michael.Davidson@noaa.gov>
Sent	Wednesday, December 15, 2010 8:07 pm
To	ocs.ndb@noaa.gov , coast.pilot@noaa.gov
Cc	AHB Chief <AHB.Chief@noaa.gov> , ops.thomas.jefferson@noaa.gov
Bcc	
Subject	OPR-D304-TJ-10 Coast Pilot Review
Attachments	OPR-D304-TJ-10_Coast Pilot Report.pdf 85K

Coast Pilot Branch,

Attached is the Coast Pilot Review memo for OPR-D304-TJ-10 covering surveys H12200, H12201, H12202, and H12203.

Please feel free to contact me with any questions.

V/R,
Mike

--
LT Michael C. Davidson
NOAA Ship Thomas Jefferson
439 W York St
Norfolk, VA 23510
michael.davidson@noaa.gov
ops.thomas.jefferson@noaa.gov
757-647-0187 (ship's cell)

Subject: [Fwd: Re: Survey Gap]
From: mark blankenship <Mark.Blankenship@noaa.gov>
Date: Tue, 31 Aug 2010 09:59:29 -0400
To: "kimberly.glomb" <Kimberly.Glomb@noaa.gov>
CC: _OMAO MOA OPS Thomas Jefferson <OPS.Thomas.Jefferson@noaa.gov>, CO Thomas Jefferson <CO.Thomas.Jefferson@noaa.gov>, _NMAO MOA ChiefST Thomas Jefferson <ChiefST.Thomas.Jefferson@noaa.gov>

Kim,
please add that little corner gap from the prior junctions to your survey sheet. Thank you.
Mark

-------- Original Message --------
Subject: Re: Survey Gap
Date: Tue, 31 Aug 2010 09:31:02 -0400
From: james.m.crocker <James.M.Crocker@noaa.gov>
To: mark blankenship <Mark.Blankenship@noaa.gov>
CC: Kyle.Ward <Kyle.Ward@noaa.gov>, _OMAO MOA OPS Thomas Jefferson <OPS.Thomas.Jefferson@noaa.gov>
References: <4C7CFEDE.6020503@noaa.gov>

Mark,

That area is an oversight on the sheet layout. The sheet should junction to all priors. Please add that area to H12200. Thanks for catching this.

Jim

mark blankenship wrote:

> Kyle,
> For survey project OPR-D304-TJ-10 there is a small gap in the NW corner of the proposed survey limits and the prior surveys. It's only 0.5 X 0.3 nm, I was wondering if we should just go ahead and grab this with sheet H12200 or has this already been taken care of to your knowledge.
> Mark

LT Mark A. Blankenship
Field Operations Officer
NOAA Ship Thomas Jefferson S222
(w) (757) 647-0187 / 418-0629

Subject: [Fwd: Danger to Navigation - H12200]
From: mark blankenship <Mark.Blankenship@noaa.gov>
Date: Sat, 09 Oct 2010 16:51:11 -0400
To: "kimberly.glomb" <Kimberly.Glomb@noaa.gov>
CC: _NMAO MOA ChiefST Thomas Jefferson <ChiefST.Thomas.Jefferson@noaa.gov>

-------- Original Message --------
Subject: Danger to Navigation - H12200
Date: Tue, 05 Oct 2010 15:27:27 -0400
From: ocs.ndb <OCS.NDB@noaa.gov>
To: _NOS OCS NSD Coast Pilot <coast.pilot@noaa.gov>, Allen Taylor <Allen.Taylor@noaa.gov>, Andrew Kampia <Andrew.Kampia@noaa.gov>, Castle E Parker <Castle.E.Parker@noaa.gov>, Craig Winn <Craig.Winn@noaa.gov>, David Merke <David.Merke@noaa.gov>, Ed Martin <Ed.Martin@noaa.gov>, Gerald Koehl <Gerald.Koehl@noaa.gov>, Howard Danley <Howard.Danley@noaa.gov>, James M Crocker <James.M.Crocker@noaa.gov>, John Barber <John.Barber@noaa.gov>, Ken Forster <Ken.Forster@noaa.gov>, Kevin Shaw <Kevin.Shaw@noaa.gov>, Mark Griffin <Mark.Griffin@noaa.gov>, Michael Gaeta <Michael.Gaeta@noaa.gov>, OCS NDB <OCS.NDB@noaa.gov>, Richard T Brennan <Richard.T.Brennan@noaa.gov>, Robert Ramsey <Robert.Ramsey@noaa.gov>, Tara Wallace <Tara.Wallace@noaa.gov>, Travis Newman <Travis.Newman@noaa.gov>, Mark Blankenship <Mark.Blankenship@noaa.gov>, Kyle Ward <Kyle.Ward@noaa.gov>, AHB Chief <AHB.Chief@noaa.gov>

L-1207/10 and DD-18536 have been registered by the Nautical Data Branch and directed to PBC for processing.

The DtoN reported is a wreck in the approaches to the Chesapeake Bay, 19 NM east of Cape Henry.

The following charts are affected:
12221 kapp 558
12207 kapp 548
12200 kapp 526
13003 kapp 2156

The following ENCs are affected:
US4VA12M
US3DE01M
US2EC03M

References:
H-12200
OPR-D304-TJ-10

This information was discovered and submitted by NOAA ship THOMAS JEFFERSON.

-------- Original Message --------
Subject: D304 H12200 DTON
Date: Tue, 05 Oct 2010 09:49:55 -0400
From: mark blankenship <Mark.Blankenship@noaa.gov>
To: OCS.NDB@noaa.gov
CC: James M Crocker <James.M.Crocker@noaa.gov>, "Kyle.Ward" <Kyle.Ward@noaa.gov>, AHB.Chief@noaa.gov

A wreck was located near a charted Wreck PA, least depth 46ft in approximately 62 ft of

water.

LT Mark A. Blankenship
Field Operations Officer
NOAA Ship Thomas Jefferson S222
(w) (757) 647-0187 / 418-0629

H12200_DR_DTON.zip	**Content-Type:** application/x-zip-compressed **Content-Encoding:** base64

Subject: [Fwd: D304 H12200 DTON]
From: mark blankenship <Mark.Blankenship@noaa.gov>
Date: Sat, 09 Oct 2010 16:50:16 -0400
To: "kimberly.glomb" <Kimberly.Glomb@noaa.gov>

-------- Original Message --------
Subject: D304 H12200 DTON
Date: Tue, 05 Oct 2010 09:49:55 -0400
From: mark blankenship <mark.blankenship@noaa.gov>
To: ocs.ndb@noaa.gov
CC: James M Crocker <James.M.Crocker@noaa.gov>, "Kyle.Ward" <Kyle.Ward@noaa.gov>, ahb.chief@noaa.gov

A wreck was located near a charted Wreck PA, least depth 46ft in approximately 62 ft of water.

LT Mark A. Blankenship
Field Operations Officer
NOAA Ship Thomas Jefferson S222
(w) (757) 647-0187 / 418-0629

H12200_DR_DTON.zip	**Content-Type:** application/x-zip-compressed **Content-Encoding:** base64

Subject: RE: XML DR
From: Janice Eisenberg <Janice.Eisenberg@noaa.gov>
Date: Wed, 03 Nov 2010 16:33:11 -0400
To: "'kimberly.glomb'" <Kimberly.Glomb@noaa.gov>
CC: xml.dr@noaa.gov

Hi Kim,

Thanks for the heads up. We are looking into it.

It would be helpful to us if you could CC: the XML DR email account (xml.dr@noaa.gov) on future support requests - that way we will retain a copy of your request for archival purposes. It also forwards your request to the entire XML DR team.

Thanks,
Janice

Janice Eisenberg
Hydrographic Systems and Technology Programs
Coast Survey Development Laboratory
Office of Coast Survey
NOAA
Tel: 301-713-2653 x153
Fax: 301-713-4580
Janice.Eisenberg@noaa.gov

-----Original Message-----
From: kimberly.glomb [mailto:Kimberly.Glomb@noaa.gov]
Sent: Wednesday, November 03, 2010 4:00 PM
To: Janice.Eisenberg@noaa.gov
Subject: XML DR

Janice, I found another XML DR Quirk.

Under chart comparison the charts hold the numbers. The ENCs do not hold the number when the XML DR is saved. There are 3 ENCs for the survey area. When the XML is saved, closed, and reopened all of the numbers show up as US4NC32M. The rest of the information related to the ENCs holds.

The XML DR for H12200 is nearly complete.

Kimberly

AHB COMPILATION LOG

General Survey Information	
REGISTRY No.	H12200
PROJECT No.	OPR-D304-TJ-10
FIELD UNIT	NOAA SHIP THOMAS JEFFERSON
DATE OF SURVEY	20100909 - 20101015
LARGEST SCALE CHART	***12208, edition 14, 20090801, 1:50,000***
ADDITIONAL CHARTS	***12221, edition 81, 20110401, 1:80,000***
SOUNDING UNITS	***12207, edition 22, 20091001, 1:80,000***
COMPILER	Kolleen Mortimer

Source Grids	**File Name** T:\CompileInWork\H12200_D304_TJ\AHB_H12200\SAR Final Products\GRIDS
	H12200_Dev1_Cube_NOAA_50cm_Final.csar **H12200_Dev2_Cube_NOAA_50cm_Final.csar** **H12200_Dev3_Cube_NOAA_50cm_Final.csar** **H12200_Dev4_Cube_NOAA_50cm_Final.csar** **H12200_Dev5_Cube_NOAA_50cm_Final.csar** **H12200_Dev6_Cube_NOAA_50cm_Final.csar** **H12200_MB_CUBE_NOAA_2m_Final.csar**
Surfaces	**File Name** T:\CompileInWork\H12200_D304_TJ\AHB_H12200\COMPILE\Working
Combined	**H12200_4m_Combined.csar**
Interpolated TIN	\Interpolated TIN**H12200_12m_InterpTIN.csar**
Shifted Interpolated TIN	\Shifted Surface**H12200_12m_InterpTIN_Shifted.csar**
Final HOBs	**File Name** T:\CompileInWork\H12200_D304_TJ\AHB_H12200\COMPILE\Final_Hobs
Survey Scale Soundings	**H12200_SS_Soundings.hob**
Chart Scale Soundings	**H12200_CS_Soundings.hob**
Contour Layer	**H12200_Contours.hob**
Feature Layer	**H12200_Features.hob**
Meta-Objects Layer	**H12200_MetaObjects.hob**
Blue Notes	**H12200_BlueNotes.hob**
ENC Retain Soundings	

Meta-Objects Attribution	
Acronym	**Value**
M_COVR	
CATCOV	1 – coverage available
SORDAT	20101015
SORIND	US,US,graph,H12200
M_QUAL	
CATZOC	6 – zone of confidence U (data not assessed)
INFORM	Insert vessel name
POSACC	10.0 m
SORDAT	20101015
SORIND	US,US,graph,H12200
SUREND	20101015
SURSTA	20100909

DEPARE	
DRVALV 1	45.000 ft
DRVALV2	84.419 ft
SORDAT	20101015
SORIND	US,US,graph,H12200
M_CSCL	
CSCALE	50,000
SORDAT	20101015
SORIND	US,US,graph,H12200

SPECIFICATIONS:

I. COMBINED SURFACE:
- a. Number of SAR Final Grids: 7
- b. Resolution of Combined (m): 4 m

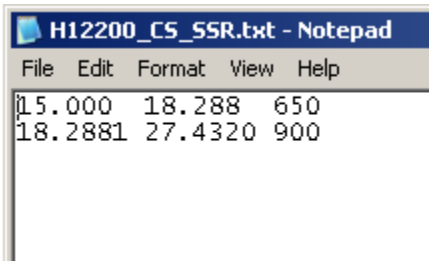
II. SURVEY SCALE SOUNDINGS (SS):
- a. Attribute Name: Depth
- b. Selection criteria: Radius, Shoal bias
- c. Radius value is: mm at map scale
  - i. Use single-defined radius: 1.00
  - ii. And/Or use radius table file: H1XXXX_SS_SSR_XXk.txt [*XXk = chart scale*]
    [*insert SSR table here*]
    H1XXXX_SS_SSR_XXk.txt
    [*insert SSR table here*]
- d. Queried Depth of All Soundings
  - i. Minimum: 14.024 m
  - ii. Maximum: 25.730 m

III. INTERPOLATED TIN SURFACE:
- a. Resolution (m): 12 m
- b. Interpolation method: Natural Neighbor
- c. Shift value: -0.75 ft [*only include applicable shift values*]
  [*-0.75 feet* (And/Or) *-0.75 fathoms*]

IV. CONTOURS:
- a. Attribute Name: Depth
- b. Use a Depth List: H12200_depth_contours.txt
- c. Output Options: Create contour lines
  - i. Line Object: DEPCNT
  - ii. Value Attribute: VALDCO

V. FEATURES:
- a. Number of Chart Features: 3 [*all features included in H-Cell*]
- b. Number of Non-Chart Features: 1 [*all features submitted by field & not included in H-Cell*]

VI. CHART SURVEY SOUNDINGS (CS):
- a. Number of ENC CS Soundings: 165
- b. Attribute Name: Depth
- c. Selection criteria: Radius, Shoal bias
- d. Radius value is: Distance on the ground (m)
  - i. Use single-defined radius: X.XX m
  - ii. And/Or use radius table file: H12200_CS_SSR.txt



e. Number Survey CS Soundings: 165

VII. NOTES:

[*Type text*]

ATLANTIC HYDROGRAPHIC BRANCH
H-CELL REPORT to ACCOMPANY
SURVEY H12200 (2010)

This H-Cell Report has been written to supplement and/or clarify the original Descriptive Report (DR) and pass critical compilation information to the cartographers in the Marine Chart Division. Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

B.2 QUALITY CONTROL

The AHB source depth grids for the survey's nautical chart update included 7 grids: one 2m mainscheme multibeam BASE surface (*.CSAR) and six 50cm multibeam development BASE surfaces (*.CSAR), which were combined at 4m resolution. The survey scale soundings were created from the combined surface at a single defined radius of 1mm at the largest scale chart covering the respective area of the survey (Chart 12207 ~ 1:80,000; Chart 12208 ~ 1:50,000). The survey scale soundings were imported into a "point cloud" grid. The chart scale soundings were derived directly from the survey scale soundings point cloud grid to preserve absolute continuity between the charted depths, the survey scale soundings, and the original source grid. The chart scale soundings were selected using a sounding spacing range (SSR) file. The chart scale soundings are a subset of the survey scale soundings. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portray the bathymetry within the common area.

A UTM projected TIN surface was created from the survey scale soundings point cloud grid, from which an interpolated surface of 12m resolution was generated. The interpolated TIN surface of 12m resolution was shifted by the NOAA sounding rounding value of -0.75 feet. The shifted interpolated TIN was used to generate depth contours in feet (60 ft). The depth contours are forwarded to MCD for reference only. The contours were utilized during chart scale sounding selection and quality assurance efforts at AHB. The depth contours are incorporated into the SS H-Cell product as per 2009 H-Cell Specifications.

The compilation products (Final *.HOB files) for this survey are detailed in the H12200 AHB Compilation Log contained within this document. The Final HOB files include depth areas (DEPARE), depth contours (DEPCNT), soundings (SOUNDG), meta-objects (M_COVR, M_QUAL, and M_CSCL), cartographic Blue Notes ($CSYMB,), and features (WRECKS and OBSTRN).

As dictated by Hydrographic Technical Directive 2008-8, the Final HOB files were combined into two separate H-Cell files in S-57 format. Both S-57 files were exported from CARIS S-57 Composer in feet. Quality assurance and topology checks were conducted using CARIS S-57 Composer and DKART Inspector validation tests.

The final H-Cell products are two S-57 files, in Lat/Long NAD-83. The contents of these two H-Cell deliverables are listed in the table below:

TABLE 1 - Contents of H-Cell Files

H12200_CS.000			Scale 1:80,000
Object Class Types	**Geographic**	**Cartographic**	**Meta**
S-57 Object Acronyms	DEPARE	$CSYMB	M_COVR
	OBSTRN		M_QUAL
	SBDARE		M_CSCL
	WRECKS		
	SOUNDG		
H12200_SS.000			**Scale 1:40,000**
Object Class Types	**Geographic**		
S-57 Object Acronyms	DEPCNT		
	SOUNDG		

B.2.4 Junctions and Prior Surveys

Survey H12200 (2010) junctions with survey H12202 (2010) to the southwest and H12201 (2010) to the east. Most present survey depths compare within 2 feet of junctioning survey depths to the southwest, and within 2 feet of junctioning survey depths to the east. Most present survey depths compare within 3 feet of the charted hydrography to the southeast and 4 feet to the north.

B.4 DATA PROCESSING

List the software used during office processing of the survey. Where applicable, include the version number, service pack, and latest hot-fix. Below are the programs generally used. If any of these programs were not used, remove them from the list; if something that was used is not listed, add it to the list.

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

CARIS Bathy DataBASE version 3.2/HF2
CARIS HIPS/SIPS version 7.1/HF2
CARIS S-57 Composer version 2.2/SP1/HF4
DKART Inspector version 5.1
HSTP Pydro version 11.9 (r3585)

C. HORIZONTAL AND VERTICAL CONTROL

The hydrographer makes adequate mention of horizontal and vertical control used for this survey in section C of the DR. The sounding datum for this survey is Mean Lower Low Water (MLLW), and the vertical datum is Mean High Water (MHW). Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 18 North.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

12207 (22nd Edition, 10/2009)
Cape Henry to Currituck Beach Light
Corrected through NM 08/20/2011
Corrected through LNM 09/13/2011
Scale 1:80,000

12221 (81st Edition, 04/2011)
Chesapeake Bay Entrance
Corrected through NM 09/10/2011
Corrected through LNM 09/13/2011
Scale 1:50,000

12208 (22nd Edition, 08/2009)
Approaches to Chesapeake Bay
Corrected through NM 08/27/2011
Corrected through LNM 09/13/2011
Scale 1:50,000

ENC COMPARISON

US4VA12M
Chesapeake Bay Entrance
Edition 5
Application Date 2011/04/12
Issue Date 2011/04/12
Chart 12207

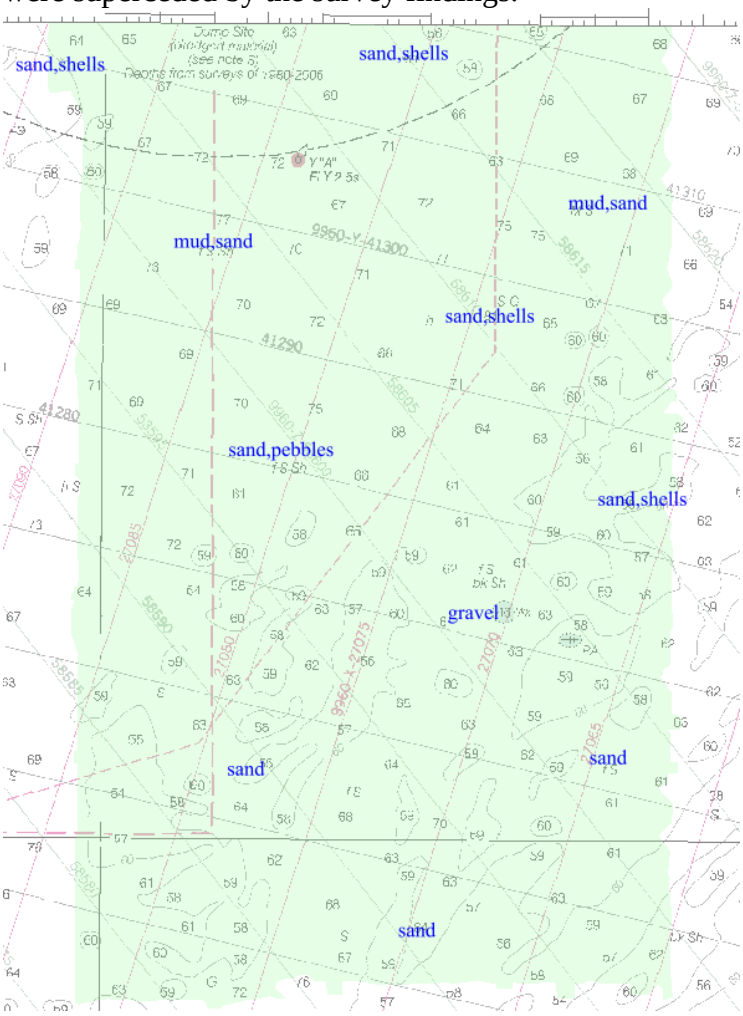
US4VA12M
Chesapeake Bay Entrance
Edition 15
Application Date 2011/01/20
Issue Date 2011/09/15
Chart 12221

US5VA11M
Approaches to Chesapeake Bay
Edition 15
Application Date 2011/08/01
Issue Date 2011/09/16
Chart 12208

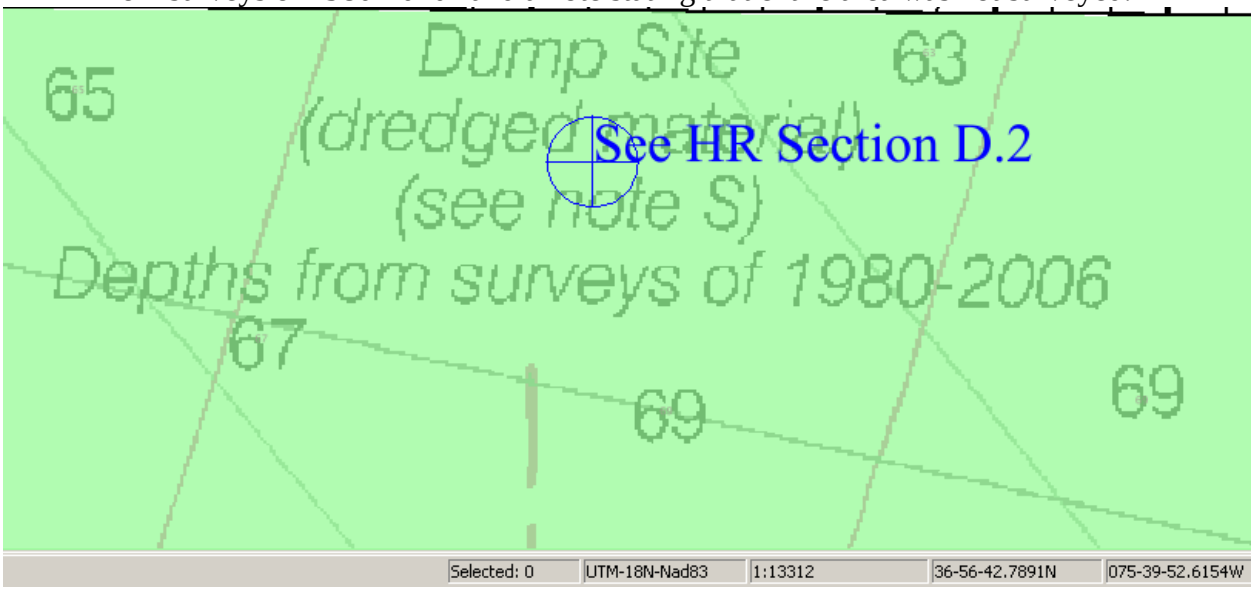
D.2 ADDITIONAL RESULTS

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section D and Appendix I and II of the DR. The hydrographer recommends that any charted features not specifically addressed either in the H-Cell files or the Blue Notes should be retained as charted. The following exceptions are noted:

a. The field unit collected a total of 10 bottom samples. One charted Mud, Sand seabed characteristics was retained as charted, while most of the charted seabed characteristics were superceded by the survey findings.



b. A dump site located in the northwest corner of the survey should be revised to “Depths from surveys of 1980-2010” and a note stating that entire area was not surveyed.



D.6 MISCELLANEOUS

Chart compilation was completed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to the Marine Chart Division in Silver Spring, Maryland. See section D.1 of this report for a list of the Raster Charts and Electronic Navigation Charts (ENC) used for compiling the present survey.

D.7 ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell files or the Blue Notes should be retained as charted. Refer to section D and Appendix I and II of the DR for further recommendations by the hydrographer.

APPROVAL SHEET
H12200

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth contours, disposition of critical depths, cartographic symbolization, and verification or disproval of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with National Ocean Service and Office of Coast Survey requirements except where noted in the Descriptive Report and the H-Cell Report.

All final products have undergone a comprehensive review per the Hydrographic Surveys Division Office Processing Manual and are verified to be accurate and complete except where noted.

Kolleen Mortimer

Digitally signed by Kolleen Mortimer
DN: cn=Kolleen Mortimer, o=NOAA, ou=NOAA Atlantic Hydrographic Branch, email=kolleen.mckenzie@noaa.gov, c=US
Date: 2011.09.29 12:13:20 -04'00'

Kolleen Mortimer
Atlantic Hydrographic Branch

I have reviewed the H-Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet National Ocean Service requirements and standards for products in support of nautical charting except where noted.

Digitally signed by Edward Owens
DN: cn=Edward Owens, o=NOAA, ou=AHB, email=Edward.Owens@noaa.gov, c=US
Date: 2011.09.29 12:33:06 -04'00'

Approved for: _____

CDR Richard T. Brennan, NOAA
Chief, Atlantic Hydrographic Branch

Paul Turner
AWOIS & SURF Review
2011.10.07 14:06:12
-04'00'

Version Updated 08/23/11