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: H11323

LOCALITY

State: Virginia

General Locality: Chesapeake Bay

Sub-locality: Thimble Shoal Channel

2005- 2006

CHIEF OF PARTY

CDR Raymond C. Slagle, NOAA

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DATE

NOAA FORM 77-28 U.S. DEPARTMENT OF COMMERCE (11-72) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

H11323

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: Chesapeake Bay

Sub-Locality: Thimble Shoal Channel

 Scale:
 1:10,000
 Date of Survey:
 06/02/05 to 06/21/2006

 Instructions Dated:
 02/16/05
 Project Number:
 OPR-D304-TJ-05 and OPR-D304-TJ-06

Change No. 1 Dated: **03/04/05**Change No. 2 Dated 05/13/05
Change No. 3 Dated 07/19/05

Vessel: NOAA Ship THOMAS JEFFERSON, S-222

Chief of Party: CDR Raymond C. Slagle , NOAA

Surveyed by: THOMAS JEFFERSON Personnel

Soundings by: Reson SeaBat 8101 and 8125 multibeam sonar

Graphic record checked by: N/A

Protracted by: N/A Automated Plot: N/A

Verification by: Atlantic Hydrographic Branch Personnel

Soundings in: Meters Feet at MLLW

Remarks:

1) All Times are UTC.

2) This is a Special Navigable Area Hydrographic Survey.

3) Projection is UTM Zone 18.

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DESCRIPTIVE REPORT

to accompany
HYDROGRAPHIC SURVEY H11323

Scale of Survey: 1:10,000 Year of Survey: 2005-2006 NOAA Ship THOMAS JEFFERSON CDR Raymond C. Slagle, Commanding Officer

A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project OPR-D304-TJ-05 and OPR-D304-TJ-06 Chesapeake Bay, VA. The original instructions are dated 02/16/05.

Change No. 1 Dated: 03/04/05, Change No. 2 Dated 05/13/05, Change No. 3 Dated 07/19/05.

OPR-D304-TJ-06 Letter of Instructions was not included with submitted data.

This Descriptive Report pertains to sheet "G" of project OPR-D304-TJ-05, which includes the Chesapeake Bay Bridge South Entrance, Thimble shoal channel, and the approach to Little Creek. The assigned registry number for this sheet is H11323, as prescribed in the Letter Instruction. Data were acquired into the junction of H10945 (RUDE, 2004) prior to receiving additional information from the branch. The extent of the prior survey is noted on the project sketch. Discrete items that may have appeared after that survey were noted in the PYDRO Report.

No "change" to OPR-D304-TJ-06 Letter of Instructions recognizing the new survey limits were included in this report.

This project responds to a request from the Maryland and Virginia Pilots Associations for modern hydrographic data in the approaches to the Chesapeake Bay.

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

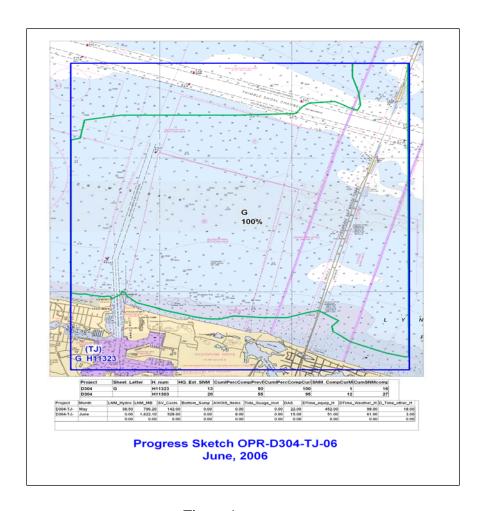


Figure 1.

Survey Statistics

Specific dates of acquisition	Jun 2-3, 13-14, 23, Aug 26, 2005 Apr 17-20, 22-
	25, May 2, 5-6, 8-10, Jun 20-21, 2006
Lineal nautical miles of single beam only sounding lines – mainscheme only	0
Lineal nautical miles of multibeam only sounding lines – mainscheme only	818.97
Lineal nautical miles of side scan sonar only lines – mainscheme only	512.49
Lineal nautical miles of crosslines	64.91
Lineal nautical miles of developments	84.5
Lineal nautical miles of shoreline/near shore investigation	0
Number of bottom samples collected	0
Number of items investigated either as a new development or from AWOIS	38

B. DATA ACQUISITION AND PROCESSING

B.1. EQUIPMENT

Data were acquired by NOAA Hydrographic Survey Launch 1005, 1014, 3101 and 3102. Launch 1005 and 1014 were replaced in July of 2005 with launch 3101 and 3102. Launch 1005 and 1014 are 8.5-meter aluminum Jensen vessel with a typical 0.5-meter transducer draft. Launch 3101 and 3102 are 9.75m Jensen design with a typical 0.8-meter transducer draft.

Launch 1005 acquired multibeam echosounder (MBES) data with a Reson SeaBat 8101 and side scan sonar (SSS) data with a Klein 5000. Launch 1014 acquired MBES data with a Reson SeaBat 8125. Launch 3101 acquired MBES data with a Reson SeaBat 8125. All positioning and attitude were determined with a TSS POS/MV 320 (version 3) GPS-aided inertial navigation system for launch 3102 and 1005; and version 4 for 3101 and 1014.

Refer to the Data Acquisition and Processing Report (DAPR) for detailed equipment and vessel configuration information. 2005 and 2006 DAPR filed with field reports.

B.2. QUALITY CONTROL

Side Scan Sonar Quality Control

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. A good check consisted of distinguishing contacts or sand waves across the entire range of the side scan trace. The SSS data were slant range corrected using CARIS's additional "Use Height Source" option. Launch 3102 HVF setup does not have a tow point entry for the year 2005, offsets for this are in the Navigation field. Launch 1005, 1014, and 3102 (2006) were processed normally with tow point. Refer to the Thomas Jefferson DAPR 2005 and 2006 and the 2005 SSS certification for a detailed description. *Ok. Future surveys should have tow points for all SSS platforms regardless whether towed or hull-mounted configuration*.

Shallow Water Multibeam Quality Control

On occasion Reson 8125 produced a timing error. The HVF was adjusted to account for this and the data merged. A detailed explanation of this error can be found in the 2006 DAPR. A list of the lines affected can be found in supplemental correspondence "8125 timing errors.xls". There are 243 instances of this observed that spanned both 2005 and 2006 data. If the timing error was within specification no entry was made in HVF. Some data were acquired by launch 1005 in which side scan and multibeam were acquired simultaneously. This caused noise to appear on the outside beams. Lines were typically filtered or manually rejected and any residual noise ignored by the base surface. There were no other faults with the SWMB system which affected data integrity. Refer to this project's DAPR for detailed discussion of SWMB system

calibrations, data acquisition, and data processing. Concur. Timing error reports are in Appendix V, Supplemental Records.

Cross Lines

A system of crosslines was acquired over the mainscheme lines. The crosslines met the requirements of the NOS Hydrographic Surveys Specifications and Deliverables (HSSD) of June 2006 and were 8.9% of the regular mainscheme lines. When crosslines from 2006 were compared with data acquired from 2005 some differences in bottom depth were observed (Figure 2). This data artifact may be primarily attributed to the application (or lack thereof) of True Heave, since it was not available and thus not applied to 2005 data. Most of the differences between crossline and mainscheme in these cases were on average 20-40cm and within IHO specifications. Any data observed to exceed IHO Order 1 specifications were rejected. *OK*

A quality control report was generated in CARIS. Several of the beams were below the 95% confidence level for Order 1 (see Separates IV for details). The entire grid was examined and 99.9% of the grid was within IHO specifications, including crosslines. Specific statistics can be found in "Crossline Comparisons" under H11323_Survey_Line_index.doc.xls, in Separates IV. *OK*

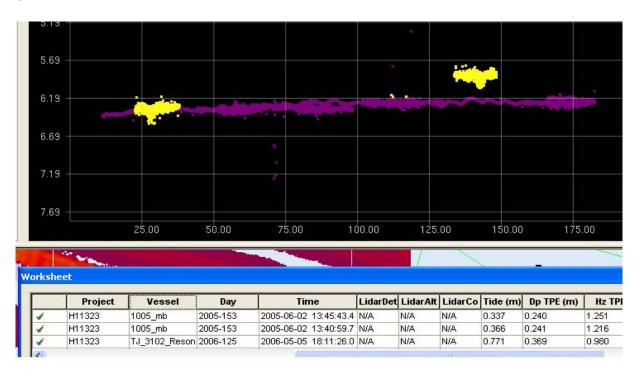


Figure 2. Heave artifact in crossline comparison

Junctions

This survey junctions with the 2004 RUDE survey H10945 (located to the north and west), but data were not available for comparison. Data acquisition began on this survey per the original project instructions; however, changes to the instructions resulted in a reduction in survey area where H10945 overlapped. As a result, some data have been acquired in this overlapping area but do not necessarily meet the coverage requirements of the HSSD. Inside the amended survey limits (per Figure 1), this survey meets or exceeds the minimum requirement for overlap on a junction survey based on the survey limits provided. *OK*

B.3. CORRECTIONS TO ECHO SOUNDING

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

B.4 PROCESSING

The survey data were broken into field sheet sections for processing management. The base surfaces were processed using CUBE at a 1-m resolution for coverage; designated soundings were flagged on features which the surface did not adequately represent. Data cleaning was done on a case by case basis where the CUBE surface did not represent the bottom as expected due to noise and other sounding errors.

Surface from single Field sheet	Resolution meters	Surface from single Field sheet	Resolution meters
H11323_1_1m_Final	1.0	H11323_17_1m_Final	1.0
H11323_2_1m_Final	1.0	H11323_18_1m_Final	1.0
H11323_3_1m_Final	1.0	H11323_19_1m_Final	1.0
H11323_4_1m_Final	1.0	H11323_20_1m_Final	1.0
H11323_5_1m_Final	1.0	H11323_21_1m_Final	1.0
H11323_6_1m_Final	1.0	H11323_22_1m_Final	1.0
H11323_7_1m_Final	1.0	H11323_23_1m_Final	1.0
H11323_8_1m_Final	1.0	H11323_24_1m_Final	1.0
H11323_9_1m_Final	1.0	H11323_25_1m_Final	1.0
H11323_10_1m_Final	1.0	H11323_26_1m_Final	1.0
H11323_11_1m_Final	1.0	H11323_27_1m_Final	1.0
H11323_12_1m_Final	1.0	H11323_28_1m_Final	1.0
H11323_13_1m_Final	1.0	H11323_29_1m_Final	1.0

H11323_14_1m_Final H11323_15_1m_Final H11323_16_1m_Final	1.0 1.0 1.0	H11323_30_1m_Final H11323_31_1m_Final H11323_32_1m_Final	1.0 1.0 1.0
Fieldsheet/Combined Surface H11323_33_1m_Final H11323_34_1m_Final H11323_35_1m_Final H11323_36_1m_Final H11323_37_1m_Final H11323_38_1m_Final H11323_39_1m_Final		solution ters 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	
H11323_MB (Field Sheet) H11323_All_2m Final combined surface(submission)		2.0	
SSS H11323_100_1m		1.0	
H11323_200_1m			
Contacts			
H11323_Contact		N/A	

Numerous processing setbacks occurred due to software upgrades and resultant implementations into this dual-season survey. Processing methods followed those discussed in the 2005 and 2006 DAPRs and system certifications. No other unusual vessel configurations or problems were encountered.

A CUBE 2m combined surface was generated by the Branch for inclusion into PYDRO and for selected soundings for the H-Cell.

C. VERTICAL AND HORIZONTAL CONTROL

VERTICAL CONTROL

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at Chesapeake Bay Bridge Tunnel, VA (863-8863) served as control for datum determination. Tidal zoning for this survey is consistent with the Letter Instructions. The preliminary zones and correctors used for this survey are as follows:

Zone	TIME CORR	Range Ratio	Reference station
SCB11	0	x 1.06	863-8863
SCB12	0	x 1.00	863-8863
SCB13	12	x 1.00	863-8863
SCB14	18	x 0.96	863-8863

A Request for Approved Tides letter was sent to N/OPS1 on July 10 2006 (Appendix IV). Verified Water Levels from the N/OPS1 CO-OPS website were downloaded on 6 July 2006 and applied to all sounding data. Refer to the DAPR for a summary of the methods used to determine, evaluate, and apply tide corrections to sounding data.

Final zoning was received Dec 15, 2006 and has not been applied to the data.

There is no mention in this descriptive report of a revised tide zoning used by the field. Fortunately, when checked against the final zoning provided by CO-OPS, the zones match where there is data. Final tide zoning was received 3 months prior to the writing of this descriptive report and therefore should have been applied to all data before submittal.

HORIZONTAL CONTROL

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

Sounding positional control was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon stations. The DGPS beacon used for this survey was Driver, Virginia. No horizontal control stations were established for this survey.

Horizontal Dilution of Precision (HDOP) was monitored daily on the launches, and the observed HDOP values did not exceed 2.5. Adequate satellite coverage was maintained throughout the survey period. *OK*

D. RESULTS AND RECOMMENDATIONS

CHART COMPARISON

There are 6 charts and 2 ENC's affected by this survey:

Chart Number	Edition	Edition Date	Scale	Corr NM Date
12254	46	2/1/2006	1:20,000	2/11/2006
12255	16	9/1/2005	1:5,000	9/3/2005
12256	15	7/1/2005	1:20,000	7/30/2005
12222	47	11/1/2005	1:40,000	11/5/2005
12221	78	4/1/2006	1:80,000	4/22/2006
12207	21	3/1/2004	1:80,000	3/13/2004
ENC USVA18M	4	8/04/2005	N/A	11/03/2005
ENC US5VA19M	2	2/15/2005	N/A	6/29/2006

General Agreement with Charted soundings

Overall the surveyed soundings differed by not more than 2 feet from the charted values, except in discrete areas. Shoaling was found in a few areas. The west side of the north tunnel entrance jetty of the Chesapeake Bay Bridge Tunnel was shoal by 4 -6 feet. Areas to the east and west of the south tunnel entrance were shoal by 4-5 feet. These areas did not extend past the danger and cautionary lines running on either side of the bridge tunnel. *Concur.*

A comparison was made between chart 12254 and ENC US5VA18m and US5VA19m. There were 27 discrepancies noted and can be found in Appendix V, "H11323_chart_enc_comp.doc".

All of the soundings in this survey are sufficient to supercede the chart. Discrete differences are addressed in the "AWOIS Item Investigations", "Dangers to Navigation", "Charted Features" and "Un-Charted Features" sections of the feature report. Some adjustments were made by the Branch to the features recommendations provided in the "office notes."

AWOIS Items and Significant Contacts

Thirty-eight assigned AWOIS items fell within the survey limits and were resolved by this survey. Several of the items from the 2005 and 2006 AWOIS list referred to the same item but with a different record number. These AWOIS Items and other discrete items are discussed in the feature reports in Appendix I.

A problem occurred in which the file OPR-D304-TJ-06_AWOIS.mbd dated 4/21/06 would not load into PYDRO. The AWOIS list "Complete_OPR-D304-TJ-05_AWOIS.mbd" also dated 4/21/06 was loaded into PYDRO with no problem. Because the two files did not contain equivalent information, a request to HSD was made for clarification. HSD resent the 2006 file

based on the assumption that the file had been corrupted, but the new file also failed to load into PYDRO. Subsequent trouble shooting from HSTP showed that there was a software issue in PYDRO. By the time the issues for the 2006 list were resolved, complete analysis was already completed on the items in the 2005 database. Removal of the 2005 lists from PYDRO would have resulted in a complete loss of the item assessments. Because both lists are nearly identical, both are retained in the PYDRO pss to assure completeness with only the unique items selected and duplicates rejected. *PYDRO was scrutinized by the Branch and all items checked for completeness and resolution.*

Most of the contacts fall within the multibeam echosounder data. Any SSS contacts not completely covered by MBES were noted in PYDRO PSS. These can be found in Separates II. Concur. However, any items found by SSS need to be fully developed by echosounder unless it poses a risk to crew or vessel. Any charted items not fully covered by echosounder were retained.

Dangers to Navigation

There were a total of 46 15 Dangers to Navigation (DtoN) reported by the Hydrographer to Marine Charting Division (MCD), N/CS26 on 10/09/06 and 11/03/06. DtoN reports may be found in Appendix I. One additional DToN was submitted by the Branch during compilation which brings the total submitted to 16.

Charted Features

All charted point features are addressed in the Item Investigations and Dangers to Navigation sections of the Appendices. *Concur*.

ADDITIONAL RESULTS

Aids to Navigation and Other Detached Positions

There are twelve 12 aids to navigation on this survey and appear to be charted appropriately. *Concur.*

Bridges and Overhead Cables

There are no overhead cables on this survey. The Chesapeake Bay Bridge Tunnel spans the eastern portion of the survey. There is some slight chart discrepancy with its location and new sections appear to have been added on the north side of the southern set of tunnel entrances and should be verified by aerial photography. *Concur.* Side Scan contacts were obtained on many of the pilings supporting the trestles of the bridge. These pilings lean inwards and the trestles

overhang the bridge and may not reflect the positioning required. A list of points of contact can be found in Appendix V.4 Correspondence.

Ferry Routes

There is one ferry route from Little Creek to Cape Charles, which is still in use. See note F on chart 12254. *OK*

Submarine Cables and Pipelines

There are no submarine cables on this survey. There is one sewer pipeline that extends 1050 meters north of the east side of the approach to Little Creek inlet and appears to be charted appropriately. *OK*

Tunnels

There is one area on H11323 where a tunnel is present; it is part of the Chesapeake Bay Bridge Tunnel. The Rip Rap around the tunnel entrances shows depths that may go beyond the blue danger area of the 18 foot curve. In some cases it looks like blocks have fallen outside the perimeter of the main area of rip rap. *OK*

E. APPROVAL SHEET

OPR-D304-TJ-06 Chesapeake Bay Virginia

Thimble Shoal Channel Survey Registry No. H11323

Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All field sheets, this Descriptive Report, and all accompanying records and data are approved.

This survey is adequate to supersede all prior surveys in common areas, and for application to the relevant NOS nautical charts.

Submitted in association with this descriptive report are the following 2005/2006 reports:

- OPR-D304-TJ-06 Horizontal and Vertical Control Report (submitted 4 December 2006)
- 2005 Hydrographic Systems Certification Report (submitted 17 May 2005); addendum
- 1005_mb.hvf (submitted 19 May 2005)
- 2006 Hydrographic Systems Readiness Review report (submitted 9 May 2006)
- 2005 Spring Data Acquisition and Processing Report (submitted 13 September 2005)
- 2005 Fall Data Acquisition and Processing Report (submitted 14 March 2006)
- 2006 Data Acquisition and Processing Report (submitted 6 October 2006)

Respectfully Submitted:

Peter G. Lewit Sheet Manager

Approved and Forwarded:

LT Christiaan van Westendorp, NOAA Field Operations Officer CDR Raymond C. Slagle, NOAA Commanding Officer

APPENDIX I

DTON REPORTS

H11323 Final DR_DtoN_ Reports

Registry Number: H11323 **State:** Virginia

Locality: Chesapeake Bay

Sub-locality: Thimble Shoal Channel

Project Number: OPR-D304-TJ-06

Survey Dates: 06/13/2005 - 06/21/2006

Charts Affected

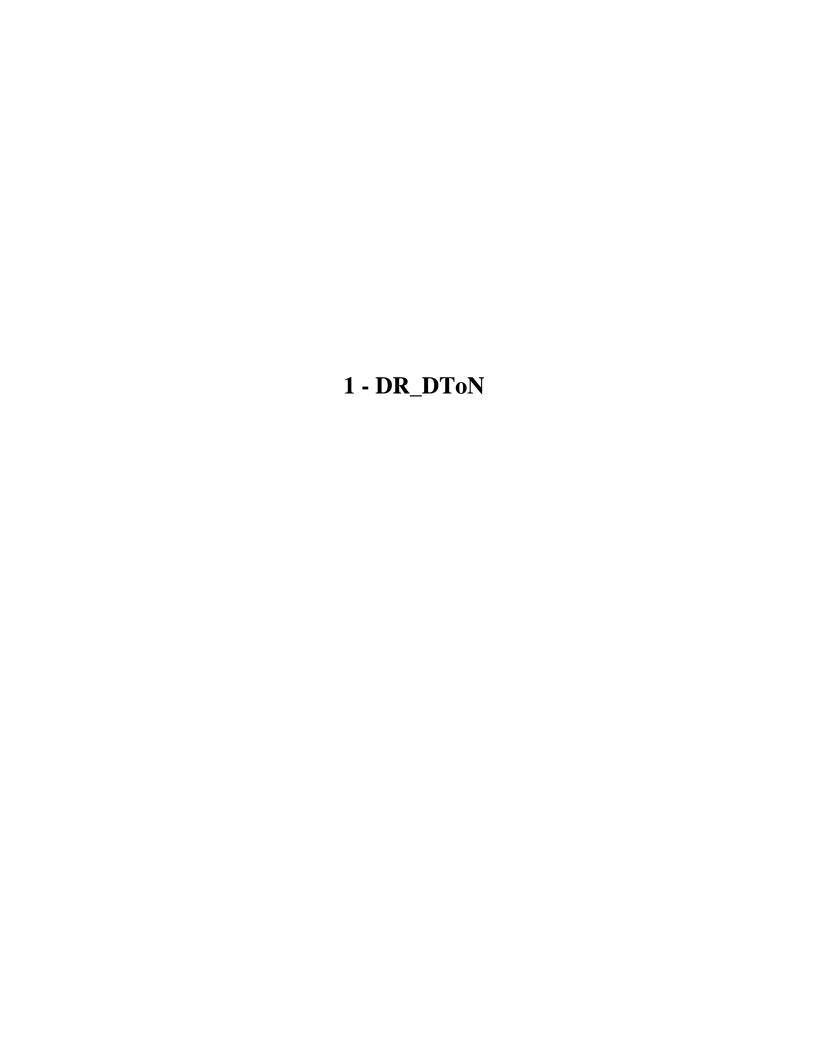
Number Edition Date Scale (R		Scale (RNC)	RNC Correction(s)*	
12255	16th	09/01/2005	1:5,000 (12255_1)	[L]NTM: ?
12256	15th	07/01/2005	1:20,000 (12256_1)	[L]NTM: ?
12254	46th	02/01/2006	1:20,000 (12254_1)	[L]NTM: ?
12222	47th	11/01/2005	1:40,000 (12222_1)	[L]NTM: ?
12205	30th	11/01/2005	1:80,000 (12205_1)	[L]NTM: ?
12221	77th	05/01/2005	1:80,000 (12221_1)	[L]NTM: ?
12207	21st	03/01/2004	1:80,000 (12207_1)	[L]NTM: ?
12280	6th	09/01/2005	1:200,000 (12280_2)	[L]NTM: ?
13003	48th	10/01/2004	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	Submitted DTON A 19416/97	Obstruction	4.97 m	36:57:04.2 N	076:07:51.8 W	
1.2	Submitted DTON A 639/228	Obstruction	11.45 m	36:58:08.7 N	076:06:17.9 W	
1.3	Submitted DTON A 1391/85	Shoal	12.69 m	36:58:30.6 N	076:06:30.2 W	
1.4	DTON B 451/11	Obstruction	6.13 m	36:56:06.5 N	076:10:23.3 W	
1.5	DTON B 168/97	Obstruction	7.18 m	36:56:23.4 N	076:11:18.6 W	
1.6	Submitted DTON A 268/101	Wreck	4.96 m	36:56:33.5 N	076:07:28.5 W	
1.7	DTON B 980/100	Obstruction	6.53 m	36:56:51.8 N	076:07:37.0 W	
1.8	DTON B 691/101	Obstruction	5.16 m	36:56:44.1 N	076:09:13.6 W	
1.9	DTON B 289/232	Obstruction	6.59 m	36:57:33.3 N	076:08:27.7 W	

1.10	DTON B 369/73	Obstruction	6.85 m	36:56:27.3 N	076:09:21.0 W	
1.11	DTON B 474/191	Obstruction	6.67 m	36:56:09.8 N	076:10:09.7 W	
1.12	DTON B 340/158	Dolphin	2.97 m	36:55:39.9 N	076:07:49.2 W	
1.13	DTON B 86/238	Dolphin	3.36 m	36:55:40.1 N	076:07:50.6 W	
1.14	AHB DTON #1 410/230	Obstruction	7.07 m	36:59:04.3 N	076:11:06.3 W	
1.15	DTON B 368/199	Obstruction	5.98 m	36:56:11.8 N	076:11:01.9 W	
1.16	DTON B 26/101	Pile	3.23 m	36:55:12.0 N	076:06:59.2 W	



1.1) Submitted DTON A 19416/97

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:57:04.2 N, 076:07:51.8 W

Least Depth: $4.97 \text{ m} = 16.31 \text{ ft} = 2.718 \text{ fm} = 2 \text{ f$

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 1.257 m; **TVU** (**TPEv**) ± 0.240 m

Timestamp: 2005-165.21:03:08.133 (06/14/2005)

Survey Line: h11323 / 1005_mb / 2005-165 / 156_2041

Profile/Beam: 19416/97

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-165/156_2041	19416/97	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-115/255_1324	0003	3.38	324.2	Secondary (grouped)
h11323/1005_100/2005-165/156_2043	0001	4.19	265.0	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous Obstruction with least depth 4.97 meters (16.31 feet).

Cartographically-Rounded Depth (Affected Charts):

16ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 2 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 4.970 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. This obstruction is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

Feature Images

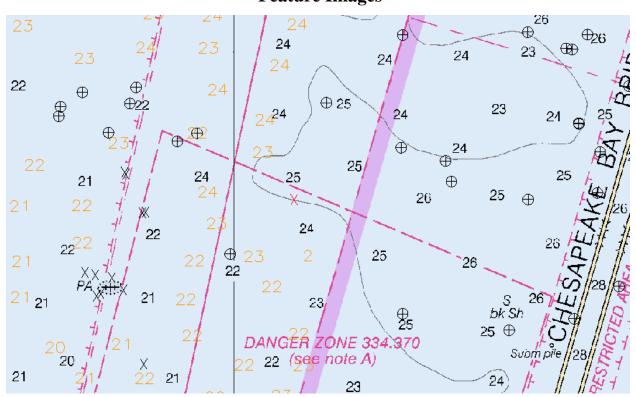


Figure 1.1.1

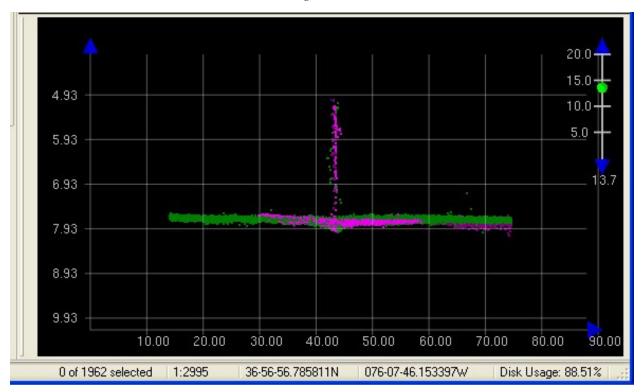


Figure 1.1.2

1.2) Submitted DTON A 639/228

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:58:08.7 N, 076:06:17.9 W

Least Depth: 11.45 m (= 37.56 ft = 6.260 fm = 6 fm 1.56 ft)**TPU** ($\pm 1.96 \sigma$): **THU** (**TPEh**) $\pm 1.103 \text{ m}$; **TVU** (**TPEv**) $\pm 0.231 \text{ m}$

Timestamp: 2005-165.19:27:20.465 (06/14/2005)

Survey Line: h11323 / 1014_mb / 2005-165 / 281_1926

Profile/Beam: 639/228

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1014_mb/2005-165/281_1926	639/228	0.00	0.000	Primary
h11323/1005_100/2005-154/178_1657	0002	2.91	310.1	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous Obstruction with least depth 11.45 meters (37.56 feet).

Cartographically-Rounded Depth (Affected Charts):

37ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 6 1/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 11.448 m

VERDAT - 12:Mean lower low water

Office Notes

Concur. This obstruction is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

Feature Images

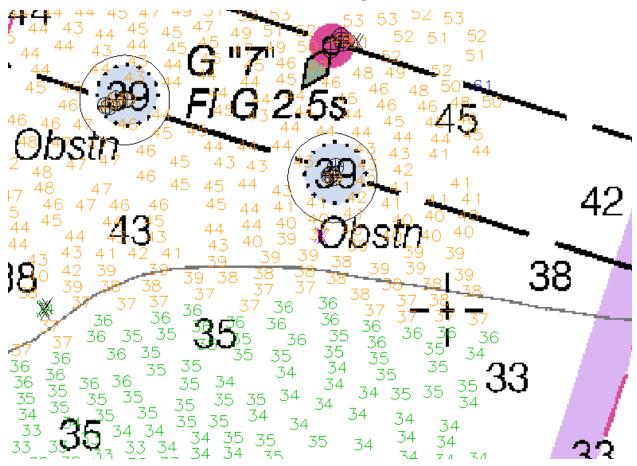


Figure 1.2.1

1.3) Submitted DTON A 1391/85

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:58:30.6 N, 076:06:30.2 W

Least Depth: 12.69 m = 41.64 ft = 6.941 fm = 6 fm 5.64 ft**TPU** ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 1.348 \text{ m}$; **TVU** (**TPEv**) $\pm 0.228 \text{ m}$

Timestamp: 2005-174.16:18:07.762 (06/23/2005)

Survey Line: h11323 / 1014_mb / 2005-174 / 419_1616

Profile/Beam: 1391/85

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Sounding acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1014_mb/2005-174/419_1616	1391/85	0.00	0.000	Primary

Hydrographer Recommendations

Chart dangerous Sounding with least depth 12.69 meters (41.64 feet).

Cartographically-Rounded Depth (Affected Charts):

41ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 7fm (13003_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: QUASOU - 1:depth known

TECSOU - 3: found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

AHB concurs w/ the field.

Feature Images

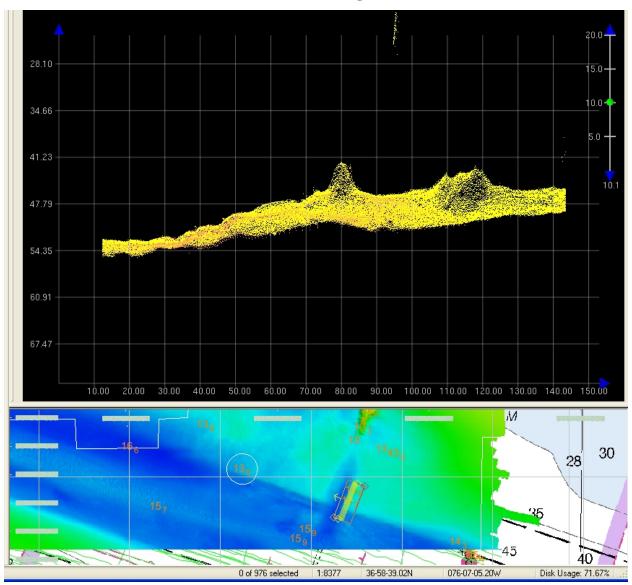


Figure 1.3.1

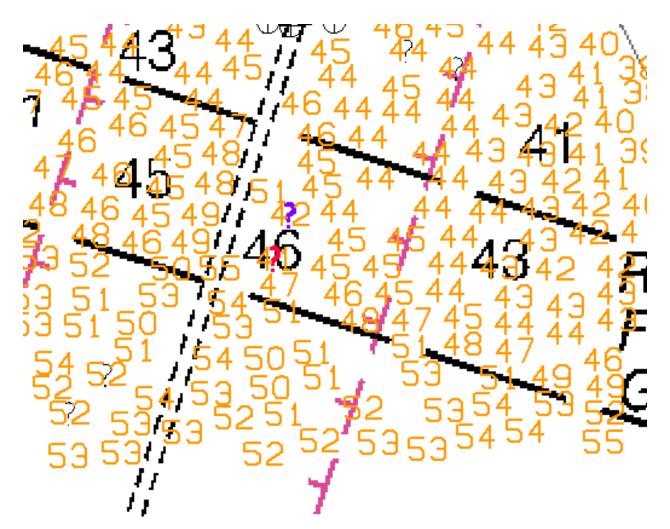


Figure 1.3.2

1.4) DTON B 451/11

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:56:06.5 N, 076:10:23.3 W

Least Depth: 6.13 m = 20.12 ft = 3.353 fm = 3 fm 2.12 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.368 m

Timestamp: 2006-130.19:38:18.464 (05/10/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-130 / 095_1937

Profile/Beam: 451/11

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-130/095_1937	451/11	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-130/209_1646	0001	1.92	199.6	Secondary (grouped)
h11323/1005_100/2005-165/132_1649	0002	6.59	302.9	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous Obstruction with least depth 6.13 meters (20.12 feet).

Cartographically-Rounded Depth (Affected Charts):

20ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ¹/₄fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.132 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. This obstruction is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

Feature Images

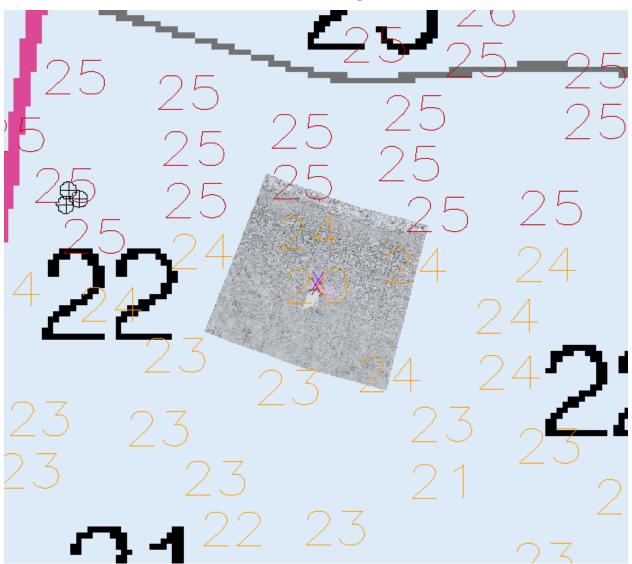


Figure 1.4.1

1.5) DTON B 168/97

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:56:23.4 N, 076:11:18.6 W

Least Depth: 7.18 m (= 23.57 ft = 3.929 fm = 3 fm 5.57 ft)

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.368 m

Timestamp: 2006-130.21:28:37.246 (05/10/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-130 / 103_2128

Profile/Beam: 168/97

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Rock acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-130/103_2128	168/97	0.00	0.000	Primary
h11323/tj_3102_reson8101/2006-130/100_2122	169/18	1.36	284.2	Secondary (grouped)
h11323/1005_100/2005-165/133_1632	0002	3.67	117.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-130/209_1647	0001	5.49	283.5	Secondary (grouped)
h11323/1005_100/2005-165/133_1632	0001	14.28	258.3	Secondary (grouped)
h11323/tj_3102_reson8101/2006-130/103_2128	211/95	18.05	268.1	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous Rock with least depth 7.18 meters (23.57 feet).

Cartographically-Rounded Depth (Affected Charts):

23ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ³4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

SORDAT - 20060621

SORIND - US, US, survy, H11323

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

VALSOU - 7.185 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB does not concur. See AHB E-SAR Checklist: Section II. DATA COMPLETENESS AND COMPLIANCE WITH SPECIFICATIONS- All Pydro Features" comments.

AHB: Feature is not deemed to be a rock. Chart Dangerous Obstruction.

Feature Images

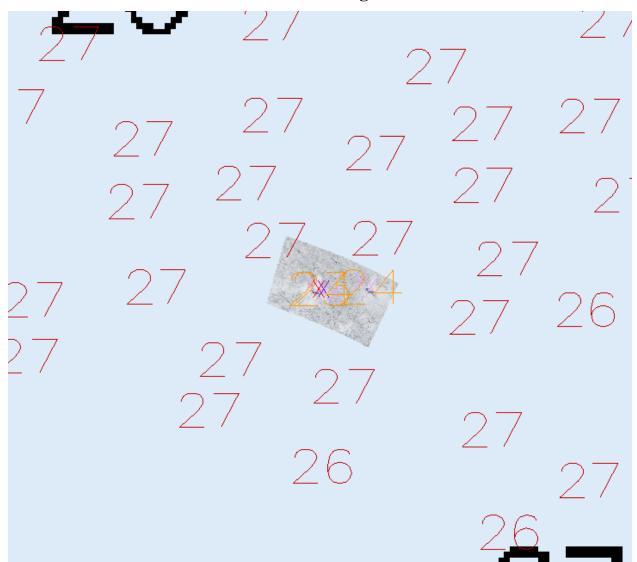


Figure 1.5.1

1.6) Submitted DTON A 268/101

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:56:33.5 N, 076:07:28.5 W

Least Depth: 4.96 m = 16.26 ft = 2.711 fm = 2 fm = 4.26 ft

TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.314 m; TVU (TPEv) ± 0.242 m

Timestamp: 2005-164.21:45:53.044 (06/13/2005)

Survey Line: h11323 / 1005_mb / 2005-164 / 150_2123

Profile/Beam: 268/101

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Wreck acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-164/150_2123	268/101	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-115/261_1617	0001	6.22	034.7	Secondary (grouped)
h11323/1005_100/2005-164/150_2123	0001	6.79	037.1	Secondary (grouped)
h11323/1005_100/2005-164/150_2123	0004	19.28	085.6	Secondary
h11323/1005_mb/2005-164/150_2123	149/99	19.62	088.0	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous Wreck with least depth 4.96 meters (16.26 feet).

Cartographically-Rounded Depth (Affected Charts):

16ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 2 ³4fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

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

VALSOU - 4.957 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. This wreck is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

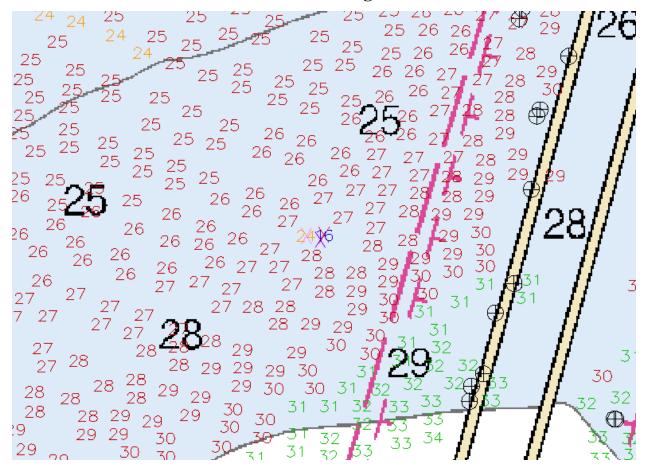


Figure 1.6.1

1.7) DTON B 980/100

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:56:51.8 N, 076:07:37.0 W

Least Depth: 6.53 m = 3.572 fm = 3 fm = 3.43 ft

TPU (\pm **1.96** σ): THU (**TPEh**) \pm 1.246 m; TVU (**TPEv**) \pm 0.244 m

Timestamp: 2005-164.18:29:43.459 (06/13/2005)

Survey Line: h11323 / 1005_mb / 2005-164 / 154_1807

Profile/Beam: 980/100

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-164/154_1807	980/100	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-115/257_1418	0001	2.19	279.6	Secondary (grouped)
h11323/1005_100/2005-164/154_1808	0001	6.38	334.1	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous obstruction with least depth 6.53 meters (21.43 feet).

Cartographically-Rounded Depth (Affected Charts):

21ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

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

VALSOU - 6.533 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. This obstruction is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.



Figure 1.7.1

1.8) DTON B 691/101

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:56:44.1 N, 076:09:13.6 W

Least Depth: 5.16 m = 16.94 ft = 2.823 fm = 2 fm = 2.824 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 1.329 m; TVU (TPEv) \pm 0.242 m

Timestamp: 2005-165.14:02:29.435 (06/14/2005)

Survey Line: h11323 / 1005_mb / 2005-165 / 146_1351

Profile/Beam: 691/101

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-165/146_1351	691/101	0.00	0.000	Primary
h11323/1005_100/2005-165/146_1351	0001	4.34	281.3	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-115/265_1806	0002	8.87	076.6	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous Obstruction with least depth 5.16 meters (16.94 feet).

Cartographically-Rounded Depth (Affected Charts):

17ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 2 ³/₄fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.163 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. This obstruction is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.



Figure 1.8.1

1.9) DTON B 289/232

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:57:33.3 N, 076:08:27.7 W

Least Depth: 6.59 m = 21.63 ft = 3.605 fm = 3 fm 3.63 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-129.16:31:26.775 (05/09/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-129 / 1005

Profile/Beam: 289/232

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-129/1005	289/232	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/015_2022	0005	1.51	197.6	Secondary

Hydrographer Recommendations

Chart dangerous Obstruction with least depth 6.59 meters (21.63 feet).

Cartographically-Rounded Depth (Affected Charts):

21ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.593 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. This obstruction is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

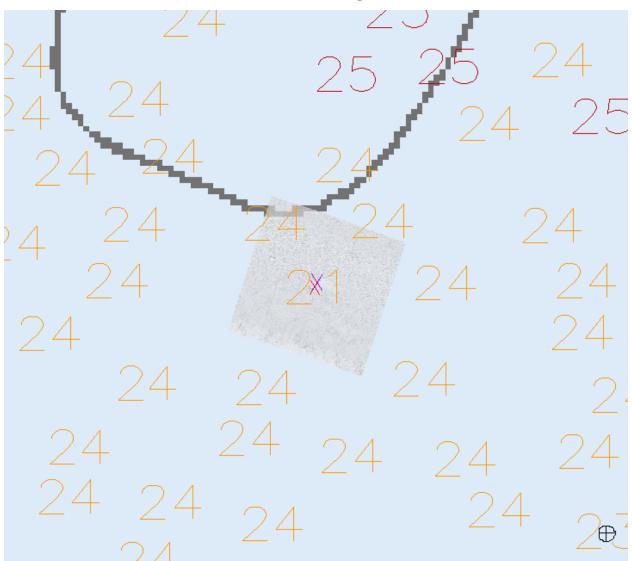


Figure 1.9.1

1.10) DTON B 369/73

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:56:27.3 N, 076:09:21.0 W

Least Depth: 6.85 m = 22.48 ft = 3.747 fm = 3 fm = 4.48 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.20:12:00.386 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 167_2011

Profile/Beam: 369/73

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/167_2011	369/73	0.00	0.000	Primary
h11323/tj_3102_reson8101/2006-113/269_1927	9298/98	5.63	261.0	Secondary
h11323/tj_3102_klein5000_sss200/2006-113/269_1928	0001	12.00	093.1	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous Obstruction (OBSTNS) with least depth 6.85 meters (22.48 feet).

Cartographically-Rounded Depth (Affected Charts):

22ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.853 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. This obstruction is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

1.11) DTON B 474/191

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:56:09.8 N, 076:10:09.7 W

Least Depth: 6.67 m = 21.88 ft = 3.647 fm = 3 fm 3.88 ft

TPU ($\pm 1.96\sigma$): THU (TPEh) $\pm 0.980 \text{ m}$; TVU (TPEv) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.12:30:30.026 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 184_1230

Profile/Beam: 474/191

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address		Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/184_1230	474/191	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-114/277_1900	0001	5.14	110.2	Secondary (grouped)
h11323/1005_100/2005-165/134_1614	0003	8.74	028.2	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-130/208_1634	0001	16.96	300.4	Secondary
h11323/tj_3101_reson8125/2006-130/185_1234	438/239	31.29	169.8	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/184_1230	612/164	31.72	179.8	Secondary (grouped)
h11323/1005_100/2005-165/134_1614	0002	44.27	006.5	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/183_1233	210/239	59.10	003.3	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/183_1233	709/239	60.81	177.8	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/183_1233	99/197	84.47	009.1	Secondary (grouped)

Hydrographer Recommendations

Chart dangerous Obstruction with least depth 6.67 meters (21.88 feet).

Cartographically-Rounded Depth (Affected Charts):

22ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2)

3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

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

VALSOU - 6.670 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. This obstruction is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

This feature strongly resembles a sewer diffuser based on both SSS imagery and MBES presentation. A sewer is charted on 12221 approximately 500m to the west of this item. No sewer was found by the field party in that location. The officer reviewer strongly recommends either further field investigation into this item, review of permits and construction documents, or both to determine whether this item is the sewer. Defer charting recommendations on the charted sewer to Marine Chart Division.

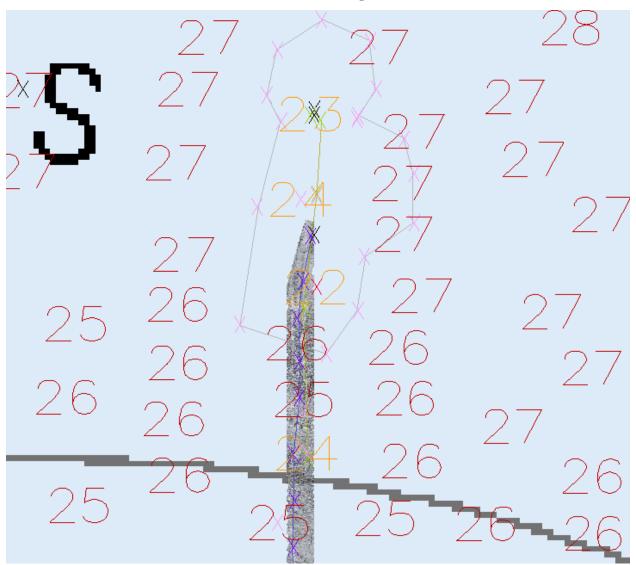


Figure 1.11.1

1.12) DTON B 340/158

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:55:39.9 N, 076:07:49.2 W

Least Depth: 2.97 m (= 9.74 ft = 1.623 fm = 1 fm 3.74 ft)

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.14:58:02.697 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 864_1457

Profile/Beam: 340/158

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

This submerged dolphin was found at the current surveyed position correlating with Awois 12371. Acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/864_1457	340/158	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/046_1331	0001	1.74	069.0	Secondary
h11323/tj_3102_klein5000_sss200/2006-113/215_1749	0001	5.47	116.2	Secondary (grouped)

Hydrographer Recommendations

Chart a submerged dolphin least depth 2.97 meters (9.74 feet).

Cartographically-Rounded Depth (Affected Charts):

9ft (12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2) 1 ½fm (13003_1)

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: CATPLE - 3:post

CONDTN - 2:ruined

CONVIS - 2:not visual conspicuous

Office Notes

Concur. This item is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

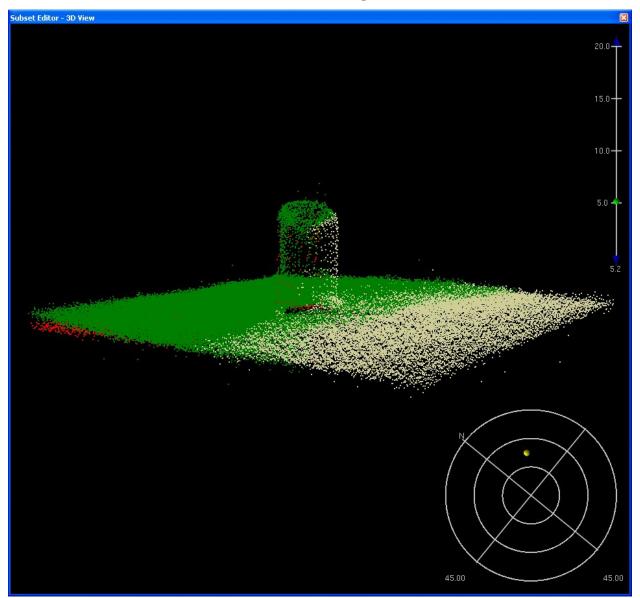


Figure 1.12.1

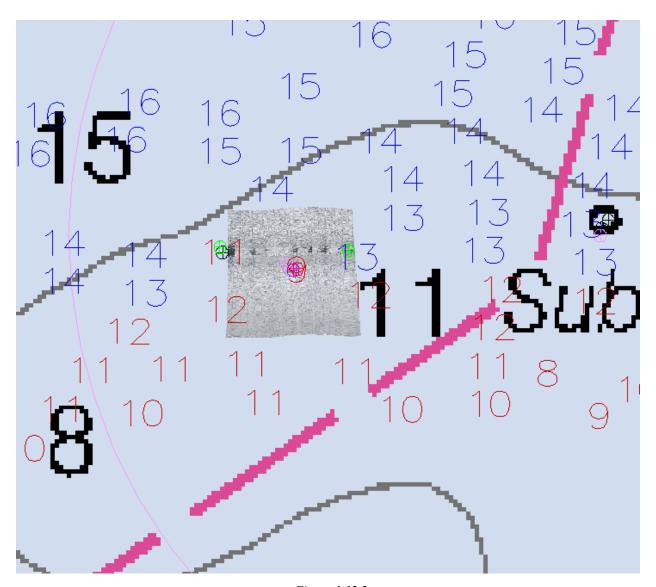


Figure 1.12.2

1.13) DTON B 86/238

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:55:40.1 N, 076:07:50.6 W

Least Depth: 3.36 m = 1.835 fm = 1 fm 5.01 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.14:57:54.229 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 864_1457

Profile/Beam: 86/238

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

This second submerged dolphin was found in the Awois 12371 circle radius. Uncharted dangerous Dolphin acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/864_1457	86/238	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-114/284_2029	0001	2.78	157.9	Secondary

Hydrographer Recommendations

Chart a submerged dolphin with least depth 3.36 meters (11.01 feet).

Cartographically-Rounded Depth (Affected Charts):

11ft (12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2)
1 ³4fm (13003_1)

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: CATPLE - 3:post

CONDTN - 2:ruined

CONVIS - 2:not visual conspicuous

Office Notes

Concur. This item is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

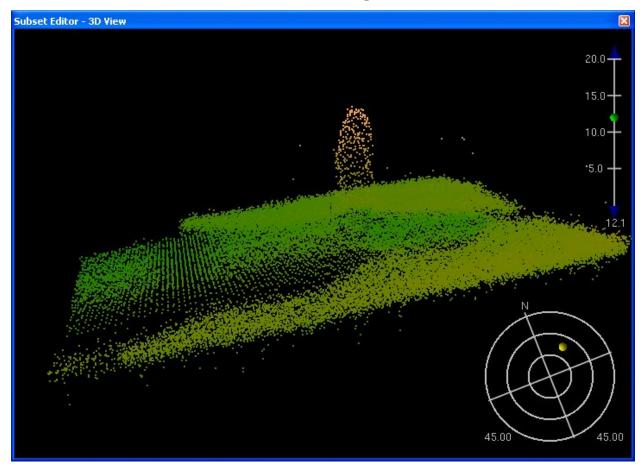


Figure 1.13.1

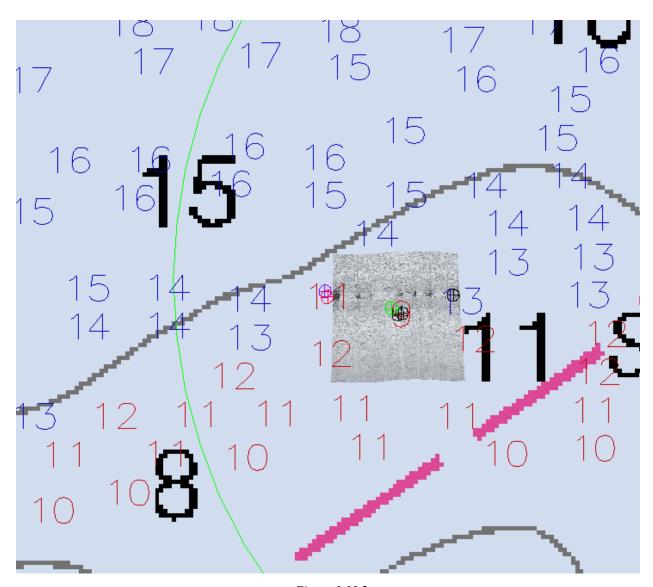


Figure 1.13.2

1.14) AHB DTON #1 410/230

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:59:04.3 N, 076:11:06.3 W

Least Depth: 7.07 m = 23.19 ft = 3.865 fm = 3 fm 5.19 ft

TPU ($\pm 1.96\sigma$): THU (TPEh) $\pm 0.980 \text{ m}$; TVU (TPEv) $\pm 0.367 \text{ m}$

Timestamp: 2006-171.15:21:33.297 (06/20/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-171 / 009_1521

Profile/Beam: 410/230

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Shoaling found. Acquisition over the item was covered by Reson 8125 MBES and 200 % Klein 5000 SSS.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-171/009_1521	410/230	0.00	0.000	Primary
h11323/1005_mb/2005-154/173_1923	275/67	0.35	309.6	Secondary

Hydrographer Recommendations

Chart a sounding least depth of 7.07 meters (23.19 feet).

Cartographically-Rounded Depth (Affected Charts):

23ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20060621

SORIND - US, US, survy, H11323

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

VALSOU - 7.069 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Do not concur. Shoaling is not evident in the survey data at this location. This target is determined to be an obstruction. Chart OBSTN symbol and text OBSTN at 23.19 feet.

This Item sent in as DtoN on July 10, 2008 by AHB.

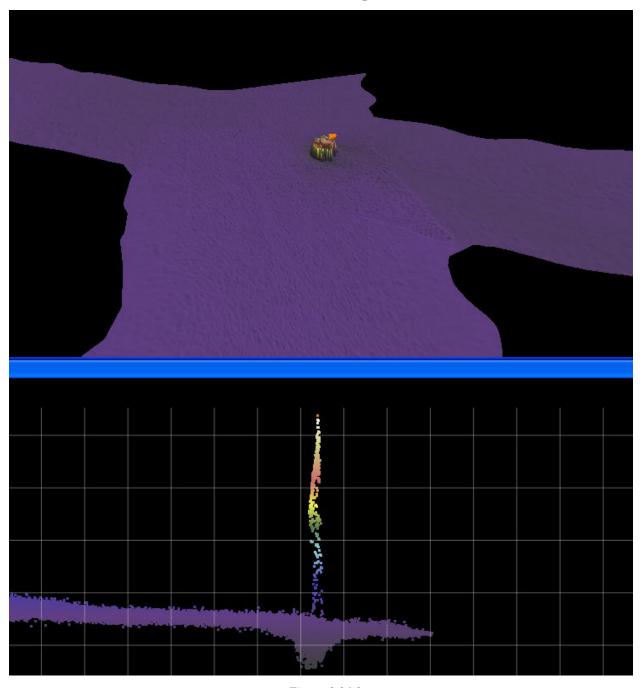


Figure 1.14.1

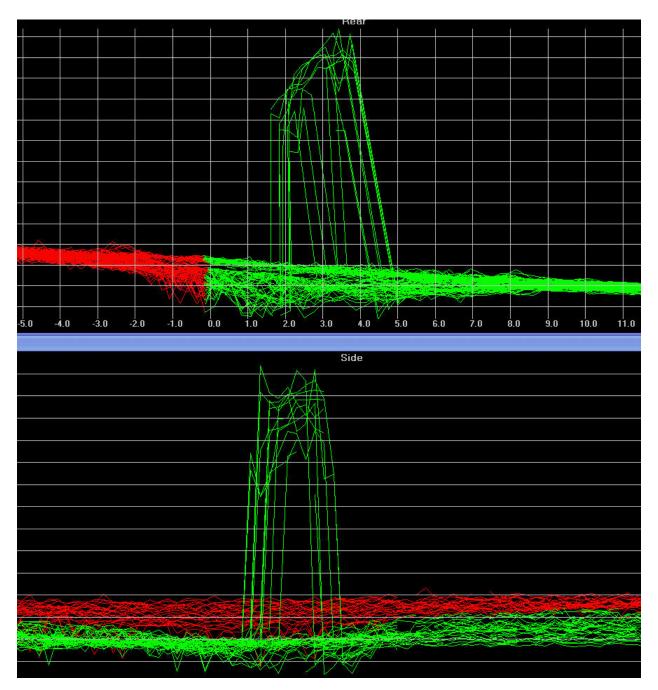


Figure 1.14.2

1.15) DTON B 368/199

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:56:11.8 N, 076:11:01.9 W

Least Depth: 5.98 m (= 19.63 ft = 3.272 fm = 3 fm 1.63 ft)

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-172.13:38:14.013 (06/21/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-172 / 040_1337

Profile/Beam: 368/199

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-172/040_1337	368/199	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-114/279_1822	0002	4.60	137.3	Secondary

Hydrographer Recommendations

Chart dangerous Obstruction with least depth 5.98 meters (19.63 feet).

Cartographically-Rounded Depth (Affected Charts):

19ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.983 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB concurs w/ the field.

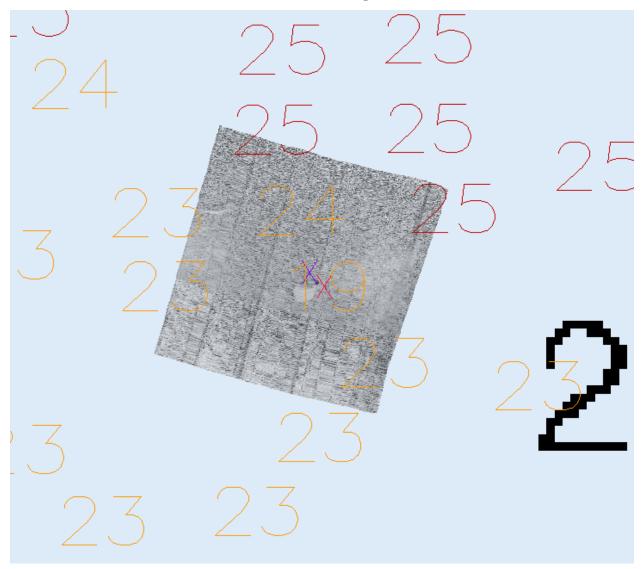


Figure 1.15.1

1.16) DTON B 26/101

DANGER TO NAVIGATION

Survey Summary

Survey Position: 36:55:12.0 N, 076:06:59.2 W

Least Depth: 3.23 m = 1.768 fm = 1 fm 4.61 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-108.17:29:35.226 (04/18/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-108 / 034_1729

Profile/Beam: 26/101

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted dangerous PILE acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-108/034_1729	26/101	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-108/034_1729	0001	2.93	087.1	Secondary

Hydrographer Recommendations

Chart submerged pile with least depth 3.23 meters (10.61 feet).

Cartographically-Rounded Depth (Affected Charts):

10ft (12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2) 1 ³/₄fm (13003_1)

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: CATPLE - 3:post

CONVIS - 2:not visual conspicuous

Office Notes

Concur. This item is presently charted on the continual maintenance raster dated September 18, 2007. Retain as charted.

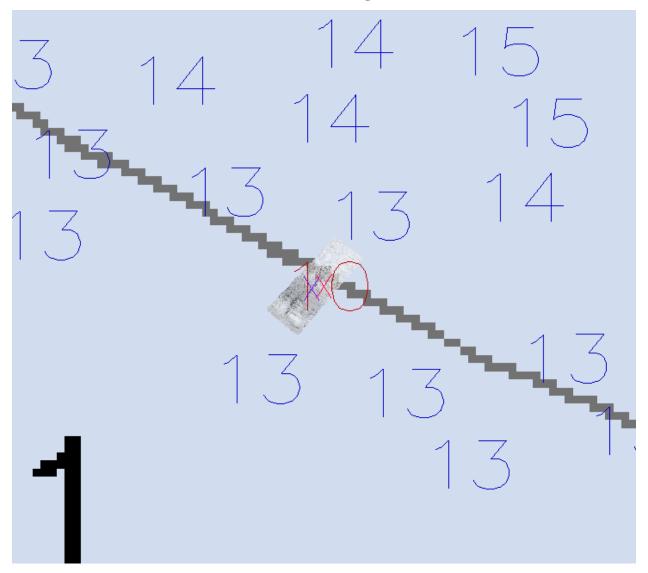


Figure 1.16.1

APPENDIX II

SURVEY FEATURE REPORT

Following are item investigation reports detailing three groups of features:

- 1. AWOIS Items
- 2. Charted Features and Notes
- 3. Significant Uncharted Features

H11323 Final DR AWOIS Reports

Registry Number: H11323 **State:** Virginia

Locality: Chesapeake Bay

Sub-locality: Thimble Shoal Channel

Project Number: OPR-D304-TJ-06

Survey Dates: 06/02/2005 - 11/07/2006

Charts Affected

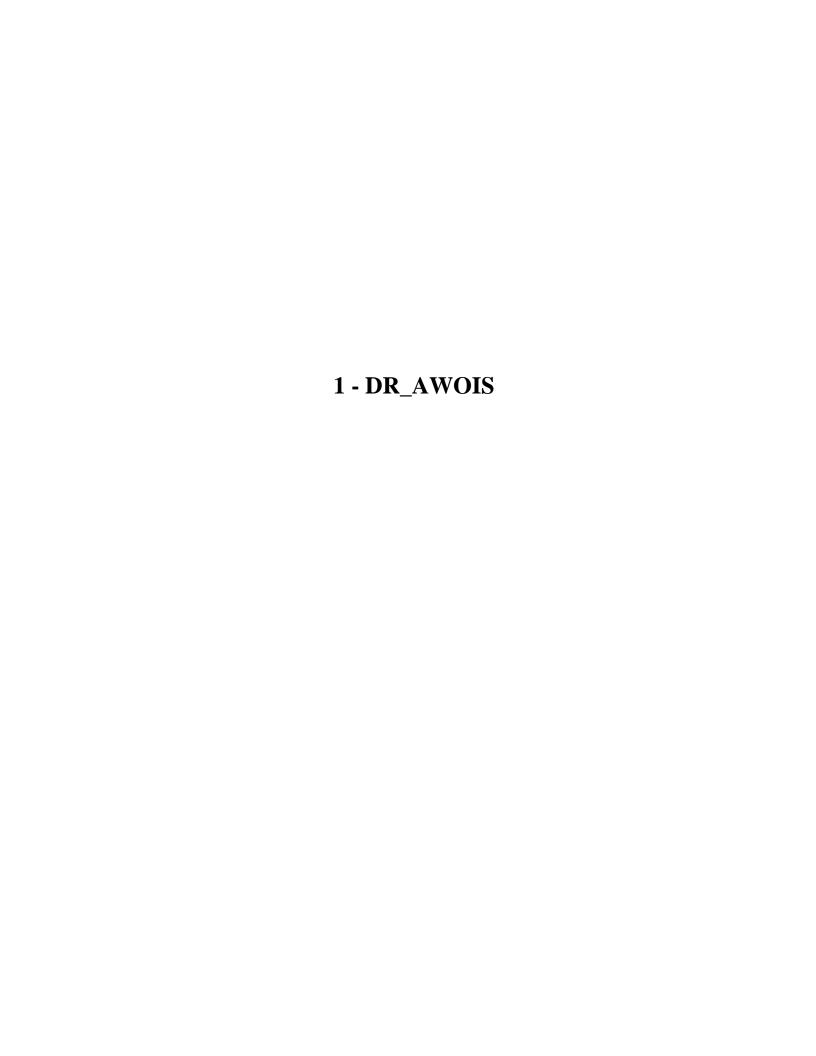
Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12255	16th	09/01/2005	1:5,000 (12255_1)	[L]NTM: ?
12256	15th	07/01/2005	1:20,000 (12256_1)	[L]NTM: ?
12254	46th	02/01/2006	1:20,000 (12254_1)	[L]NTM: ?
12222	47th	11/01/2005	1:40,000 (12222_1)	[L]NTM: ?
12205	30th	11/01/2005	1:80,000 (12205_1)	[L]NTM: ?
12221	77th	05/01/2005	1:80,000 (12221_1)	[L]NTM: ?
12207	21st	03/01/2004	1:80,000 (12207_1)	[L]NTM: ?
12280	6th	09/01/2005	1:200,000 (12280_2)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?

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

Features

		Feature	Survey	Survey	Survey	AWOIS
No.	Name	Type	Depth	Latitude	Longitude	Item
1.1	1817/31 AWOIS 10595	Obstruction	11.93 m	36:58:13.6 N	076:06:26.7 W	10595
1.2	16227/88 AWOIS 3706 Found	Obstruction	4.58 m	36:56:54.4 N	076:08:15.0 W	3706
1.3	18 foot Obstruction AWOIS 9826	Obstruction	5.48 m	36:57:31.0 N	076:09:16.1 W	9826
1.4	24 foot Obstn AWOIS 3693	Obstruction	7.30 m	36:56:29.8 N	076:09:48.4 W	3693
1.5	4847/22 AWOIS 3711 insignificant	Obstruction	7.60 m	36:56:18.7 N	076:09:35.0 W	3711
1.6	560/188 AWOIS 10596	Obstruction	12.05 m	36:58:10.7 N	076:06:17.3 W	10596
1.7	2296/18 AWOIS 12389	Obstruction	13.54 m	36:58:33.8 N	076:06:44.6 W	12389
1.8	428/170 AWOIS 9825	Obstruction	6.01 m	36:57:16.7 N	076:09:35.6 W	9825
1.9	1273/159 AWOIS 3716	Obstruction	6.16 m	36:55:58.7 N	076:09:32.2 W	3716

1.10	360/26 insignificant AWOIS 3713	Obstruction	6.26 m	36:55:55.4 N	076:08:58.2 W	3713
1.11	1042/214 AWOIS 3698	Obstruction	5.09 m	36:55:57.6 N	076:09:02.0 W	3698
1.12	0017 AWOIS 822 Disproval	Shoal	[None]	36:55:55.5 N	076:09:27.4 W	822
1.13	665/99 AWOIS 3696	Obstruction	4.58 m	36:55:48.0 N	076:09:28.4 W	3696
1.14	224/13 AWOIS 846	Obstruction	7.61 m	36:57:32.3 N	076:06:53.8 W	846
1.15	8112/18 AWOIS 3692	Obstruction	7.33 m	36:56:31.8 N	076:09:56.8 W	3692
1.16	697/2 AWOIS 9559	Obstruction	5.91 m	36:56:58.7 N	076:10:44.2 W	9559
1.17	1927/98 AWOIS 3717	Obstruction	6.13 m	36:57:44.3 N	076:10:39.4 W	3717
1.18	709/55 AWOIS 12363	Obstruction	6.52 m	36:57:48.7 N	076:10:32.8 W	12363
1.19	627/26 AWOIS 9827	Obstruction	6.38 m	36:57:34.2 N	076:08:50.5 W	9827
1.20	556/237 AWOIS 3712 insignificant	Obstruction	6.02 m	36:55:53.1 N	076:08:35.9 W	3712
1.21	307/21 AWOIS 3703	Obstruction	8.27 m	36:56:28.6 N	076:09:01.9 W	3703
1.22	416/228 AWOIS 9828	Obstruction	5.40 m	36:57:26.5 N	076:09:00.5 W	9828
1.23	0002 AWOIS 12371approx 100m West of this location	SSS	[None]	36:55:40.6 N	076:07:43.3 W	12371
1.24	2534/92 AWOIS 3718 insignificant	Obstruction	5.22 m	36:55:50.8 N	076:09:47.1 W	3718
1.25	419/31AWOIS 3726 insignificant	Pile	8.26 m	36:56:48.0 N	076:07:17.6 W	3726
1.26	357/25 AWOIS 3715 insignificant	Shoal	6.34 m	36:55:52.2 N	076:08:44.0 W	3715
1.27	1111/175 AWOIS 3685	Obstruction	4.55 m	36:55:53.1 N	076:09:34.8 W	3685
1.28	0001AWOIS 3694 Disproval	Shoal	[None]	36:55:38.1 N	076:07:55.7 W	3694
1.29	0001AWOIS 3687 Disproval	Shoal	[None]	36:55:41.0 N	076:07:16.8 W	3687



1.1) 1817/31 AWOIS 10595

Primary Feature for AWOIS Item #10595

Search Position: 36:58:13.6 N, 076:06:26.8 W

Historical Depth: 11.89 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

F00450/99-- OPR-E350-RU; UNCHARTED OBSTRUCTION NOTED DURING OFFICE PROCESSING. LD OF 39 FEET (11.9 METERS) IN LAT. 36-58-13.56N, LONG. 76-06-26.76W. EVALUATOR RECOMMENDS CHARTING A 39 OBSTN AS SURVEYED. (ENT 4/27/00, SJV)

Survey Summary

Survey Position: 36:58:13.6 N, 076:06:26.7 W

Least Depth: 11.93 m (= 39.15 ft = 6.526 fm = 6 fm 3.15 ft)

TPU (\pm **1.96** σ): THU (TPEh) \pm 1.214 m; TVU (TPEv) \pm 0.242 m

Timestamp: 2005-154.15:06:49.290 (06/03/2005)

Survey Line: h11323 / 1005_mb / 2005-154 / 179_1504

Profile/Beam: 1817/31

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found as charted. Acquisition over the item and radius were covered by 100% Klein 5000 Side Scan Sonar and 100% Reson 8125 Multibeam Sonar and partial Reson 8101 Multibeam sonar. This combination satisfies the project instruction requirment.

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-154/179_1504	1817/31	0.00	0.000	Primary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 10595	2.17	076.3	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 40	2.21	088.4	Secondary (grouped)
h11323/1005_mb/2005-154/179_1504	1856/26	11.98	090.8	Secondary (grouped)
h11323/1014_mb/2005-165/042_1808	1181/35	21.38	067.2	Secondary (grouped)
h11323/1005_100/2005-154/179_1504	0002	24.37	073.7	Secondary (grouped)

Retain as charted. Update database.

Cartographically-Rounded Depth (Affected Charts):

```
39ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2)
6 ½fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 11.934 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur



Figure 1.1.1

1.2) 16227/88 AWOIS 3706 Found

Primary Feature for AWOIS Item #3706

Search Position: 36:56:54.5 N, 076:08:23.8 W

Historical Depth: [None] **Search Radius:** 1000

Search Technique: S2, MB, DI **Technique Notes:** [None]

History Notes:

H9910/80--OPR-D103-MI-80; 1:10,000 SCALE SURVEY; SUNKEN DANG WK PA. SOURCE ■ UNKNOWN. NOT INVESTIGATED OR ADDRESSED BY SURVEY. NOT CONSIDERED VERIFIED OR ■ DISPROVED. RECOMMENDED RETAIN AS CHARTED IN LAT.36-56-54N, LONG.76-08-25W. ■ (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:56:54.4 N, 076:08:15.0 W

Least Depth: 4.58 m = 15.01 ft = 2.502 fm = 2 fm = 3.01 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 1.196 m; **TVU** (**TPEv**) ± 0.240 m

Timestamp: 2005-164.19:33:45.248 (06/13/2005)

Survey Line: h11323 / 1005_mb / 2005-164 / 152_1906

Profile/Beam: 16227/88

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstruction was found. No evidence of Wreck described as 15 ft outboard was found. Many other Obstns in area are not related and of insigificant height. With the exception of a small area between the twin spans of the Chesapeake Bay Bridge Tunnel, Acquisition over the entire 2000m radius was covered by 200% Klein 5000 Side Scan Sonar. The Wk symbol was completly covered by 100% 8125 multibeam data. The Charted item is considered disproved at this location.

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-164/152_1906	16227/88	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-115/258_1442	0001	15.06	332.9	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 44	46.72	096.0	Secondary (grouped)
OPR-D304-TJ-06_AWOIS	AWOIS # 3706	217.61	091.3	Secondary

Remove WK PA, chart Obstn least depth 4.58 meters (15.01 feet). Update data base.

Cartographically-Rounded Depth (Affected Charts):

```
15ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2)
2 ½fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 4.576 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Concur

1.3) 18 foot Obstruction AWOIS 9826

Primary Feature for AWOIS Item #9826

Search Position: 36:57:31.0 N, 076:09:16.2 W

Historical Depth: 5.79 m

Search Radius: 100

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE410SS/95-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. ECHO SOUNDER LD OF 5.8 METERS (19 FEET). IN 7.2 METERS IN LAT. 36-57-31.041N, LONG. 76-09-16.181W. EVALUATOR RECOMMENDS CHARTING A 19 OBSTR AS SURVEYED. (ENT 7/12/96, SJV)

Survey Summary

Survey Position: 36:57:31.0 N, 076:09:16.1 W

Least Depth: 5.48 m = 17.98 ft = 2.996 fm = 2 fm = 2.996 ft

TPU (\pm 1.96 σ): THU (TPEh) \pm 1.258 m; TVU (TPEv) \pm 0.240 m

Timestamp: 2005-165.21:21:08.830 (06/14/2005)

Survey Line: h11323 / 1005_mb / 2005-165 / 157_2109

Profile/Beam: 1786/96

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found as charted with a shoaler depth. Acquisition over the entire radius and was covered by 200% Klein 5000 Side Scan Sonar and 100% Reson 8125 and partial Reson 8101 Multibeam Sonar. LD certain.

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-165/157_2109	1786/96	0.00	0.000	Primary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 9826	2.52	112.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/253_2117	0001	3.93	125.8	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 18	5.14	240.7	Secondary (grouped)

Remove charted 19 feet. Chart depth 5.48 meters (17.98 feet) inside danger circle. Update Data base.

Cartographically-Rounded Depth (Affected Charts):

```
18ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2)
3fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.479 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur



Figure 1.3.1

1.4) 24 foot Obstn AWOIS 3693

Primary Feature for AWOIS Item #3693

Search Position: 36:56:29.5 N, 076:09:48.8 W

Historical Depth: 7.01 m Search Radius: 200

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

H9910/80--OPR-D103-MI-80; ITEM 134; 1:10,000 SCALE SURVEY; DEL NORTE CONTROL ■(R/R, R/A); INVESTIGATING AND OBSTR IN LAT.36-56-31N, LONG.76-09-59W ■ORIGINATED IN FE233WD; ECHO SOUNDER W/50M LINE SPACING; 3FT SPIKE ON ■FATHOGRAM; STAR PATTERN INVESTIGATION OVER AREA OF SPIKE W/NO FURTHER ■SIGN OF OBSTR; OBSTR HAS LEAST DEPTH OF 23FT; EVALUATOR RECOMMENDED CHARTING ■23FT OBSTR IN LAT.36-56-29N, LONG.76-09-50W. (ENTERED 10/15/84 MSM)■ FE410SS/95-- OPR-E696-HE; NOT INVESTIGATED DUE TIME CONSTRAINTS.■EVALUATOR RECOMMENDS RETAINING AS CHARTED AND REASSIGNING IN■FUTURE. (UP 2/9/96, SJV)

Survey Summary

Survey Position: 36:56:29.8 N, 076:09:48.4 W

Least Depth: 7.30 m = 23.95 ft = 3.991 fm = 3 fm = 5.95 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 1.238 m; TVU (TPEv) \pm 0.241 m

Timestamp: 2005-174.17:44:59.871 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 211_1742

Profile/Beam: 3574/65

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found as charted. Acquisition over the entire radius was covered by 200% Klein 5000 Side Scan Sonar and 100% Reson 8101.

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/211_1742	3574/65	0.00	0.000	Primary
h11323/1005_100/2005-153/140_1557	0001	3.20	279.9	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-113/270_2058	0002	9.25	156.9	Secondary (grouped)

Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3693	11.94	045.2	Secondary (grouped)
ChartGPs - ENC US5VA18M	Danger 12	41.47	010.8	Secondary (grouped)

Retain as charted. Update data base.

Cartographically-Rounded Depth (Affected Charts):

24ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

TECSOU - 2: found by side scan sonar

VALSOU - 7.299 m

VERDAT - 12:Mean lower low water

Office Notes

Concur with clarification. The cartographically rounded least depth of this feature is 24 feet. Chart a 24 Obstn in the present survey position.

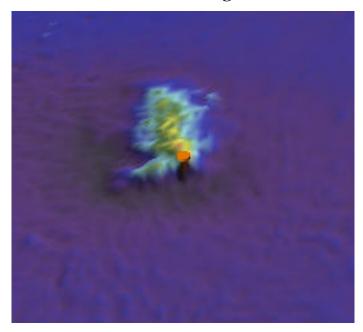


Figure 1.4.1

1.5) 4847/22 AWOIS 3711 insignificant

Primary Feature for AWOIS Item #3711

Search Position: 36:56:19.6 N, 076:09:37.1 W

Historical Depth: 6.40 m Search Radius: 200

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

H9255WD/71,72--OPR-467-R/H-71,72; ITEM 37; 1:20,000 SCALE SURVEY. RAYDIST ■CONTROL (HYPERBOLIC, R/R) AND VISUAL. ANCHOR EXTENDING 1 1/2FT OFF BOTTOM. ■HUNG AT 21FT; CLEARED BY 21FT. DEPTHS IN AREA FROM H9910/80 ARE 26-27FT. ■RECOMMENDED CHARTING AS A SUBM OBSTR W/WIRE DRAG CLEARANCE OF 21FT IN ■LAT.36-56-19.1N, LONG.76-09-38.3W. (ENTERED 10/15/84 MSM)■ FE410SS/95-- OPR-E696-HE; NOT INVESTIGATED DUE TIME CONSTRAINTS.■EVALUATOR RECOMMENDS RETAINING AS CHARTED AND REASSIGNING IN■FUTURE. (UP 2/9/96, SJV)

Survey Summary

Survey Position: 36:56:18.7 N, 076:09:35.0 W

Least Depth: 7.60 m = 24.92 ft = 4.154 fm = 4 fm = 0.92 ft

TPU (\pm **1.96** σ): THU (**TPEh**) \pm 1.268 m; TVU (**TPEv**) \pm 0.241 m

Timestamp: 2005-174.17:40:43.568 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 213_1736

Profile/Beam: 4847/22

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/213_1736	4847/22	0.00	0.000	Primary
h11323/1005_100/2005-153/138_1648	0001	0.33	188.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-113/272_1860	0001	3.39	316.1	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3711	58.91	118.4	Secondary
OPR-D304-TJ-06_AWOIS	AWOIS # 3711	58.91	118.4	Secondary

OPR-D304-TJ-06_AWOIS	AWOIS # 822	738.95	346.1	Secondary
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Chart an Obstn

Cartographically-Rounded Depth (Affected Charts):

25ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.596 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Concur with clarification. This could be AWOIS 3711. The least depth is 25 ft and therefore insignificant. Maintain the AWOIS database but remove the "21 wire drag Obstn" from chart.

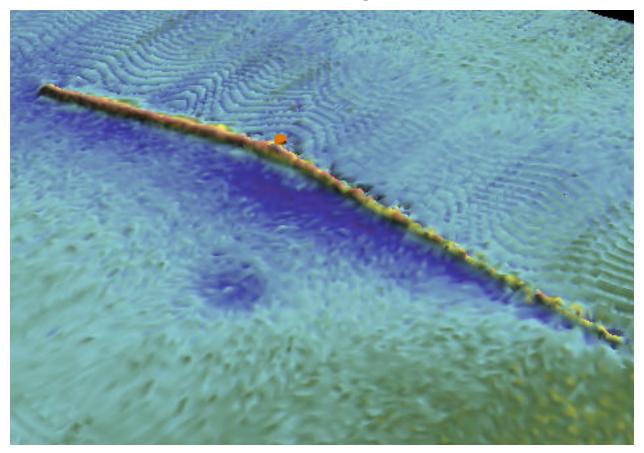


Figure 1.5.1

1.6) 560/188 AWOIS 10596

Primary Feature for AWOIS Item #10596

Search Position: 36:58:10.7 N, 076:06:17.3 W

Historical Depth: 11.89 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

F00450/99-- OPR-E350-RU; UNCHARTED OBSTRUCTION LOCATED DURING OFFICE PROCESSING. LD DEPTH OF 39 FEET (11.9 METERS) LOCATED IN LAT. 36-58-10.74N, LONG. 76-06-17.35W. EVALUATOR RECOMMENDS CHARTING A 39 OBSTN AS SURVEYED. (ENT 4/27/00, SJV)

Survey Summary

Survey Position: 36:58:10.7 N, 076:06:17.3 W

Least Depth: 12.05 m = 39.53 ft = 6.589 fm = 6 fm 3.53 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 1.193 m; TVU (TPEv) \pm 0.229 m

Timestamp: 2005-165.18:55:06.811 (06/14/2005)

Survey Line: h11323 / 1014_mb / 2005-165 / 279_1854

Profile/Beam: 560/188

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found as charted. Acquisition over the entire radius was covered by 100% Klein 5000 Side Scan Sonar and 100% Reson 8125 Multibeam Sonar.

Address	Feature	Range	Azimuth	Status
h11323/1014_mb/2005-165/279_1854	560/188	0.00	0.000	Primary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 10596	0.52	128.8	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 39	4.34	145.9	Secondary (grouped)
h11323/1005_100/2005-154/179_1504	0001	5.44	124.4	Secondary (grouped)
h11323/1970tj_3102_klein5000_sss200/2006-126/203_1305	0001	13.40	192.2	Secondary (grouped)

Retain as charted. Update data base.

Cartographically-Rounded Depth (Affected Charts):

```
39ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2)
6 ½fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 12.050 m

VERDAT - 12:Mean lower low water

Office Notes

Concur with clarification. As presently charted on 12221, this obstruction is shown as a danger circle with no least depth. Chart a 39 foot obstruction with danger circle in the presently surveyed position.

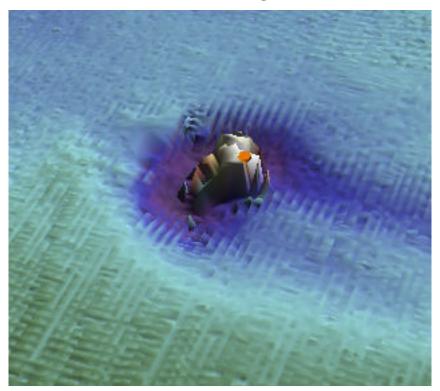


Figure 1.6.1

1.7) 2296/18 AWOIS 12389

Primary Feature for AWOIS Item #12389

Search Position: 36:58:33.9 N, 076:06:44.6 W

Historical Depth: 13.41 m

Search Radius: 50

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

NO REGISTRY NUMBER ASSIGNED-- S-E604-RU-02; HLS PROJECT REPORT; SIDE SCAN SONAR CONTACT. SWMB LD OF 44 FEET IN LAT. 36-58-33.881N, LONG. 76-06-44.550W. SONAR IMAGERY DESCRIBES A BUOY AND BLOCK. EVALUATOR RECOMMENDS CHARTING A 44 OBSTN AS SURVEYED. (ENT 4/3/04, SJV)

Survey Summary

Survey Position: 36:58:33.8 N, 076:06:44.6 W

Least Depth: 13.54 m = 44.41 ft = 7.401 fm = 7 fm 2.41 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 1.371 m; **TVU** (**TPEv**) ± 0.233 m

Timestamp: 2005-174.16:19:35.109 (06/23/2005)

Survey Line: h11323 / 1014_mb / 2005-174 / 419_1616

Profile/Beam: 2296/18

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found as charted. Acquisition over the entire radius was covered by 100% Klein 5000 Side Scan Sonar and 100% Reson 8125 Multibeam Sonar.

Address	Feature	Range	Azımuth	Status
h11323/1014_mb/2005-174/419_1616	2296/18	0.00	0.000	Primary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 12389	1.24	208.3	Secondary

Retain as charted. Update data base.

Cartographically-Rounded Depth (Affected Charts):

```
44ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 7 ½fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

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

VALSOU - 13.535 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Concur with clarification. This feature was created during office processing. It is replacing the field submitted object marked at an incorrect depth.

1.8) 428/170 AWOIS 9825

Primary Feature for AWOIS Item #9825

Search Position: 36:57:16.6 N, 076:09:35.6 W

Historical Depth: 5.79 m

Search Radius: 100

Search Technique: S2, MB. DI, SD

Technique Notes: [None]

History Notes:

FE410SS/95-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. ECHO SOUNDER LD OF 6 METERS (19 FEET) IN 6-8 METERS IN LAT. 36-57-16.627 N, LONG. 76-09-35.608 W. EVALUATOR RECOMMENDS CHARTING A 19 OBSTR AS SURVEYRD. (ENT 7/12/96, SJV)

Survey Summary

Survey Position: 36:57:16.7 N, 076:09:35.6 W

Least Depth: 6.01 m = 19.73 ft = 3.288 fm = 3 fm = 1.73 ft

TPU (\pm 1.96 σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-126.18:19:27.005 (05/06/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-126 / 484_1819

Profile/Beam: 428/170

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found as charted. Acquisition over the entire radius was covered by 200% Klein 5000 Side Scan Sonar and 100% Reson 8125 Multibeam Sonar.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-126/484_1819	428/170	0.00	0.000	Primary
h11323/1005_100/2005-164/152_2016	0001	0.47	332.8	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 9825	1.60	334.8	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-115/258_1506	0002	4.80	192.3	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 8	5.82	298.5	Secondary (grouped)
h11323/tj_3101_reson8125/2006-126/774_1827	450/226	34.98	296.3	Secondary (grouped)
h11323/tj_3101_reson8125/2006-126/485_1759	351/67	35.86	237.8	Secondary (grouped)

Retain as charted. Update data base.

Cartographically-Rounded Depth (Affected Charts):

```
19ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2)
3 ¼fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.013 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur

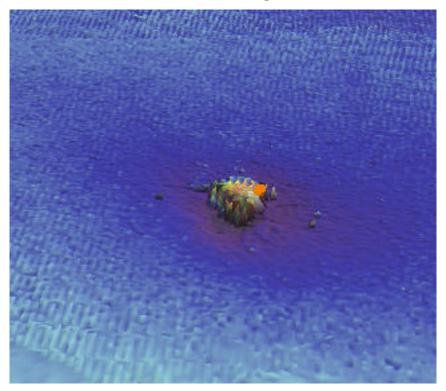


Figure 1.8.1

1.9) 1273/159 AWOIS 3716

Primary Feature for AWOIS Item #3716

Search Position: 36:55:59.0 N, 076:09:32.1 W

Historical Depth: 5.79 m

Search Radius: 200

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

H9255WD/71,72--OPR-467-RH-71,72; ITEM 34; 1:20,000 SCALE SURVEY. RAYDIST ■CONTROL (HYPERBOLIC, R/R) AND VISUAL; MUSHROOM ANCHOR EXTENDING 3FT OFF ■BOTTOM. HUNG AT 19FT, CLEARED BY 18FT. LEAST DEPTH OF 19FT. DEPTHS IN AREA ■FROM H9910/80 ARE 22-23FT. RECOMMENDS CHARTING OBSTR W/LEAST DEPTH OF 19FT. ■IN LAT.36-55-58.5N, LONG.76-09-33.3W. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:58.7 N, 076:09:32.2 W

Least Depth: 6.16 m = 20.21 ft = 3.369 fm = 3 fm 2.21 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.13:59:21.273 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 354_1358

Profile/Beam: 1273/159

Charts Affected: 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found as charted. Acquisition over the entire radius was covered by 200% Klein 5000 Side Scan Sonar and 100% Reson 8101 Multibeam Sonar. The danger circle was covered by 100 Reson 8125 multibeam sonar.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/354_1358	1273/159	0.00	0.000	Primary
h11323/1005_100/2005-165/126_1909	0002	4.25	084.6	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3716	9.83	203.3	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 3	12.71	176.4	Secondary (grouped)

Remove charted depth. Chart least depth of 6.16 meters (21.21 feet) inside danger circle. Update data base.

Cartographically-Rounded Depth (Affected Charts):

```
20ft (12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2) 3 <sup>1</sup>/<sub>4</sub>fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.161 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification: Least Depth is 20 ft.



Figure 1.9.1

1.10) 360/26 insignificant AWOIS 3713

Primary Feature for AWOIS Item #3713

Search Position: 36:55:55.5 N, 076:08:58.1 W

Historical Depth: 5.18 m Search Radius: 200

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

H9255WD/71,72--OPR-467-RH-71,72; ITEM 31; 1:20,000 SCALE SURVEY; RAYDIST ■CONTROL (HYPERBOLIC, R/R) AND VISUAL. SCRAP METAL EXTENDING 2FT OFF BOTTOM. ■HUNG AT 17FT. CLEARED BY 17FT; DEPTHS IN AREA FROM H9910/80 ARE 20-22FT. ■ECOMMENDED CHARTING A SUBM OBSTR W/WIRE DRAG CLEARANCE OF 17 FT IN ■LAT.36-55-55N, LONG.76-08-59.3W. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:55.4 N, 076:08:58.2 W

Least Depth: 6.26 m = 20.54 ft = 3.423 fm = 3 fm = 2.54 ft

TPU ($\pm 1.96\sigma$): THU (TPEh) $\pm 0.980 \text{ m}$; TVU (TPEv) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.14:16:13.380 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 537_1415

Profile/Beam: 360/26

Charts Affected: 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found as charted. Acquisition over the entire radius was covered by 200% Klein 5000 Side Scan Sonar. The obstn circle was covered by 100% Reson 8125 Multibeam Sonar.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/537_1415	360/26	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-114/290_1955	0001	0.43	051.8	Secondary (grouped)
h11323/1005_100/2005-153/135_1824	0006	4.18	113.4	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3713	4.89	218.3	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 4	8.46	044.6	Secondary (grouped)

Remove 17 ft swept by wire drag. Chart least depth 6.26 meters(20.54 ft) inside danger circle. Update data base.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.260 m

VERDAT - 12:Mean lower low water

Office Notes

AHB: Do not concur. Height off bottom is insignficant. Delete dangerous obstruction 17 foot found by wire drag and text "Obstn" at $36^{\circ}55'55.396$ ", $-076^{\circ}08'58.183$ ".

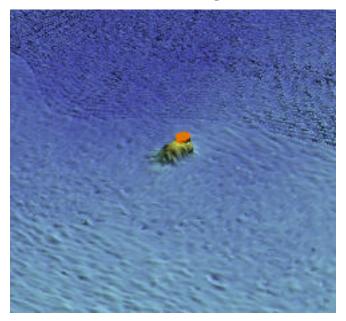


Figure 1.10.1

1.11) 1042/214 AWOIS 3698

Primary Feature for AWOIS Item #3698

Search Position: 36:55:57.5 N, 076:09:02.4 W

Historical Depth: 5.18 m Search Radius: 200

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

FE233WD/69--AMC-SP-5-69; 1:20,000 SCALE SURVEY; OBSTR IDENTIFIED AS ROCK ■4X6FT; 5.4FT ABOVE BOTTOM; HUNG AT 19FT AND CLEARED BY 19FT IN PA ■LAT.36-55-57N, LONG.76-09-04W; DIVER LEADLINE LEAST DEPTH OF 22FT; EVALUATOR ■RECOMMENDED CHARTING AS OBSTR W/CLEARED DEPTH OF 19FT. QUALITY REVIEWER ■RECOMMENDED CHARTING 22FT OBSTR; ■ H9255WD/71-72--CONCRETE CLUMP EXTENDING 6FT OFF THE BOTTOM IN LAT.36-55-56.5N,■LONG.76-09-03.5W. RECOMMENDED ITEM BE CHARTED AS OBSTR W/CLEARED DEPTH OF ■17FT THRU H9255WD. ■ H9910/80--OPR-D103-MI-80; 1:10,000 SCALE SURVEY, DEL NORTE CONTROL (R/R, R/A) ■ECHO SOUNDER 23FT DEPTHS IN AREA. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:57.6 N, 076:09:02.0 W

Least Depth: 5.09 m = 16.71 ft = 2.785 fm = 2 fm = 4.71 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.14:16:44.509 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 537_1415

Profile/Beam: 1042/214

Charts Affected: 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

The AWOIS item was found north east of position. Acquisition over the radius was covered by 200% Klein 5000 Side Scan Sonar. The danger circle was covered by 100% Reson 8125 Multibeam Sonar.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/537_1415	1042/214	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/055_1839	0001	1.54	005.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/275_1655	0002	2.10	097.7	Secondary (grouped)

h11323/tj_3102_klein5000_sss200/2006-114/290_1955	0002	3.31	043.8	Secondary (grouped)
h11323/1005_100/2005-153/135_1824	0001	3.84	099.7	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3698	9.08	068.1	Secondary (grouped)

Remove Obstn 17 foot swept by wire drag and danger circle. Chart Obstn and danger circle with least depth of 5.09 meters (16.71 feet) at the surveyed position. Update data base.

Cartographically-Rounded Depth (Affected Charts):

16ft (12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2) 2 ³4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: NATCON - 2:concreted

QUASOU - 6:least depth known

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

VALSOU - 5.093 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Concur



Figure 1.11.1

1.12) 0017 AWOIS 822 Disproval

Primary Feature for AWOIS Item #822

Search Position: 36:55:55.5 N, 076:09:27.8 W

Historical Depth: 4.88 m Search Radius: 1000

Search Technique: SD, S2, SWMB, DI

Technique Notes: INVESTIGATION NOT REQUIRED SHOREWARD OF THE 12-FOOT DEPTH

CURVE.

History Notes:

LNM1/72--A 36-FT. BARGE WITH PILE DRIVER ATTACHED HAS SUNK IN APPROX. 18■FT., IN THE VICINITY OF THE ENTRANCE TO LITTLE CREEK HARBOR; POS. DOUBTFUL. ■ 1969 R/H INVESTIGATION 20-2-69 (UNPROCESSED); BOTTOM LITTERED WITH■MISC. DEBRIS■ H9910/80--OPR-D103-MI-80; 1:10,000 SCALE SURVEY; DEL NORTE CONRTOL (R/R, R/A)■ECHO SOURNDER W/50M LINE SPACING, DID NOT LOCATE WK; H9255WD DID NOT LOCATE■BUT CLEARED WK TO 16FT IN 19-21FT DEPTHS; RECOMMEND RETAIN SUBM DANG WK W/ED■AND NOTE (CLEARED TO 16FT); NOT CONSIDERED DISPROVED BY THIS SURVEY. (ENTERED■10/15/84, MSM)

Survey Summary

Survey Position: 36:55:55.5 N, 076:09:27.4 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-265.08:14:42 (09/22/2006)

Survey Line: h11323 / tj_3102_klein5000_sss200 / 2006-114 / 290_1955

Contact/Point: 0017/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Disproval of WK. No mapinfo search radius was given for item. Acquisition over the 1000m search radius in the microsoft database was covered by 200% Klein 5000 side scan sonar up to the 4-6 foot curve. The Wreck symbol was covered by 100% Reson 8101 multibeam sonar. No evidence of wreck was found at this location. The charted Wk is considered disproved.

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss200/2006-114/290_1955	0017	0.00	0.000	Primary

ChartGPs - ENC US5VA19M	Danger 43	3.76	061.2	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 822	10.31	087.1	Secondary

Remove charted wreck ED. Update data base.

S-57 Data

[None]

Office Notes

AHB: Concur

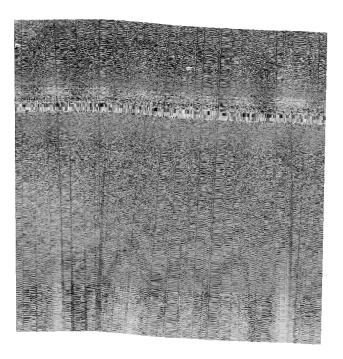


Figure 1.12.1

1.13) 665/99 AWOIS 3696

Primary Feature for AWOIS Item #3696

Search Position: 36:55:49.5 N, 076:09:27.8 W

Historical Depth: 4.27 m

Search Radius: 200

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

UNKNOWN SOURCE--3FT X 3FT CONCRETE BLOCK REPORTED CHARTED AS AN OBST IN LAT ■ 36-55-48N, LONG 76-09-33W. ■FE233WD/69--AMC-SP-5-69; 1:20,000 SCALE SURVEY; CONCRETE BLOCK NOT LOCATED ■ HOWEVER INVESTIGATED HANG IS 95 M EAST OF CHARTED POSITION; MAY HAVE ■ HUNG ON BOTTOM; HUNG AT 15FT IN PA LAT.36-55-49N, LONG.76-09-29W. CLEARED TO ■ 14FT. EVAL. RECOMMENDS DELETING ORIGINAL OBSTR CHARTING SUBM OBSTR CLEARED ■ TO 14FT IN NEW POSITION. (ENTERED MSM 6/11/85) ■H9910/80--OPR-D103-MI-80; 1:10,000 SCALE SURVEY; DEL NORTE CONTROL (R/R, R/A) ■ ECHO SOUNDER, DEPTHS TO 17FT IN AREA,CONCUR W/RECOMMENDATION IN FE233WD TO ■ CHART AN OBSTR. CLEARED TO 14FT AT POS. LISTED ABOVE. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:48.0 N, 076:09:28.4 W

Least Depth: 4.58 m = 15.03 ft = 2.505 fm = 2 fm 3.03 ft

TPU ($\pm 1.96\sigma$): THU (TPEh) $\pm 0.981 \text{ m}$; TVU (TPEv) $\pm 0.368 \text{ m}$

Timestamp: 2006-130.19:18:00.392 (05/10/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-130 / 330_1917

Profile/Beam: 665/99

Charts Affected: 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Awois 3696 item location and actual location in description differ. This is the item talked about that is 95 meters east of the "reported position" and hung at 15 ft. The acquired depth matches that depth. It looks like it drifted a few more meters east. No Mapinfo search radius was provided but the Acquisition over the 200m radius in the microsoft database listing was covered by 200% Klein 5000 side scan sonar and 100% Reson 8101 and 8125 multibeam sonar. LD certain.

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-130/330_1917	665/99	0.00	0.000	Primary

h11323/tj_3102_klein5000_sss100/2006-109/046_1813	0001	2.85	000.4	Secondary (grouped)
OPR-D304-TJ-06_AWOIS	AWOIS # 3696	49.31	197.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/287_1928	0003	163.78	169.5	Secondary (grouped)
ChartGPs - ENC US5VA18M	Danger 10	213.07	139.6	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/287_1928	0002	217.78	136.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/290_1955	0005	220.59	169.8	Secondary (grouped)

Remove danger circle and text cleared to 12 ft. Chart Obstn with least depth 15 ft at the surveyed position. Update data base.

Cartographically-Rounded Depth (Affected Charts):

15ft (12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2) 2 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 4.581 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images



Figure 1.13.1

1.14) 224/13 AWOIS 846

Primary Feature for AWOIS Item #846

Search Position: 36:57:33.1 N, 076:06:51.3 W

Historical Depth: 4.27 m

Search Radius: 0

Search Technique: SD, S2, SWMB, DI

Technique Notes: SURVEY RECTANGULAR AREA AS OUTLINED ON CHART 12254

History Notes:

NM30/70--LEAST DEPTH OF 19FT AT MLW IN A RECTANGULAR SHAPED AREA 262YDS LONG■AND 73 YDS WIDE ALONG EAST SIDE OF AND PARALLEL TO THE BRIDGE.■ H9814/80--OPR-D103-PE-80; ITEM #81; 1:10,000 SCALE SURVEY; ARGO (R/R),■DELNORTE (R/A); REP AS DEBRIS CONSISTING OF BRIDGE SECTIONS RESULTING FROM A■COLLISION OF USS YANCEY W/TRESTLE AT LAT.36-57-30N, LONG.76-06-55.6W;■SOUNDING SEARCH; IMPROVISED CHAIN DRAG; DIVER INVESTIGATION OBTAINING LEAST■DEPTH OF 14FT IN LAT.36-57-32.57N, LONG.76-06-52.51W; EVALUATOR RECOMMENDS■RETAINING AREA LIMITS AS CHARTED W/REVISED LEAST DEPTH OF 14FT. (ENTERED■11/8/84 MSM)

Survey Summary

Survey Position: 36:57:32.3 N, 076:06:53.8 W

Least Depth: 7.61 m = 24.98 ft = 4.163 fm = 4 fm 0.98 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.369 m

Timestamp: 2006-122.19:49:39.400 (05/02/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-122 / 231_1949

Profile/Beam: 224/13

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Awois 846 describes a 14 foot sounding found at 36 57 32.57N, 076 06 52.51. The least depth in this area is 7.61 meters parallel to the bridge. Shoal depths are found only underbridge. See

/tj_3102_reson8101/2006-122/232_1950 522/1. Acquisition over the rectangular danger area assigned was covered by 200% klein 5000 Sidescan sonar and 100% Reson 8101 multibeam sonar.

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-122/231_1949	224/13	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-107/042_1606	0008	6.86	313.8	Secondary (grouped)

h11323/tj_3102_klein5000_sss200/2006-110/214_1603	0008	19.84	349.9	Secondary
h11323/tj_3102_klein5000_sss100/2006-107/042_1606	0009	22.45	224.2	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/232_1950	538/92	26.24	006.6	Secondary
h11323/tj_3102_reson8101/2006-122/232_1950	670/100	29.30	228.3	Secondary
h11323/tj_3102_reson8101/2006-122/232_1950	587/7	30.32	088.7	Secondary
h11323/tj_3102_reson8101/2006-122/232_1950	634/1	36.62	120.0	Secondary
h11323/tj_3102_reson8101/2006-122/232_1950	522/1	48.13	063.5	Secondary
h11323/tj_3102_reson8101/2006-122/232_1950	695/1	49.66	142.5	Secondary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 846	67.79	247.8	Secondary (grouped)

Revise extent of danger limit to encompass Obstns. Retain Obstns text with depth in parantheses as 7.61 meters (24.98 feet).

Cartographically-Rounded Depth (Affected Charts):

25ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.614 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Concur. Extent of danger area will be modified to reflect the most recent survey data.

Feature Images

Figure 1.14.1

1.15) 8112/18 AWOIS 3692

Primary Feature for AWOIS Item #3692

Search Position: 36:56:31.5 N, 076:09:57.8 W

Historical Depth: 6.40 m

Search Radius: 200

Search Technique: SD, SWMB, S2, DI

Technique Notes: [None]

History Notes:

CL182/70, CL1028/70--AMC-SP-5-69; 10/69; PROCESSED UNDER SURVEY REGISTRY NO. ■ FE-233WD; SUBM DANG OBSTR; CARGO LOST DURING TRANSFER BETWEEN NAVY SHIPS; ■PROJECT TWO FEET ABOVE BOTTOM; BUOYED BY FIELD PARTY AND NAVY NOTIFIED; NAVY ■COULD NOT LOCATE AND NO FURTHER ATTEMPTS TO LOCATE WERE MADE; TEMP HUNG AT ■22FT; CLEARED TO 21FT IN LAT.36-56-31.2N, LONG.76-09-58.8W. ■ H9910/80--OPR-D103-MI-80; ITEM 134; 1:10,000 SCALE SURVEY; DEL NORTE CONTROL ■(R/R, R/A); ECHO SOUNDER W/50M LINE SPACING; 3FT SPIKE ON FATHOGRAM; STAR ■PATTERN INVESTIGATION OVER SPIKE W/NO FURTHER SIGN OF OBSTR; OBSTR WAS LEAST ■DEPTH OF 23FT; EVALUATOR RECOMMENDS AND OBSTR CLEARED BY 21FT BE CHARTED IN ■LAT.39-56-31N, LONG.76-09-59W (FROM FE233WD) AND A 23FT OBSTR BE CHARTED IN ■LAT.36-56-29N, LONG.76-09-50 (FROM H9910). (ENTERED 10/15/84 MSM)■ FE410SS/95--OPR-E696-HE; NOT INVESTIGATED DUE TIME CONSTRAINTS.■EVALUATOR RECOMMENDS RETAINING AS CHARTED AND REASSIGNING IN■FUTURE. (UP 2/9/96, SJV)

Survey Summary

Survey Position: 36:56:31.8 N, 076:09:56.8 W

Least Depth: 7.33 m = 24.05 ft = 4.009 fm = 4 fm = 0.05 ft

TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.144 m; TVU (TPEv) ± 0.242 m

Timestamp: 2005-153.16:01:58.306 (06/02/2005)

Survey Line: h11323 / 1005_mb / 2005-153 / 140_1557

Profile/Beam: 8112/18

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The item was found as charted and and acquisition over the entire search raduis covered by 100% Klein 5000 sidescan sonar and Reson 8101 multibeam sonar. 200% SSS had one small holiday. This combination satisfies the Project instructions.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-153/140_1557	8112/18	0.00	0.000	Primary
h11323/1005_100/2005-153/140_1557	0002	1.71	172.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-113/270_2058	0001	5.44	321.0	Secondary (grouped)
ChartGPs - ENC US5VA18M	Danger 11	16.38	052.9	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3692	26.89	068.6	Secondary (grouped)
h11323/1005_100/2005-153/140_1557	0003	29.52	086.1	Secondary (grouped)

Hydrographer Recommendations

Remove Obstn charted 21 feet swept by wire drag. Add Obstn least depth 7.33 meters (24.05 feet) at the surveyed position. Update data base.

Cartographically-Rounded Depth (Affected Charts):

24ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

TECSOU - 2: found by side scan sonar

VALSOU - 7.331 m

VERDAT - 12:Mean lower low water

Office Notes

1.16) 697/2 AWOIS 9559

Primary Feature for AWOIS Item #9559

Search Position: 36:56:58.4 N, 076:10:44.3 W

Historical Depth: 5.49 m

Search Radius: 100

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE388SS/94-- OPR-E696-HE; WHILE SEARCHING FOR AWOIS ITEM 8862, 2 CONCRETE BLOCKS WERE DISCOVERED DURING A ROUTINE SIDE SCAN CONFIDENCE CHECK IN THE VICINITY OF THE "LC" BUOY. DIVERS DESCRIBE 2 CONCRETE BLOCKS, 10 METERS APART. THE LARGER BLOCK MEASURED 5 X 5 FEET AND EXTENDED 3 FEET OFF THE BOTTOM. PNEUMO LD OF 18 FEET IN LAT. 36-56-58.405N, LONG. 76-10-44.284W. EVALUATOR RECOMMENDS DELETING CHARTED WRECK (AWOIS 8862) AND CHARTING A DANGEROUS SUBM OBSTR 18 FEET AS SURVEYED. LORAN-C RATES (9960 CHAIN): W=15960.1, X=27219.8, Y=41219.8, Z=58485.2. (ENT 9/6/95, SJV)

Survey Summary

Survey Position: 36:56:58.7 N, 076:10:44.2 W

Least Depth: 5.91 m (= 19.38 ft = 3.229 fm = 3 fm 1.38 ft)

TPU (\pm **1.96** σ): THU (TPEh) \pm 1.240 m; TVU (TPEv) \pm 0.255 m

Timestamp: 2005-174.15:42:54.847 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 255_1542

Profile/Beam: 697/2

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The item was found as charted. Acquisition over the entire radius was covered by 200% Klein 5000 sidescan sonar and 100% Reson 8101 multibeam sonar. LD certain.

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/255_1542	697/2	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-113/267_1642	0001	3.36	338.6	Secondary (grouped)
h11323/1005_100/2005-165/144_1440	0001	3.47	297.9	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 9559	7.82	008.9	Secondary (grouped)

ChartGPs - ENC US5VA18M	Danger 6	8.70	008.9	Secondary (grouped)
h11323/1005_mb/2005-174/253_1539	870/90	26.26	019.3	Secondary (grouped)
h11323/1005_mb/2005-174/251_1537	643/79	47.07	358.3	Secondary (grouped)
h11323/1005_100/2005-165/143_1513	0002	47.56	001.5	Secondary (grouped)
h11323/1005_mb/2005-174/255_1542	922/65	48.67	121.1	Secondary (grouped)
h11323/1005_mb/2005-174/256_1521	843/62	56.70	131.6	Secondary (grouped)

Remove charted 18 ft. Chart 5.91 meters (19.38 feet) inside danger circle. Update data base.

Cartographically-Rounded Depth (Affected Charts):

19ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ¹/₄fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.906 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

1.17) 1927/98 AWOIS 3717

Primary Feature for AWOIS Item #3717

Search Position: 36:57:44.2 N, 076:10:39.3 W

Historical Depth: 5.79 m
Search Radius: 100
Search Technique: [None]
Technique Notes: [None]

History Notes:

H9255WD/71-- OPR-467-RH-71,72; ITEM NO. 44; 1:20,000-SCALE SURVEY; RAYDIST CONTROL (HYPERBOLIC, R/R) AND VISUAL. LEADLINE, 2 X 2 X 2-FOOT CONCRETE BLOCK, HUNG AT 19 FEET (ESTIMATED). CLEARED BY18 FEET; LEAST DEPTH BY LEAD LINE OF 19 FEET; DEPTHS IN AREA FROM H9910/80 ARE22 FEET. RECOMMENDED CHARTING OBSTR WITH A LEAST DEPTH OF 19 FEET IN LAT. 36-57-42.9N, LONG. 76-10-39.8W. (ENT 10/15/84, MSM) FE388SS/94-- OPR-E696-HE; 3 OBSTRUCTIONS LOCATED BY SIDE SCAN SONAR. DIVERS DESCRIBE A 2 X 2 X 2-FOOT CONCRETE BLOCK MATCHING AWOIS DESCRIPTION IN LAT. 36-57-48.666N, LONG. 76-10-32.694. LD (PNEUMO GAUGE) OF 6.3 METERS (20 FEET). THIS BLOCK WAS LOCATED WITHIN THE ASSIGNED SEARCH RADIUS. ALSO WITHIN THE RADIUS WERE 2 OTHER CONCRETE BLOCKS, 10 METERS APART. DIVERS DECRIBE THE LARGEST MEASURING 5 X 5 FEET EXTENDING 3 FEET OFF THE BOTTOM AND WAS LOCATED IN LAT. 36-57-44.228N, LONG. 76-10-39.333W. LD PNEUMO GAUGE) OF 5.9 METERS (19 FEET). EVALUATOR RECOMMENDS MOVING CHARTED 19-FOOT OBSTR TO SURVEY POSITION. LORAN-C RATES (9960 CHAIN) FOR THE LAST BLOCK MENTIONED ARE: W=15961.0, X=27220.9, Y=41276.5, Z=58488.5. RATES FOR SMALLER BLOCK (2 X 2 X 2 FEET) ARE: W=15960.4, X=27220.5, Y=41277.6, Z=58490.4. (ENT 9/6/95, SJV)

Survey Summary

Survey Position: 36:57:44.3 N, 076:10:39.4 W

Least Depth: 6.13 m = 20.11 ft = 3.352 fm = 3 fm 2.11 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 1.225 m; TVU (TPEv) \pm 0.244 m

Timestamp: 2005-174.14:59:35.493 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 265_1458

Profile/Beam: 1927/98

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The item was found as charted. Acquisition over the entire radius was covered by 200% Klein 5000 sidescan sonar and 100% Reson 8125 and 8101 multibeam sonar. LD certain.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/265_1458	1927/98	0.00	0.000	Primary
h11323/1005_100/2005-165/155_2013	0001	3.10	086.1	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3717	3.65	340.5	Secondary
ChartGPs - ENC US5VA19M	Danger 12	6.46	319.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-115/255_1322	0002	6.65	213.0	Secondary
h11323/1005_mb/2005-174/265_1458	1831/100	19.54	211.8	Secondary (grouped)

Hydrographer Recommendations

Remove charted 19 feet. Chart 6.13 meters (20.11 feet) inside danger circle. Update data base.

Cartographically-Rounded Depth (Affected Charts):

20ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ¹/₄fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.131 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

1.18) 709/55 AWOIS 12363

Primary Feature for AWOIS Item #12363

Search Position: 36:57:48.7 N, 076:10:32.7 W

Historical Depth: 6.10 m Search Radius: 100

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

F00388/94-- OPR-E696-HE; OBSTRUCTION LOCATED BY SIDE SCAN SONAR. LD (PNEUMO) OF 6.3METERS (20 FEET) IN LAT. 36-57-48.666N, LONG. 76-10-32.694W. DIVERS DESCRIBE A 2X2X2 FOOT CONCRETE BLOCK. EVALUATOR RECOMMENDS CHARTING A 20 OBSTN AS SURVEYED. (ENT 3/24/04, SJV)

Survey Summary

Survey Position: 36:57:48.7 N, 076:10:32.8 W

Least Depth: 6.52 m = 21.38 ft = 3.564 fm = 3 fm 3.38 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 1.266 m; **TVU** (**TPEv**) ± 0.241 m

Timestamp: 2005-174.14:46:37.620 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 266_1446

Profile/Beam: 709/55

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The item was found as charted. Acquisition over the entire radius was covered by 200% Klein 5000 sidescan sonar and 100% Reson 8125 and 8101 multibeam sonar.

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/266_1446	709/55	0.00	0.000	Primary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 12363	2.69	301.9	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 13	7.54	314.1	Secondary (grouped)
h11323/1005_100/2005-165/157_2110	0004	16.66	244.4	Secondary (grouped)

Remove charted 20 feet. Chart 6.13 meters (20.11 feet) inside danger circle. Update data base.

Cartographically-Rounded Depth (Affected Charts):

```
21ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.518 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Do not concur. Chart obstruction 6.518 meters (21.38 feet).

1.19) 627/26 AWOIS 9827

Primary Feature for AWOIS Item #9827

Search Position: 36:57:32.8 N, 076:08:50.2 W

Historical Depth: 6.10 m Search Radius: 100

Search Technique: S2, MB, DI, SD

Technique Notes: [None]

History Notes:

FE410SS/95-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. ECHO SOUNDER LD OF 6.2 METERS (20 FEET) IN 7.3 METERS IN LAT. 36-57-32.793N, LONG. 76-08-50.147W. EVALUATOR RECOMMENDS CHARTING A 20 OBSTR AS SURVEYED. (ENT 7/12/96, SJV)

Survey Summary

Survey Position: 36:57:34.2 N, 076:08:50.5 W

Least Depth: 6.38 m = 20.92 ft = 3.486 fm = 3 fm 2.92 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-126.15:34:24.786 (05/06/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-126 / 523_1534

Profile/Beam: 627/26

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstn was just outside danger circle within the items search radius. Positioning of Charted item may be innaccurate. Acquisition over the entire radius was covered by 200% Klein 5000 sidescan sonar and 100% Reson 8125 and 8101 multibeam sonar.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-126/523_1534	627/26	0.00	0.000	Primary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 9827	45.10	349.2	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 19	49.34	347.3	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-130/204_1239	0005	67.64	314.1	Secondary (grouped)
h11323/tj_3102_reson8101/2006-126/005_1733	11294/81	131.15	023.1	Secondary (grouped)

Remove Obstn 20 feet. Chart Obstn Ld 6.38 meters(20.92 feet) at the surveyed postion. Update data base.

Cartographically-Rounded Depth (Affected Charts):

```
21ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.375 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

1.20) 556/237 AWOIS 3712 insignificant

Primary Feature for AWOIS Item #3712

Search Position: 36:55:53.0 N, 076:08:34.9 W

Historical Depth: 4.57 m

Search Radius: 200

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

H9255WD/71,72--OPR-467-RH-71,72; ITEM 30; 1:20,000 SCALE SURVEY; RAYDIST ■CONTROL (HYPERBOLIC, R/R) AND VISUAL. UNINVESTIGATED HAND AT 18FT. CLEARED BY 15FT. DEPTHS IN AREA FROM H9910/80 ARE 21-22FT; RECOMMENDED THAT A ■SUBM OBSTR CLEARED TO 15FT BE CHARTED IN LAT.36-55-52.5N, LONG.76-08-36.1W. ■(ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:53.1 N, 076:08:35.9 W

Least Depth: 6.02 m = 19.75 ft = 3.292 fm = 3 fm 1.75 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.14:29:19.779 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 376_1428

Profile/Beam: 556/237

Charts Affected: 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

The item was found as charted. Several items were inside the danger circle. Acquisition over the entire radius was covered by 200% Klein 5000 Sidescan sonar. The items in the danger circle were covered with 100% Reson 8125 multibeam sonar. LD certain.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/376_1428	556/237	0.00	0.000	Primary
h11323/1005_100/2005-153/136_1756	0001	15.27	328.2	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/376_1428	490/21	19.93	332.6	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 10	21.29	308.1	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/376_1428	468/6	23.78	328.5	Secondary (grouped)

h11323/tj_3102_klein5000_sss200/2006-114/287_1928	0005	23.80	327.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/275_1655	0001	24.79	330.4	Secondary (grouped)
OPR-D304-TJ-06_AWOIS	AWOIS # 3712	25.51	276.1	Secondary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3712	25.51	276.1	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 834	1956.85	194.0	Secondary
OPR-D304-TJ-06_AWOIS	AWOIS # 834	1956.85	194.0	Secondary

Remove charted 15 feet swept by wire drag. Chart text Obstns with LD 6.02 meters (19.75 feet) inside the danger circle at the surveyed position. Update data base.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.020 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Height off Bottom is insignificant. Remove dangerous obstruction least depth 15 feet found by wire drag and text "Obstn" at $36^{\circ}55'53.107"N$, $076^{\circ}08'35.887"W$.

1.21) 307/21 AWOIS 3703

Primary Feature for AWOIS Item #3703

Search Position: 36:56:28.5 N, 076:09:01.3 W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None] **Technique Notes:** [None]

History Notes:

H9910/80--OPR-D103-MI-80; 1:10,000 SCALE SURVEY; UNEXPLODED DEPTH CHARGE APR. ■1956. NOT LOCATED OR ADDRESSED BY HYDROGRAPHER, SOURCE NOT ASCERTAINABLE AT ■LONG.76-09-02.5W. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:56:28.6 N, 076:09:01.9 W

Least Depth: $8.27 \text{ m} = 27.12 \text{ ft} = 4.519 \text{ fm} = 4 \text{ f$

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-130.20:00:31.607 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 858_2000

Profile/Beam: 307/21

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Charted as unexploded depth charge. A contact was selected for disproval. Acquisition over the Awois radius was covered by 200% Klein 5000 Sidescan sonar. No evidence was found of the item. The Charted danger circle was covered by 100% Reson 8125 and 8101 multibeam sonar. Not enough information, depth charge maybe covered with sand. Further investigation needed on how to resolve an item such as this safely.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/858_2000	307/21	0.00	0.000	Primary
h11323/1005_100/2005-165/143_1512	0001	15.22	276.8	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3703	15.84	282.9	Secondary
ChartGPs - ENC US5VA19M	Danger 7	16.75	329.9	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/267_2104	0001	29.52	182.6	Secondary (grouped)

h11323/tj_3102_klein5000_sss200/2006-114/267_2104	0002	61.02	179.4	Secondary (grouped)
h11323/1005_100/2005-165/143_1512	0002	73.28	220.8	Secondary (grouped)

Retain as charted. Update data base.

Cartographically-Rounded Depth (Affected Charts):

27ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: OBJNAM - un exploded depth charge

VALSOU - 8.265 m

Office Notes

AHB: Retain danger circle with no depth. Do not chart 27.12 sounding

1.22) 416/228 AWOIS 9828

Primary Feature for AWOIS Item #9828

Search Position: 36:57:26.5 N, 076:09:00.5 W

Historical Depth: 5.49 m

Search Radius: 50

Search Technique: S2, MB **Technique Notes:** [None]

History Notes:

FE410SS/95-- OPR-E696-HE; SIDE SCAN SONAR CONTACT. ECHO SOUNDER LD OF 5.5 METERS (18 FEET) IN 7.2 METERS IN LAT. 36-57-26.500N, LONG. 76-09-00.487W. EVALUATOR RECOMMENDS CHARTING AN 18 OBSTR AS SURVEYED. (ENT 7/12/96, SJV)

Survey Summary

Survey Position: 36:57:26.5 N, 076:09:00.5 W

Least Depth: 5.40 m = 17.71 ft = 2.952 fm = 2 fm = 2.71 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-126.18:31:58.487 (05/06/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-126 / 776_1832

Profile/Beam: 416/228

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Obstn was found as charted. AWOIS 3723 and AWOIS 9828 were follow up investigations on same item. Acquisition over the two Radius' given were covered by 200% Klein 5000 sidescan sonar. The danger circle was covered by 100 Reson 8125 multibeam sonar.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-126/776_1832	416/228	0.00	0.000	Primary
OPR-D304-TJ-06_AWOIS	AWOIS # 9828	1.08	183.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/253_2117	0003	2.42	137.3	Secondary (grouped)
h11323/1005_mb/2005-165/157_2108	19047/33	3.15	084.7	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 9	10.11	244.2	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3723	14.38	359.8	Secondary (grouped)

Retain as charted. Update data base.

Cartographically-Rounded Depth (Affected Charts):

```
17ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2)
3fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.398 m

VERDAT - 12:Mean lower low water

Office Notes

AHB: Do not Concur. Chart 17 Obstrn and danger circle.

1.23) 0002 AWOIS 12371approx 100m West of this location

Primary Feature for AWOIS Item #12371

Search Position: 36:55:40.4 N, 076:07:43.4 W

Historical Depth: [None] Search Radius: 250

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

H07089/46-- VERBAL INSTRUCTIONS (NO PROJECT NO.); TIDE GAUGE SYMBOL LOCATED ON SMOOTH SHEET WITH ANNOTATION "U.S. ARMY TIDE GAGE". NO MENTION OF THIS GAGE IN THE DECRIPTIVE REPORT. ■ H09910/80-- OPR-D103-MI/PE; CHARTED DOLPHIN WAS NOT LOCATED. FATHOMETER SEARCH WITH 20-METER LINE SPACING NEGATIVE AND NO VISUAL SIGHTING BY LAUNCH PERSONNEL. EVALUATOR RECOMMENDS BRINGING THE ITEM FORWARD FROM H07089/46 AS A SUBMERGED DOLPHIN, "ED". ■ F00300/87-- S-E924-HFP-86; NOT SPECIFICALLY SEARCHED FOR. HOWEVER, ALL HYDROGRAHPHY IN THE VICINITY NEGATIVE (ASSUME MAINSCHEME). EVALUATOR RECOMMENDS THE SUBMERGED DOLPHIN BE RETAINED AS CHARTED. (ENT 3/25/04, SJV)

Survey Summary

Survey Position: 36:55:40.6 N, 076:07:43.3 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]

Timestamp: 2006-284.08:34:02 (10/11/2006)

Survey Line: h11323 / tj_3102_klein5000_sss100 / 2006-109 / 046_1331

Contact/Point: 0002/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Nothing was found at this location for a known positioned dolphin. No mapinfo search radius was given. Acquisition over the radius in the microsft data base was given as 250meters rather large for a known item. Acquisition over the charted item was completly covered by 200% Klein 5000 sidescan sonar and Reson 8125 multibeam sonar. Piles were found just west of this item. They are between AWOIS 12371(this report) and AWOIS 3694 (which also mentions Piles) and are addressed in the feature report.

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss100/2006-109/046_1331	0002	0.00	0.000	Primary

ChartGPs - ENC US5VA19M	Danger 2	5.00	038.6	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 12371	8.20	027.7	Secondary

Remove charted submerged dolphin. Update data base.

S-57 Data

[None]

Office Notes

1.24) 2534/92 AWOIS 3718 insignificant

Primary Feature for AWOIS Item #3718

Search Position: 36:55:50.2 N, 076:09:50.3 W

Historical Depth: 4.27 m

Search Radius: 200

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

H9255WD/71,72--OPR-467-RU-71,72; ITEM 40; 1:20,000 SCALE SURVEY; RAYDIST ■CONTROL (HYPERBOLIC, R/R) AND VISUAL. UNINVESTIGATED HANG AT 15FT (ESTIMATED)■CLEARED BY 14FT. DEPTHS IN AREA FROM H9910/80 ARE 16-18FT; RECOMMENDED AN ■OBSTR W/WIRE DRAG CLEARANCE OF 14FT BY CHARTED IN LAT.36-55-49.7N, ■LONG.76-09-51.5W. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:50.8 N, 076:09:47.1 W

Least Depth: $5.22 \text{ m} = 17.14 \text{ ft} = 2.857 \text{ fm} = 2 \text{ f$

TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.297 m; TVU (TPEv) ± 0.240 m

Timestamp: 2005-174.19:26:41.151 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 097_1925

Profile/Beam: 2534/92

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Area looks like the obstructions were removed from area or silted over. From surrounding depths differences in height were insignificant. Acquisition over the entire radius was covered by 200% Klein 5000 sidescan sonar. The danger area was completly covered by Reson 8125 and 8101 multibeam sonar.

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/097_1925	2534/92	0.00	000.0	Primary
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3718	79.76	076.3	Secondary (grouped)

Remove Text cleared 14ft. Chart surveyed soundings. Update data base.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

TECSOU - 3: found by multi-beam

VALSOU - 5.224 m

VERDAT - 12:Mean lower low water

Office Notes

1.25) 419/31AWOIS 3726 insignificant

Primary Feature for AWOIS Item #3726

Search Position: 36:56:48.5 N, 076:07:16.8 W

Historical Depth: [None] Search Radius: 250

Search Technique: SD, S2, SWMB, DI

Technique Notes: [None]

History Notes:

CL570/62 (5/11/62)--C NORFOLK DISTRICT; VISIBLE PILE, MOVED FROM ■LAT.36-56-45N, LONG.76-07-06W TO SAME RELATIVE POSITION ON WEST SIDE OF ■TRESTLE IN PA LAT.36-56-48N, LONG.76-07-18W. ■ H9910/80--OPR-D103-MI-80; 1:10,000 SCALE SURVEY, DEL NORTE CONTROL (R/R, R/A) ■ECHO SOUNDER W/20M LINE SPACING; NOT ON FATHOGRAM, NOT SEEN BY LAUNCH ■PERSONNEL. EVALUATOR RECOMMENDED REVISING TO SUBM PILE. (ENTERED 10/15/84 ■MSM)

Survey Summary

Survey Position: 36:56:48.0 N, 076:07:17.6 W

Least Depth: 8.26 m = 27.10 ft = 4.517 fm = 4 fm 3.10 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-130.19:07:08.699 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 1137

Profile/Beam: 419/31

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Several remains of piles were found inside the search radius but not at this location and are addressed as uncharted item reports. Acquisition over the entire search radius was covered by 200% Klein sidescan sonar with the exception of the area between the twin spans of the Chesapeake Bay Bridge Tunnel. Acquisition over the charted pile was covered by 100% Reson 8125 multibeam sonar. No evidence of it was observed at this location.

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/1137	419/31	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/024_1310	0006	12.34	206.3	Secondary (grouped)
ChartGPs - ENC US5VA19M	Danger 11	19.49	251.5	Secondary (grouped)
Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3726	25.23	234.3	Secondary (grouped)

Remove charted submerged pile. Update data base.

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: CATPLE - 3:post

CONDTN - 2:ruined

CONVIS - 2:not visual conspicuous

Geo object 2: Sounding (SOUNDG)

Attributes: QUASOU - 6:least depth known

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

VERDAT - 12:Mean lower low water

Office Notes

1.26) 357/25 AWOIS 3715 insignificant

Primary Feature for AWOIS Item #3715

Search Position: 36:55:52.3 N, 076:08:43.9 W

Historical Depth: 4.57 m Search Radius: 100

Search Technique: S2, MB, DI **Technique Notes:** [None]

History Notes:

H9255W/71,72--OPR-467-RH-71,72; ITEM 38; 1:20,000 SCALE SURVEY; RAYDIST ■ CONTROL (HYPERBOLIC, R/R) AND VISUAL; UNINVESTIGATED HANG AT 15FT (ESTIMATED)■ CLEARED BY 15FT; DEPTHS IN AREA FROM H9910/80 ARE 17-18FT. RECOMMENDED ■ CHARTING AND OBSTR W/WIRE DRAG CLEARANCE OF 15FT IN LAT.36-55-51.8N, ■ LONG.76-09-45.1W. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:52.2 N, 076:08:44.0 W

Least Depth: 6.34 m = 20.78 ft = 3.464 fm = 3 fm 2.78 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.14:33:47.710 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 375_1433

Profile/Beam: 357/25

Charts Affected: 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Disproval of obstruction. All thats left is a depression. Acquisition over the entire radius was covered by 200% Klein 5000 sidescan sonar. The danger area was completly covered by Reson 8125 and 8101 multibeam sonar.

Address		Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/375_1433		357/25	0.00	0.000	Primary
	OPR-D304-TJ-06_AWOIS	AWOIS # 3715	4.86	239.2	Secondary (grouped)
	h11323/tj_3102_klein5000_sss200/2006-114/287_1928	0009	6.03	346.4	Secondary (grouped)
	ChartGPs - ENC US5VA19M	Danger 5	20.81	316.4	Secondary (grouped)
	Complete_OPR-D304-TJ-05_AWOIS	AWOIS # 3697	21.77	279.8	Secondary (grouped)

h11323/tj_3102_klein5000_sss200/2006-114/287_1928	0004	34.69	273.6	Secondary (grouped)
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Remove OBSTN 15 feet swept by wire drag. Chart LD 6.34 meters(20.78 feet). Update data base.

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: QUASOU - 6:least depth known

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

Office Notes

1.27) 1111/175 AWOIS 3685

Primary Feature for AWOIS Item #3685

Search Position: 36:55:53.1 N, 076:09:34.4 W

Historical Depth: 4.57 m

Search Radius: 200

Search Technique: S2, MB, DI, SB

Technique Notes: [None]

History Notes:

FE233WD/69--DEBRIS W/150FT OF WIRE CABLE RECOVERED; HUNG AT 16FT; CLEARED AT ■ 15FT IN LAT.36-55-52.6N, LONG.76-09-35.6W. ■H9910/80--OPR-D103-MI-80; ITEM 132; 1:10,000 SCALE SURVEY; DEL NORTE CONTROL ■ (R/R, R/A); ECHO SOUNDER W/50M LINE SPACING; EVALUATOR RECOMMENDS COMBINING ■ WITH CONCRETE CLUMP AND MUSHROOM ANCHOR FOUND WITHIN 130M OF HANG AND CHART ■ AS ONE FEATURE: OBSTRS W/WIRE DRAG CLEARANCE OF 15FT IN LAT.36-55-53N, ■ LONG.76-09-35W. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:53.1 N, 076:09:34.8 W

Least Depth: 4.55 m = 14.93 ft = 2.489 fm = 2 fm = 2.93 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.13:42:02.371 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 320_1341

Profile/Beam: 1111/175

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Awois 3685 was found, with a least depth of 15 ft matching the AWOIS description. AWOIS 3685, 3686 and 3689 all are talking about he same three items mushroom anchor, concrete and debris, all three items were found with in 10m eters of each other. Acquisition over the entire radius was covered by 200% Klein 5000 sidescan sonar. The danger area was completly covered by Reson 8101 multibeam sonar.

Address Feat		Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/320_1341	1111/175	0.00	0.000	Primary
h11323/tj_3101_reson8125/2006-130/319_1334	599/177	6.36	243.0	Secondary
OPR-D304-TJ-06_AWOIS	AWOIS # 3685	9.78	261.6	Secondary (grouped)

OPR-D304-TJ-06_AWOIS	AWOIS # 3689	28.11	240.6	Secondary
OPR-D304-TJ-06_AWOIS	AWOIS # 3686	35.20	257.5	Secondary

Chart an Obstn Least depth 4.55 meters (14.93 feet). Combine corrlating items in one danger circl. Update data base.

Cartographically-Rounded Depth (Affected Charts):

15ft (12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2) 2 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 4.552 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

1.28) **0001AWOIS 3694 Disproval**

Primary Feature for AWOIS Item #3694

Search Position: 36:55:38.1 N, 076:07:55.7 W

Historical Depth: [None]
Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: SEARCH NOT REQUIRED IN DEPTHS LESS THAN THE INSHORE LIMIT OF

HYDROGRAPHY

History Notes:

H9910/80--OPR-D103-MI-80; 1:10,000 SCALE SURVEY; DEL NORTE CONTROL (R/R, R/A); ■ ECHO SOUNDER; LINE OF 53 STAKES (APPROX. 4" IN DIAM. AND 15' APART) BEGINNING INSHORE AND RUNNING NORTH; N END IS SERIES OF STAKES IN SPIRAL SHAPE; A NET ■ CONNECTS ALL STAKES; SNDG LINE RUN ON EITHER SIDE AND N LIMIT OF FISH TRAP ■ NORTHERNMOST POS. IS LAT.36-52-42.3N, LONG.76-07-54.1W; SOUTHER LIMIT IS ■ LAT.36-55-32.7N, LONG.76-07-59.3W; POSITION ABOVE (LAT.36-55-37.6N, ■ LONG.76-07-56.9W IS CENTRAL PT OF FISH TRAP SCALED FROM SMOOTH SHEET; ■ PERMANENT FIXTURE; RECOMMENDED CHARTING. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:38.1 N, 076:07:55.7 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-311.04:32:26 (11/07/2006)

Survey Line: h11323 / tj_3102_klein5000_sss200 / 2006-114 / 284_2041

Contact/Point: 0001/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Awois 3694 Disproval. No Evidence of Fish trap. The item was not charted. Acquisition over the entire 50 meter radius was covered by 200% Klein 5000 sidescan sonar.

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss200/2006-114/284_2041	0001	0.00	0.000	Primary
OPR-D304-TJ-06_AWOIS	AWOIS # 3694	0.21	271.4	Secondary

Chart representaive soundings. Update data base.

S-57 Data

Geo object 1: Sounding (SOUNDG)

Office Notes

1.29) 0001AWOIS 3687 Disproval

Primary Feature for AWOIS Item #3687

Search Position: 36:55:41.0 N, 076:07:16.8 W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None] **Technique Notes:** [None]

History Notes:

H7089/46--SUBM DOLPHIN; US ARMY TIDE GAGE IN LAT.36-55-40.5N, LONG.76-07-18W ■H9910/80--OPR-D103-MI-80, 1:10,000 SCALE SURVEY; DEL NORTE CONTROL (R/R, R/A); ■ ECHO SOUNDER NORTH TO SOUTH W/20M LINE SPACING; NOT ON FATHOGRAMS; NOT SEEN ■ BY LAUNCH PERSONNEL; EVALUATOR RECOMMENDS REVISING TO SUBM DOLPHIN ED ON ■ CHART. (ENTERED 10/15/84 MSM)

Survey Summary

Survey Position: 36:55:41.0 N, 076:07:16.8 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) [None]; **TVU** (**TPEv**) [None]

Timestamp: 2006-311.06:36:45 (11/07/2006)

Survey Line: h11323 / tj_3102_klein5000_sss200 / 2006-110 / 223_2106

Contact/Point: 0001/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Disproval of sub pile and tide gage, AWois 3687. This item was not charted. Acquisition over the entire 50 meter radius was covered by 200% Klein 5000 sidescan sonar. No evidence of pile observed.

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss200/2006-110/223_2106	0001	0.00	0.000	Primary
OPR-D304-TJ-06_AWOIS	AWOIS # 3687	0.44	261.1	Secondary

Chart representative soundings. Update data base.

S-57 Data

Geo object 1: Sounding (SOUNDG)

Office Notes

H11323 Final DR Charted Feature Reports

Registry Number: H11323 **State:** Virginia

Locality: Chesapeake Bay

Sub-locality: Thimble Shoal Channel

Project Number: OPR-D304-TJ-06

Survey Dates: 06/03/2005 - 10/12/2006

Charts Affected

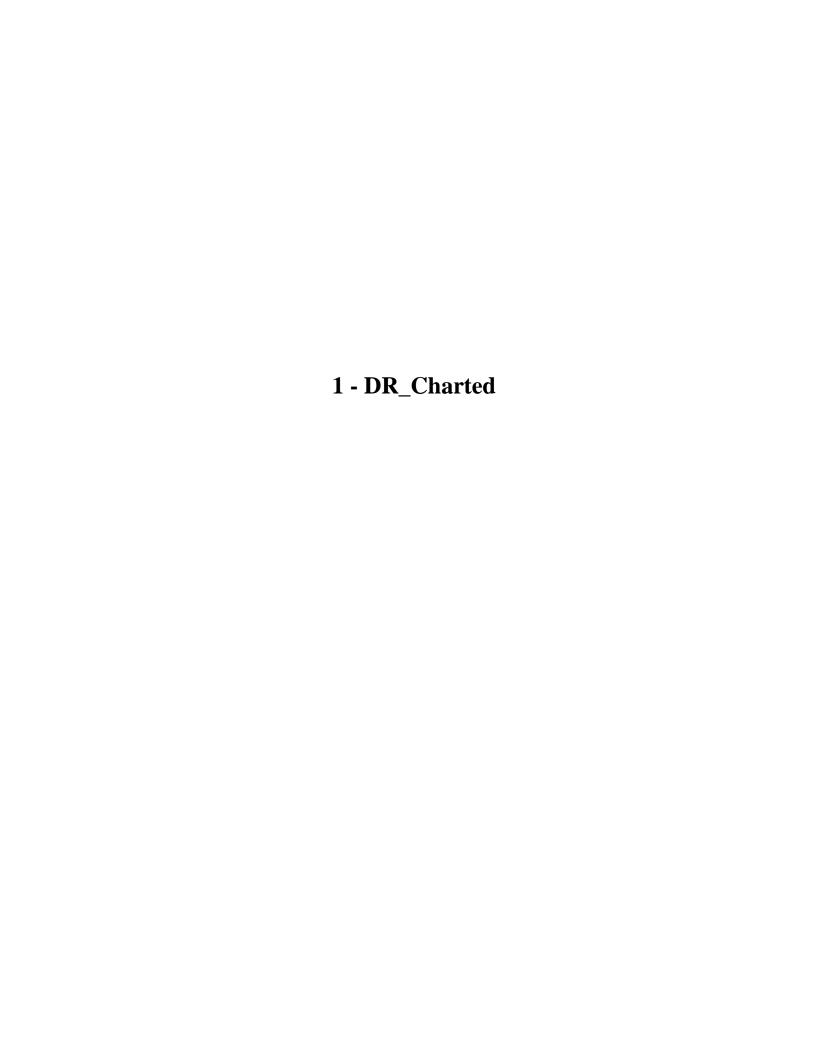
Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12255	16th	09/01/2005	1:5,000 (12255_1)	[L]NTM: ?
12256	15th	07/01/2005	1:20,000 (12256_1)	[L]NTM: ?
12254	46th	02/01/2006	1:20,000 (12254_1)	[L]NTM: ?
12222	48th	03/01/2007	1:40,000 (12222_1)	NGA NTM: 06/09/2007 (09/22/2007)
12205	30th	11/01/2005	1:80,000 (12205_1)	[L]NTM: ?
12221	77th	05/01/2005	1:80,000 (12221_1)	[L]NTM: ?
12280	6th	09/01/2005	1:200,000 (12280_2)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?

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

Features

NI.	N	Feature	Survey	Survey	Survey	AWOIS
No.	Name	Туре	Depth	Latitude	Longitude	Item
1.1	3483/89	Shoal	9.06 m	36:58:12.4 N	076:06:39.5 W	
1.2	1601/236	Obstruction	8.77 m	36:59:19.9 N	076:10:49.3 W	
1.3	286/201	Shoal	8.12 m	36:58:39.3 N	076:06:28.6 W	
1.4	848/234	Obstruction	5.77 m	36:56:56.3 N	076:08:20.2 W	
1.5	673/116	Obstruction	5.74 m	36:56:53.7 N	076:08:18.6 W	
1.6	682/178	Obstruction	5.92 m	36:56:55.7 N	076:08:16.5 W	
1.7	217/77	Obstruction	7.23 m	36:57:06.2 N	076:07:03.2 W	
1.8	0010	Stationary structure, floating or fixed	[None]	36:57:37.4 N	076:06:57.0 W	
1.9	0008	Stationary structure, floating or fixed	[None]	36:59:14.9 N	076:06:17.8 W	
1.10	0011	Stationary structure, floating or fixed	[None]	36:59:23.0 N	076:06:14.8 W	

1.11	0007	Stationary structure, floating or fixed	[None]	36:59:10.9 N	076:06:18.1 W	
1.12	0009	Stationary structure, floating or fixed	[None]	36:59:17.7 N	076:06:16.9 W	
1.13	0010	Stationary structure, floating or fixed	[None]	36:59:20.7 N	076:06:15.3 W	
1.14	592/67	Pipe	6.97 m	36:56:22.7 N	076:10:30.2 W	
1.15	1159/1	Obstruction	7.43 m	36:57:05.0 N	076:07:10.4 W	
1.16		Obstruction	5.40 m	36:58:40.2 N	076:11:09.7 W	
1.17	203/55 obstruction	Obstruction	9.43 m	36:59:07.0 N	076:07:50.6 W	
1.18	251/215	Obstruction	7.38 m	36:59:01.0 N	076:10:45.0 W	
1.19	330/116	Obstruction	11.13 m	36:59:03.7 N	076:08:30.9 W	
1.20	1648/38	Obstruction	7.13 m	36:57:21.8 N	076:06:36.4 W	
1.21	0001	Obstruction	[None]	36:58:25.0 N	076:11:12.4 W	



1.1) 3483/89

Survey Summary

Survey Position: 36:58:12.4 N, 076:06:39.5 W

Least Depth: 9.06 m (= 29.72 ft = 4.954 fm = 4 fm 5.72 ft)

TPU (\pm **1.96** σ): THU (**TPEh**) \pm 1.489 m; TVU (**TPEv**) \pm 0.241 m

Timestamp: 2005-154.17:00:56.194 (06/03/2005)

Survey Line: h11323 / 1005_mb / 2005-154 / 178_1657

Profile/Beam: 3483/89

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

CBBT rip wrap.Rip rap area and contours need to be accessed all the way around the southern tunnel entrance of this survey. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-154/178_1657	3483/89	0.00	0.000	Primary
h11323/1005_100/2005-154/178_1657	0001	6.74	207.8	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/097_1602	0001	27.35	320.3	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/099_1332	0001	27.67	150.4	Secondary (grouped)
h11323/1005_100/2005-154/177_1705	0003	53.46	331.4	Secondary (grouped)
h11323/1014_mb/2005-174/481_1830	413/232	74.55	013.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-108/051_1308	0003	82.55	340.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/097_1602	0002	89.42	003.8	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-108/041_1322	0004	216.41	356.7	Secondary (grouped)
h11323/1970tj_3102_klein5000_sss200/2006-126/202_1249	0001	296.87	354.6	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-108/023_1317	0001	390.60	008.8	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-108/051_1308	0002	419.21	044.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/215_1333	0004	431.85	025.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-109/024_1309	0001	434.74	044.5	Secondary (grouped)
h11323/1005_100/2005-154/173_1921	0001	436.95	044.6	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/215_1333	0003	437.23	048.0	Secondary (grouped)
h11323/tj_3102_reson8101/2006-109/024_1309	51/13	447.47	045.1	Secondary (grouped)

h11323/tj_3102_reson8101/2006-109/024_1309	139/76	464.72	039.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-109/024_1309	0005	558.80	025.5	Secondary (grouped)
h11323/tj_3102_reson8101/2006-109/024_1309	464/1	562.50	026.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/215_1333	0005	599.78	024.4	Secondary (grouped)
h11323/tj_3102_reson8101/2006-109/024_1309	538/1	603.97	025.4	Secondary (grouped)
h11323/1005_100/2005-154/171_2016	0001	655.29	023.9	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/215_1333	0006	679.66	022.1	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/1118	1310/239	698.42	024.8	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-109/024_1309	0006	711.24	025.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-108/041_1322	0003	716.11	009.2	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/1118	1147/11	763.53	025.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-109/052_1306	0001	766.69	026.2	Secondary (grouped)
h11323/tj_3102_reson8101/2006-108/023_1317	1183/98	767.91	013.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-108/042_1320	0001	789.10	008.9	Secondary (grouped)
h11323/1005_100/2005-154/170_2043	0003	793.29	022.1	Secondary (grouped)
h11323/tj_3102_reson8101/2006-109/024_1351	12536/73	794.70	025.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-109/024_1353	0004	801.39	025.8	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/1118	978/240	811.91	022.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-107/042_1607	0002	819.21	010.6	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/1118	920/240	831.69	022.2	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/1118	862/18	855.18	023.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-107/042_1607	0001	859.99	011.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-109/024_1309	0007	863.47	023.6	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/729_1959	255/97	879.12	010.2	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/214_1603	0004	880.47	010.3	Secondary (grouped)
h11323/1005_100/2005-154/169_2106	0001	880.60	016.9	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/730_2002	993/94	885.40	013.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/214_1321	0002	894.01	012.4	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/730_2002	1058/91	906.26	013.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/214_1321	0001	918.35	012.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/214_1603	0005	948.57	013.2	Secondary (grouped)
h11323/tj_3102_reson8101/2006-108/042_1320	472/7	954.59	013.1	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/731_2005	75/1	959.87	013.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/225_1318	0004	972.41	013.6	Secondary (grouped)

Hydrographer Recommendations

Excess the Rip rap area based on new sounding and imagery data to update contours and foul areas.

Cartographically-Rounded Depth (Affected Charts):

```
29ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2)
5fm (13003_1)
```

S-57 Data

Geo object 1: Shoreline Construction (SLCONS)

Attributes: CATSLC - 8:rip rap

Office Notes

AHB concurs w/ the field. Chart sounding and update contour line and foul area.

1.2) 1601/236

Survey Summary

Survey Position: 36:59:19.9 N, 076:10:49.3 W

Least Depth: 8.77 m = 28.76 ft = 4.793 fm = 4 fm = 4.76 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 1.274 m; **TVU** (**TPEv**) ± 0.230 m

Timestamp: 2005-154.20:04:39.574 (06/03/2005)

Survey Line: h11323 / 1014_mb / 2005-154 / 264_2002

Profile/Beam: 1601/236

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Found as charted. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status	
h11323/1014_mb/2005-154/264_2002	1601/236	0.00	0.000	Primary	
h11323/1005_100/2005-154/179_1522	0001	6.07	094.4	Secondary (grouped)	

Hydrographer Recommendations

Retain as charted

Cartographically-Rounded Depth (Affected Charts):

29ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4 34fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 8.765 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

AHB concurs w/ field.

1.3) 286/201

Survey Summary

Survey Position: 36:58:39.3 N, 076:06:28.6 W

Least Depth: 8.12 m (= 26.63 ft = 4.438 fm = 4 fm 2.63 ft)

TPU (\pm **1.96** σ): THU (**TPEh**) \pm 1.187 m; TVU (**TPEv**) \pm 0.228 m

Timestamp: 2005-165.13:40:06.976 (06/14/2005)

Survey Line: h11323 / 1014_mb / 2005-165 / 160_1339

Profile/Beam: 286/201

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Rip rap area and contours need to be accessed all the way around the northern tunnel entrance of this survey. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1014_mb/2005-165/160_1339	286/201	0.00	0.000	Primary
h11323/tj_3102_reson8101/2006-110/211a1425	83/42	28.63	195.9	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/096_1544	0001	36.29	340.9	Secondary (grouped)
h11323/1014_mb/2005-165/258_1702	1822/171	90.83	214.5	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/211a1425	345/60	125.72	183.4	Secondary (grouped)
h11323/1014_mb/2005-165/551_1531	1717/209	129.93	188.4	Secondary (grouped)
h11323/1014_mb/2005-165/243_1542	2070/231	234.13	186.9	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/005_1359	49/70	313.56	186.7	Secondary (grouped)
h11323/1014_mb/2005-174/474_1451	157/1	315.54	190.9	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/212_1546	0001	360.02	211.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/004_1334	0002	371.18	211.9	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/004_1334	245/10	371.38	212.6	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/005_1359	466/85	427.19	183.8	Secondary (grouped)
h11323/tj_3102_reson8101/2006-129/1102	255/23	448.55	211.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/004_1334	0003	450.92	211.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0003	553.38	189.3	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/212_1546	0002	579.95	210.6	Secondary (grouped)

h11323/tj_3102_klein5000_sss200/2006-110/211a1425	0006	659.31	190.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0004	677.10	189.1	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/004_1334	1027/90	695.66	209.6	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/206_1520	0001	701.06	187.2	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/211a1425	1805/87	702.67	187.4	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/004_1334	1133/8	729.30	205.9	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/004_1334	0007	729.92	206.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/057_1406	0005	754.16	189.0	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/005_1359	1588/92	757.69	190.4	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/005_1359	1589/73	759.35	189.7	Secondary (grouped)
h11323/tj_3102_reson8101/2006-125/006_1824	84/62	791.80	189.2	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/057_1406	0004	796.56	189.6	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/212_1546	0004	809.96	199.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0005	813.58	192.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/212_1546	0003	813.73	205.2	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0006	879.96	195.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/004_1334	0009	883.41	198.8	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/211a1425	2293/55	909.77	191.2	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/004_1334	1589/91	914.89	203.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/004_1334	0008	916.07	202.8	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/211a1425	2327/95	924.22	193.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/211a1425	0007	925.46	192.6	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-110/057_1406	0003	930.12	191.2	Secondary (grouped)
	•	•		•

Hydrographer Recommendations

Excess the Rip rap area based on new sounding and imagery data to update contours and foul areas.

Cartographically-Rounded Depth (Affected Charts):

26ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4 ½fm (13003_1)

S-57 Data

Geo object 1: Shoreline Construction (SLCONS)

Attributes: CATSLC - 8:rip rap

NATCON - 1:masonry

AHB concurs $\ensuremath{w/}$ field. Chart Sounding and update foul areas and contours.

1.4) 848/234

Survey Summary

Survey Position: 36:56:56.3 N, 076:08:20.2 W

Least Depth: 5.77 m = 3.157 fm = 3.157

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-129.21:22:31.507 (05/09/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-129 / 067_2122

Profile/Beam: 848/234

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-129/067_2122	848/234	0.00	0.000	Primary
h11323/1005_100/2005-164/152_2017	0003	1.51	296.2	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-115/258_1442	0003	2.38	217.7	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 3fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.774 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

AHB: Chart obstruction least depth 18.94 feet at Lat $36^{\circ}56'56.299"N$, Lon $76^{\circ}08'20.202"W$

1.5) 673/116

Survey Summary

Survey Position: 36:56:53.7 N, 076:08:18.6 W

Least Depth: $5.74 \text{ m} = 18.83 \text{ ft} = 3.138 \text{ fm} = 3 \text{ f$

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-129.21:27:59.829 (05/09/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-129 / 073_2127

Profile/Beam: 673/116

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status	
h11323/tj_3101_reson8125/2006-129/073_2127	673/116	0.00	0.000	Primary	
h11323/tj_3102_klein5000_sss200/2006-115/259_1525	0005	8.37	244.3	Secondary (grouped)	

Hydrographer Recommendations

Chart an Obstn

Cartographically-Rounded Depth (Affected Charts):

19ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 3fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.738 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

AHB: Concur

1.6) 682/178

Survey Summary

Survey Position: 36:56:55.7 N, 076:08:16.5 W

Least Depth: 5.92 m = 19.41 ft = 3.235 fm = 3 fm = 1.41 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-129.21:07:30.901 (05/09/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-129 / 080_2107

Profile/Beam: 682/178

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-129/080_2107	682/178	0.00	0.000	Primary
h11323/1005_100/2005-164/152_2017	0002	5.13	256.8	Secondary (grouped)

Hydrographer Recommendations

Chart Obstn least depth as per digital data.

Cartographically-Rounded Depth (Affected Charts):

19ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 3 ¹/₄fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.917 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

AHB: Concur

1.7) 217/77

Survey Summary

Survey Position: 36:57:06.2 N, 076:07:03.2 W

Least Depth: 7.23 m = 3.956 fm = 3 fm 5.73 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-130.17:45:24.577 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 914_1745

Profile/Beam: 217/77

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/914_1745	217/77	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-107/042_1606	0004	7.34	021.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/214_1603	0011	11.51	315.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.234 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

AHB: Chart obstruction at $36^{\circ}57'06.198"N$, $076^{\circ}07'03.236"W$, least depth 23.73 feet.

Feature Images

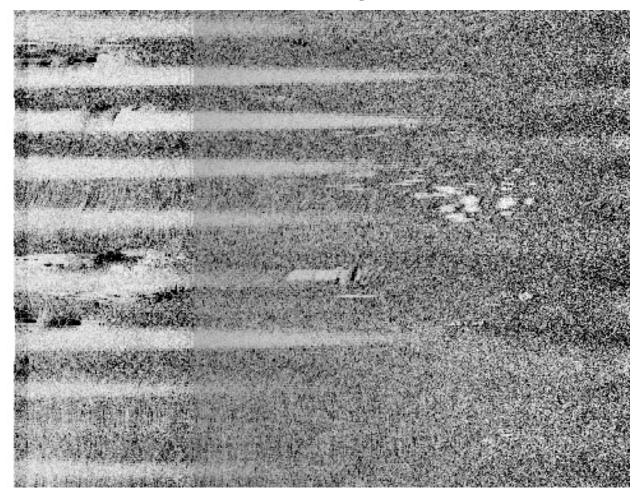


Figure 1.7.1

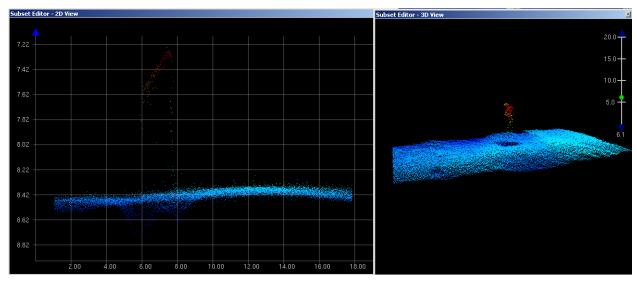


Figure 1.7.2

1.8) 0010

Survey Summary

Survey Position: 36:57:37.4 N, 076:06:57.0 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-125.06:09:31 (05/05/2006)

Survey Line: h11323 / tj_3102_klein5000_sss100 / 2006-109 / 024_1309

Contact/Point: 0010/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

North portion of CBBT Addition to bridge extends 30 meters south. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar.

Feature Correlation

	Address	Feature	Range	Azimuth	Status
]	h11323/tj_3102_klein5000_sss100/2006-109/024_1309	0010	0.00	0.000	Primary
	h11323/tj_3102_reson8101/2006-109/024_1309	1862/17	12.92	053.5	Secondary

Hydrographer Recommendations

use contemporary aerial photography to confirm actual location of bridge and update chart appropriatly.

S-57 Data

Geo object 1: Pylon/bridge support (PYLONS)

Attributes: CATPYL - 4:bridge pylon/tower

WATLEV - 2:always dry

Office Notes

Feature Images

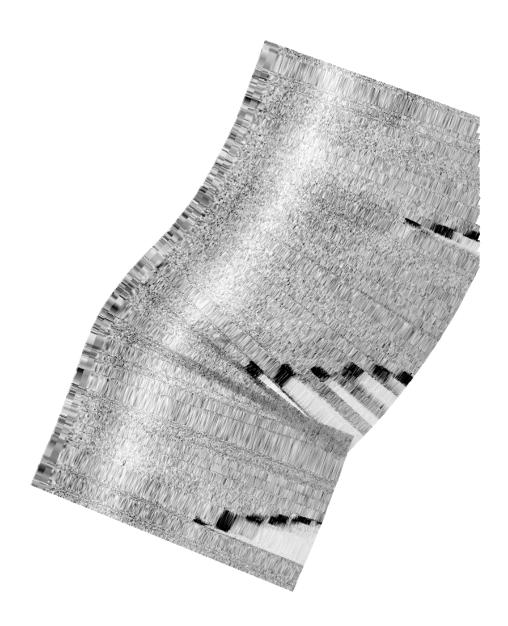


Figure 1.8.1

1.9) 0008

Survey Summary

Survey Position: 36:59:14.9 N, 076:06:17.8 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-126.02:00:28 (05/06/2006)

Survey Line: h11323 / tj_3102_klein5000_sss100 / 2006-110 / 005_1359

Contact/Point: 0008/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

West side of CBBT base structure. Chart discrepancy bridge location. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0008	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-110/211a1425	0009	8.39	262.9	Secondary (grouped)

Hydrographer Recommendations

Used Contemporary aerial photography to establish structural location of Bridge pilings and trestle.

S-57 Data

Geo object 1: Pylon/bridge support (PYLONS)

Attributes: WATLEV - 2:always dry

Office Notes

Feature Images

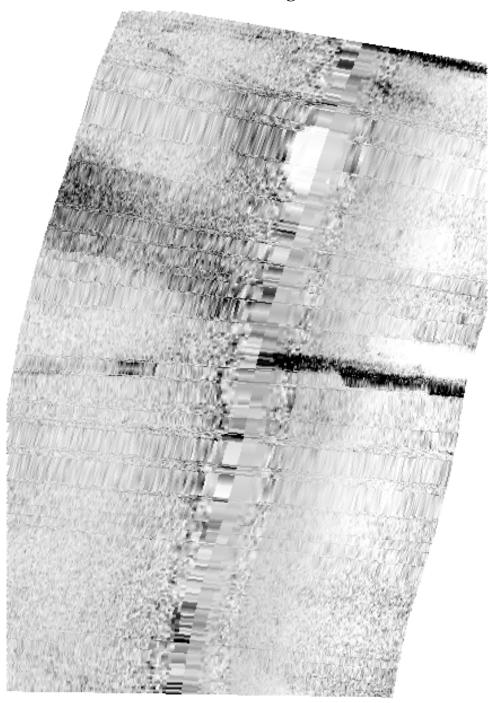


Figure 1.9.1

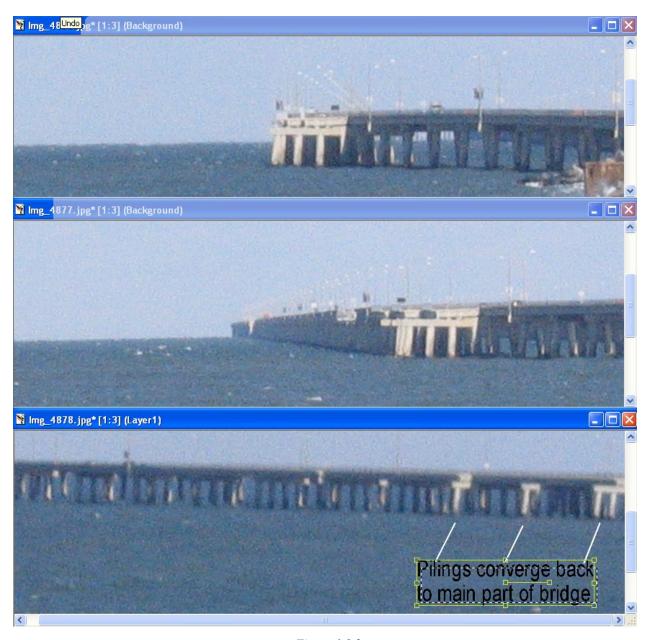


Figure 1.9.2

1.10) 0011

Survey Summary

Survey Position: 36:59:23.0 N, 076:06:14.8 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-126.02:14:29 (05/06/2006)

Survey Line: h11323 / tj_3102_klein5000_sss100 / 2006-110 / 005_1359

Contact/Point: 0011/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

West side of CBBT base structure. Chart discrepancy bridge location. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0011	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-110/211a1425	0010	17.32	285.9	Secondary

Hydrographer Recommendations

Used Contemporary aerial photography to establish structural location of Bridge pilings and trestle.

S-57 Data

Geo object 1: Pylon/bridge support (PYLONS)

Attributes: CATPYL - 4:bridge pylon/tower

WATLEV - 2:always dry

Office Notes

1.11) 0007

Survey Summary

Survey Position: 36:59:10.9 N, 076:06:18.1 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-126.01:59:07 (05/06/2006)

Survey Line: h11323 / tj_3102_klein5000_sss100 / 2006-110 / 005_1359

Contact/Point: 0007/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

West side of CBBT base structure. Chart discrepancy bridge location. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0007	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-110/211a1425	0008	6.97	259.3	Secondary

Hydrographer Recommendations

Used Contemporary aerial photography to establish structural location of Bridge pilings and trestle.

S-57 Data

Geo object 1: Pylon/bridge support (PYLONS)

Attributes: WATLEV - 2:always dry

Office Notes

1.12) 0009

Survey Summary

Survey Position: 36:59:17.7 N, 076:06:16.9 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-126.02:01:27 (05/06/2006)

Survey Line: h11323 / tj_3102_klein5000_sss100 / 2006-110 / 005_1359

Contact/Point: 0009/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

West side of CBBT base structure. Chart discrepancy bridge location. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0009	0.00	0.000	Primary
h11323/tj_3102_reson8101/2006-110/005_1359	2967/36	10.73	180.5	Secondary

Hydrographer Recommendations

Used Contemporary aerial photography to establish structural location of Bridge pilings and trestle.

S-57 Data

Geo object 1: Pylon/bridge support (PYLONS)

Attributes: WATLEV - 2:always dry

Office Notes

1.13) 0010

Survey Summary

Survey Position: 36:59:20.7 N, 076:06:15.3 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-126.02:02:11 (05/06/2006)

Survey Line: h11323 / tj_3102_klein5000_sss100 / 2006-110 / 005_1359

Contact/Point: 0010/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

West side of CBBT base structure. Chart discrepancy bridge location. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss100/2006-110/005_1359	0010	0.00	000.0	Primary

Hydrographer Recommendations

Used Contemporary aerial photography to establish structural location of Bridge pilings and trestle.

S-57 Data

Geo object 1: Pylon/bridge support (PYLONS)

Attributes: WATLEV - 2:always dry

Office Notes

1.14) 592/67

Survey Summary

Survey Position: 36:56:22.7 N, 076:10:30.2 W

Least Depth: 6.97 m = 22.88 ft = 3.813 fm = 3 fm = 4.88 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.369 m

Timestamp: 2006-114.17:14:04.657 (04/24/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-114 / 103_1712

Profile/Beam: 592/67

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

The Sewer outfall was found. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar. It appears the pipeline is 13 meters west of its actual postion.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-114/103_1712	592/67	0.00	0.000	Primary
h11323/1005_100/2005-153/136_1754	0002	5.01	194.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-130/207_1613	0002	6.81	168.6	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/275_1719	0001	8.43	121.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/275_1656	0001	10.51	109.7	Secondary (grouped)

Hydrographer Recommendations

Delete north portion of pipeline. Chart outfall LD 6.97 meters(22.88 feet) and connect to pipeline.

Cartographically-Rounded Depth (Affected Charts):

23ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 3/4fm (13003_1)

S-57 Data

Geo object 1: Pipeline area (PIPARE)

Attributes: CATPIP - 4:sewer

PRODCT - 3:water

Geo object 2: Sounding (SOUNDG)

Attributes: QUASOU - 6:least depth known

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

VERDAT - 12:Mean lower low water

Office Notes

Concur w/ verification, defer to MCD "source data branch".

1.15) 1159/1

Survey Summary

Survey Position: 36:57:05.0 N, 076:07:10.4 W

Least Depth: 7.43 m = 24.37 ft = 4.062 fm = 4 fm 0.37 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.981 m; TVU (TPEv) \pm 0.369 m

Timestamp: 2006-113.15:24:25.973 (04/23/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-113 / 215_1522

Profile/Beam: 1159/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

small item almost insig

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-113/215_1522	1159/1	0.00	0.000	Primary
h11323/tj_3102_reson8101/2006-109/024_1309	3942/90	1.97	028.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-109/024_1352	0003	8.37	042.2	Secondary

Hydrographer Recommendations

Chart Obstn Least depth 7.43 meters (24.37 feet)

Cartographically-Rounded Depth (Affected Charts):

24ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.429 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

1.16) GP No. - Danger 17 from ChartGPs - ENC US5VA19M

Survey Summary

Survey Position: 36:58:40.2 N, 076:11:09.7 W

Least Depth: 5.40 m = 17.72 ft = 2.953 fm = 2 fm 5.72 ft**TPU** ($\pm 1.96 \sigma$): **THU** (**TPEh**) [None] ; **TVU** (**TPEv**) [None]

Timestamp: [None]

GP Dataset: ChartGPs - ENC US5VA19M

GP No.: Danger 17

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Not enough data acquired by this survey to confirm.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - ENC US5VA19M	Danger 17	0.00	000.0	Primary

Hydrographer Recommendations

Retain as charted

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20031112 VALSOU - 5.400 m

WATLEV - 3:always under water/submerged

Office Notes

AHB: Item considered not disproved due to lack of coverage, recommend to retain as charted. There are contacts visable w/in the common area that were not selected. Defer to MCD Nautical Data Branch.

1.17) 203/55 obstruction

Survey Summary

Survey Position: 36:59:07.0 N, 076:07:50.6 W

Least Depth: 9.43 m = 30.94 ft = 5.156 fm = 5 fm = 0.94 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-171.13:34:12.883 (06/20/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-171 / 084_1333

Profile/Beam: 203/55

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Eastern End of Possible Titanium anchor location lost by submarine. Chain is Appx 144m long use Side Scan image as Guide for direction of Foul area. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar. The Rude performed a dive on this item. For additional information see Appx 5. Anchor Dive Report 203_55.pdf

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-171/084_1333	203/55	0.00	0.000	Primary
h11323/1005_100/2005-153/186_1928	0003	5.68	316.4	Secondary (grouped)
h11323/1005_100/2005-153/186_1928	0004	5.70	077.4	Secondary (grouped)
h11323/1005_100/2005-154/185_1424	0006	10.75	290.1	Secondary

Hydrographer Recommendations

Retain Charted Obstn. Chart foul area around chain. See Anchor Dive in Appendix 5 by Rude 3 Oct 2006

Cartographically-Rounded Depth (Affected Charts):

31ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 5fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 9.429 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

This item has been addressed in the AHB E-SAR Checklist section "Additional Item Verification comments: Item 2"

AHB: Concur. Chart obstruction least depth 30.94 feet.

Feature Images

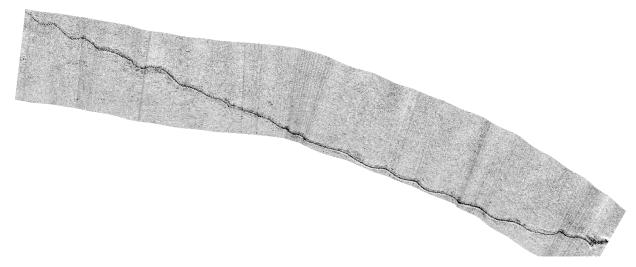


Figure 1.17.1

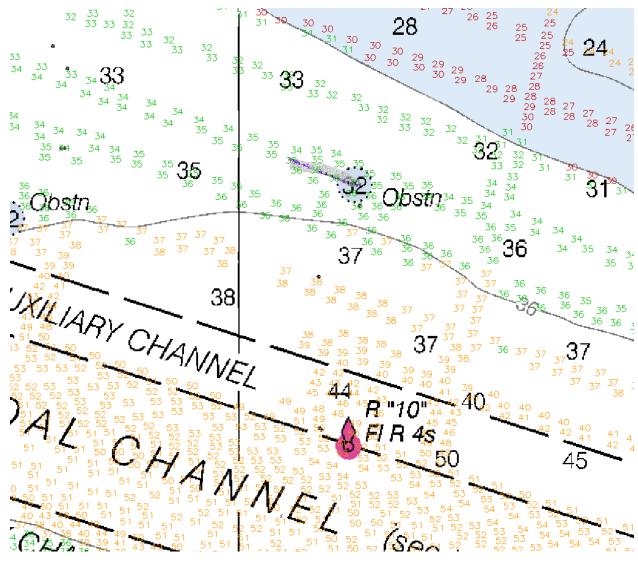


Figure 1.17.2

1.18) 251/215

Survey Summary

Survey Position: 36:59:01.0 N, 076:10:45.0 W

Least Depth: 7.38 m = 24.22 ft = 4.037 fm = 4 fm 0.22 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-171.15:09:40.803 (06/20/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-171 / 097_1509

Profile/Beam: 251/215

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-171/097_1509	251/215	0.00	0.000	Primary
h11323/1005_100/2005-154/174_1849	0003	3.88	272.7	Secondary (grouped)
h11323/1005_100/2005-154/173_1923	0004	4.13	111.0	Secondary (grouped)
h11323/1005_100/2005-154/174_1849	0002	22.10	339.9	Secondary (grouped)
h11323/1005_100/2005-154/173_1923	0002	28.98	311.0	Secondary (grouped)
h11323/1005_100/2005-154/173_1923	0003	45.81	301.3	Secondary (grouped)
h11323/1005_100/2005-154/174_1849	0001	52.42	298.9	Secondary (grouped)

Hydrographer Recommendations

Retain as charted

Cartographically-Rounded Depth (Affected Charts):

24ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.383 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB concurs w/ the field.

1.19) 330/116

Survey Summary

Survey Position: 36:59:03.7 N, 076:08:30.9 W

Least Depth: 11.13 m = 36.51 ft = 6.084 fm = 6 fm 0.51 ft**TPU** (±1.96 σ): **THU** (**TPEh**) ±0.980 m; **TVU** (**TPEv**) ±0.367 m

Timestamp: 2006-171.14:04:39.523 (06/20/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-171 / 163_1404

Profile/Beam: 330/116

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Obstn found, retain as charted. Acquisition over the item was covered by a combination of 100%, 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-171/163_1404	330/116	0.00	0.000	Primary
h11323/1005_100/2005-154/182_1220	0003	3.40	319.5	Secondary (grouped)
h11323/1005_100/2005-153/183_2016	0001	5.18	288.6	Secondary (grouped)

Hydrographer Recommendations

Retain as charted

Cartographically-Rounded Depth (Affected Charts):

36ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 6fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 11.127 m

VERDAT - 12:Mean lower low water

1.20) 1648/38

Survey Summary

Survey Position: 36:57:21.8 N, 076:06:36.4 W

Least Depth: 7.13 m = 23.39 ft = 3.898 fm = 3 fm = 3 fm = 3.898 fm = 3 fm =

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.369 \text{ m}$

Timestamp: 2006-129.19:20:12.049 (05/09/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-129 / 017_1917

Profile/Beam: 1648/38

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-129/017_1917	1648/38	0.00	0.000	Primary
h11323/tj_3102_reson8101/2006-122/722_1906	364/2	11.72	217.6	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/723_1904	386/10	15.52	143.6	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/722_1906	381/19	21.36	119.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/221_2022	0001	23.94	016.2	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/723_1904	313/95	25.72	323.5	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/723_1904	290/81	27.64	351.7	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/734_1859	416/57	29.55	252.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/222_2042	0001	29.76	202.8	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-108/039_1451	0003	33.27	102.7	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/222_2041	9653/93	35.55	066.5	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/735_1857	370/94	38.16	274.0	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/901_1839	5685/100	48.42	280.9	Secondary (grouped)
h11323/tj_3102_reson8101/2006-110/221_2022	2531/100	49.18	283.0	Secondary (grouped)

Hydrographer Recommendations

Chart Obstruction least depth 23 ft

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.128 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur.

1.21) 0001

Survey Summary

Survey Position: 36:58:25.0 N, 076:11:12.4 W

Least Depth: [None]

TPU ($\pm 1.96\sigma$): THU (TPEh) [None]; TVU (TPEv) [None]

Timestamp: 2006-285.07:45:40 (10/12/2006)

Survey Line: h11323 / tj_3102_klein5000_sss100 / 2006-109 / 013_1622

Contact/Point: 0001/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Near end of survey limit. Not enough coverage retain as charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_klein5000_sss100/2006-109/013_1622	0001	0.00	0.000	Primary
3102_2006_Master.svp	15	89.68	091.0	Secondary (grouped)

Hydrographer Recommendations

Retain as charted

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

TECSOU - 2: found by side scan sonar

Office Notes

H11323 Final DR Uncharted Feature Reports

Registry Number: H11323 **State:** Virginia

Locality: Chesapeake Bay

Sub-locality: Thimble Shoal Channel

Project Number: OPR-D304-TJ-06

Survey Dates: 06/14/2005 - 06/21/2006

Charts Affected

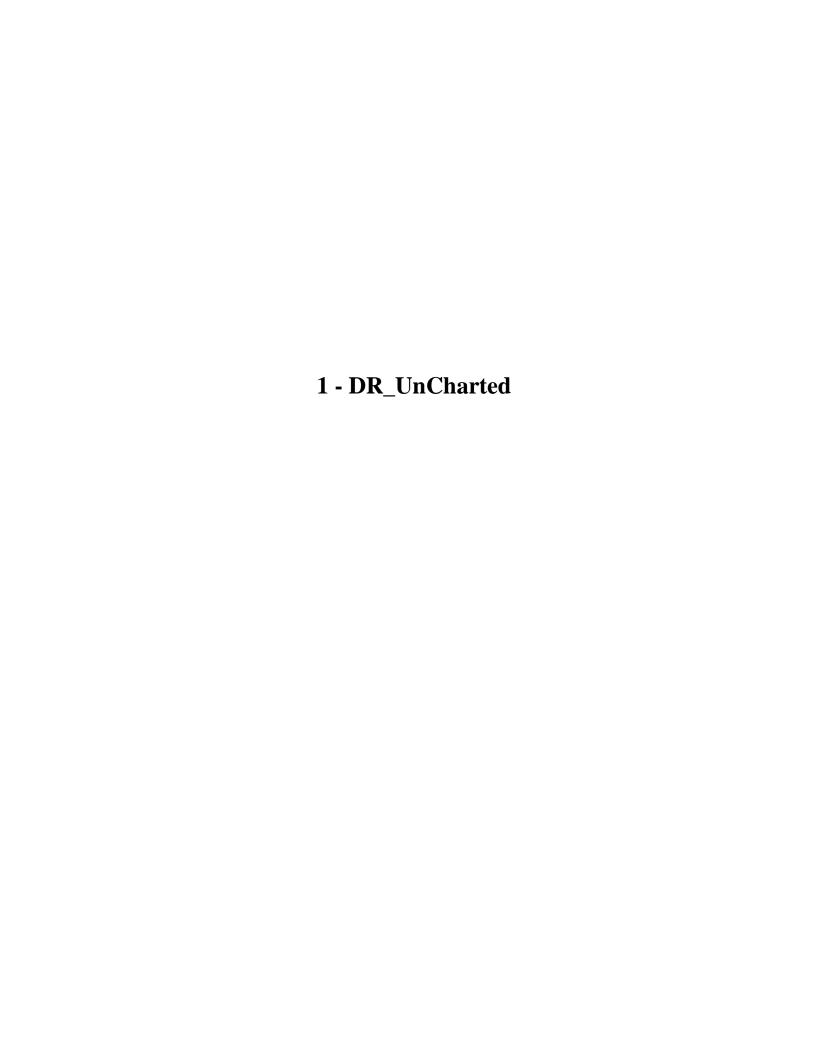
Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12255	16th	09/01/2005	1:5,000 (12255_1)	[L]NTM: ?
12256	15th	07/01/2005	1:20,000 (12256_1)	[L]NTM: ?
12254	46th	02/01/2006	1:20,000 (12254_1)	[L]NTM: ?
12222	48th	03/01/2007	1:40,000 (12222_1)	NGA NTM: 06/09/2007 (09/22/2007)
12205	30th	11/01/2005	1:80,000 (12205_1)	[L]NTM: ?
12221	77th	05/01/2005	1:80,000 (12221_1)	[L]NTM: ?
12207	21st	03/01/2004	1:80,000 (12207_1)	[L]NTM: ?
12280	6th	09/01/2005	1:200,000 (12280_2)	[L]NTM: ?
13003	48th	10/01/2004	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	703/91	Shoal	7.44 m	36:56:16.8 N	076:09:34.7 W	
1.2	277/31obstruction	Obstruction	5.82 m	36:57:07.0 N	076:09:02.0 W	
1.3	239/2	Obstruction	5.74 m	36:57:14.7 N	076:09:06.7 W	
1.4	207/97	Obstruction	6.32 m	36:57:02.9 N	076:08:12.0 W	
1.5	Obstruction 89/57	Obstruction	7.99 m	36:57:49.9 N	076:07:03.7 W	
1.6	187/82	Obstruction	8.05 m	36:56:24.5 N	076:08:13.5 W	
1.7	Obstruction 126/153	Obstruction	8.19 m	36:57:43.4 N	076:07:16.5 W	
1.8	268/83	Obstruction	6.82 m	36:57:22.1 N	076:07:37.0 W	
1.9	281/175	Obstruction	7.52 m	36:57:55.4 N	076:08:09.4 W	

1.10							
1.12 Obstruction 227/22 Obstruction 7.69 m 36:57:23.9 N 076:06:36.5 W 1.13 Obstruction 331/10 Obstruction 8.59 m 36:57:31.2 N 076:06:26.0 W 1.14 Obstruction 386/81 Obstruction 7.82 m 36:56:52.3 N 076:06:56.8 W 1.15 224/3 obstruction Obstruction 7.15 m 36:56:04.6 N 076:10:36.2 W 1.16 205/196 Obstruction Obstruction 11.15 m 36:57:43.3 N 076:06:56.6 W 1.17 193/194 Obstruction 11.19 m 36:58:05.8 N 076:06:47.5 W 1.18 134/101 Shoal 5.97 m 36:57:46.2 N 076:10:01.9 W 1.19 1083/23 Obstruction 7.04 m 36:55:28.9 N 076:10:03.0 W 1.20 1511/97 Obstruction 7.04 m 36:57:46.2 N 076:10:03.0 W 1.21 332/77 Obstruction 6.84 m 36:57:49.4 N 076:09:07.0 W	1.10	3649/5	Obstruction	6.66 m	36:57:44.4 N	076:08:06.1 W	
1.13 Obstruction 331/10 Obstruction 8.59 m 36:57:31.2 N 076:06:26.0 W 1.14 Obstruction 386/81 Obstruction 7.82 m 36:56:52.3 N 076:06:56.8 W 1.15 224/3 obstruction Obstruction 7.15 m 36:56:04.6 N 076:10:36.2 W 1.16 205/196 Obstruction Obstruction 11.19 m 36:57:43.3 N 076:06:32.8 W 1.17 193/194 Obstruction 1.19 m 36:57:46.2 N 076:06:47.5 W 1.18 134/101 Shoal 5.97 m 36:57:46.2 N 076:06:47.5 W 1.19 1083/23 Obstruction 7.04 m 36:56:29.5 N 076:10:01.9 W 1.20 1511/97 Obstruction 6.29 m 36:57:30.4 N 076:00:30.0 W 1.21 332/77 Obstruction 6.60 m 36:57:49.4 N 076:09:12.9 W 1.22 762/63 Obstruction 7.56 m 36:57:49.0 N 076:09:12.9 W <td>1.11</td> <td>Obstruction 2195/36</td> <td>Obstruction</td> <td>5.71 m</td> <td>36:55:50.9 N</td> <td>076:08:31.9 W</td> <td></td>	1.11	Obstruction 2195/36	Obstruction	5.71 m	36:55:50.9 N	076:08:31.9 W	
1.14 Obstruction 386/81 Obstruction 7.82 m 36:56:52.3 N 076:06:56.8 W	1.12	Obstruction 227/22	Obstruction	7.69 m	36:57:23.9 N	076:06:36.5 W	
1.15 224/3 obstruction Obstruction 7.15 m 36:56:04.6 N 076:10:36.2 W 1.16 205/196 Obstruction Obstruction 11.56 m 36:57:43.3 N 076:06:56.6 W 1.17 193/194 Obstruction 11.19 m 36:58:05.8 N 076:06:32.8 W 1.18 134/101 Shoal 5.97 m 36:57:46.2 N 076:06:47.5 W 1.19 1083/23 Obstruction 7.00 m 36:55:28.9 N 076:10:03.0 W 1.20 1511/97 Obstruction 6.29 m 36:57:30.4 N 076:09:10:30.0 W 1.21 332/77 Obstruction 6.84 m 36:57:30.4 N 076:09:12.9 W 1.22 762/63 Obstruction 6.60 m 36:57:49.4 N 076:09:12.9 W 1.23 87/182 Obstruction 6.58 m 36:57:49.4 N 076:09:13.7 W 1.24 447/79 Obstruction 7.56 m 36:55:20.0 N 076:07:22.5 W <tr< td=""><td>1.13</td><td>Obstruction 331/10</td><td>Obstruction</td><td>8.59 m</td><td>36:57:31.2 N</td><td>076:06:26.0 W</td><td></td></tr<>	1.13	Obstruction 331/10	Obstruction	8.59 m	36:57:31.2 N	076:06:26.0 W	
1.16 205/196 Obstruction Obstruction 11.56 m 36:57:43.3 N 076:06:56.6 W 1.17 193/194 Obstruction 11.19 m 36:58:05.8 N 076:06:32.8 W 1.18 134/101 Shoal 5.97 m 36:57:46.2 N 076:06:47.5 W 1.19 1083/23 Obstruction 7.00 m 36:56:28.9 N 076:10:03.0 W 1.20 1511/97 Obstruction 7.04 m 36:57:30.4 N 076:10:03.0 W 1.21 332/77 Obstruction 6.29 m 36:57:30.4 N 076:09:12.9 W 1.22 762/63 Obstruction 6.84 m 36:57:49.4 N 076:09:12.9 W 1.23 87/182 Obstruction 6.58 m 36:57:49.4 N 076:09:13.7 W 1.24 447/79 Obstruction 7.56 m 36:57:48.8 N 076:07:22.5 W 1.25 257/146 Obstruction 5.27 m 36:55:140.0 N 076:07:55.2 W 1.26 <td>1.14</td> <td>Obstruction 386/81</td> <td>Obstruction</td> <td>7.82 m</td> <td>36:56:52.3 N</td> <td>076:06:56.8 W</td> <td></td>	1.14	Obstruction 386/81	Obstruction	7.82 m	36:56:52.3 N	076:06:56.8 W	
1.17 193/194 Obstruction 11.19 m 36:58:05.8 N 076:06:32.8 W 1.18 134/101 Shoal 5.97 m 36:57:46.2 N 076:06:47.5 W 1.19 1083/23 Obstruction 7.00 m 36:56:28.9 N 076:10:03.0 W 1.20 1511/97 Obstruction 7.04 m 36:56:29.5 N 076:10:03.0 W 1.21 332/77 Obstruction 6.29 m 36:57:30.4 N 076:08:46.8 W 1.22 762/63 Obstruction 6.84 m 36:57:49.4 N 076:09:12.9 W 1.23 87/182 Obstruction 6.58 m 36:57:49.4 N 076:09:07.0 W 1.24 447/79 Obstruction 7.56 m 36:55:40.0 N 076:09:13.7 W 1.25 257/146 Obstruction 5.27 m 36:55:40.0 N 076:07:52.5 W 1.26 283/68 Wreck 7.42 m 36:55:40.0 N 076:06:34.8 W 1.27 402/151	1.15	224/3 obstruction	Obstruction	7.15 m	36:56:04.6 N	076:10:36.2 W	
1.18 134/101 Shoal 5.97 m 36:57:46.2 N 076:06:47.5 W 1.19 1083/23 Obstruction 7.00 m 36:56:28.9 N 076:10:01.9 W 1.20 1511/97 Obstruction 7.04 m 36:56:29.5 N 076:10:03.0 W 1.21 332/77 Obstruction 6.29 m 36:57:30.4 N 076:08:46.8 W 1.22 762/63 Obstruction 6.84 m 36:57:49.4 N 076:09:12.9 W 1.23 87/182 Obstruction 6.58 m 36:57:49.4 N 076:09:07.0 W 1.24 447/79 Obstruction 6.58 m 36:57:48.8 N 076:09:13.7 W 1.25 257/146 Obstruction 7.56 m 36:56:50.0 N 076:07:22.5 W 1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:755.2 W 1.27 402/151 Obstruction 5.27 m 36:55:45.1 N 076:06:25.1 W 1.28 Obstruc	1.16	205/196 Obstruction	Obstruction	11.56 m	36:57:43.3 N	076:06:56.6 W	
1.19 1083/23 Obstruction 7.00 m 36:56:28.9 N 076:10:01.9 W 1.20 1511/97 Obstruction 7.04 m 36:56:29.5 N 076:10:03.0 W 1.21 332/77 Obstruction 6.29 m 36:57:30.4 N 076:08:46.8 W 1.22 762/63 Obstruction 6.84 m 36:57:51.4 N 076:09:12.9 W 1.23 87/182 Obstruction 6.60 m 36:57:49.4 N 076:09:07.0 W 1.24 447/79 Obstruction 6.58 m 36:57:48.8 N 076:09:13.7 W 1.25 257/146 Obstruction 7.56 m 36:55:48.0 N 076:07:22.5 W 1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:55.2 W 1.27 402/151 Obstruction 5.27 m 36:55:41.0 N 076:06:34.8 W 1.28 Obstruction 1004/26 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30	1.17	193/194	Obstruction	11.19 m	36:58:05.8 N	076:06:32.8 W	
1.20 1511/97 Obstruction 7.04 m 36:56:29.5 N 076:10:03.0 W 1.21 332/77 Obstruction 6.29 m 36:57:30.4 N 076:08:46.8 W 1.22 762/63 Obstruction 6.84 m 36:57:51.4 N 076:09:12.9 W 1.23 87/182 Obstruction 6.60 m 36:57:49.4 N 076:09:07.0 W 1.24 447/79 Obstruction 6.58 m 36:57:49.4 N 076:09:13.7 W 1.25 257/146 Obstruction 7.56 m 36:55:00.0 N 076:07:22.5 W 1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:55.2 W 1.27 402/151 Obstruction 5.27 m 36:55:16.0 N 076:06:34.8 W 1.28 Obstruction 1004/26 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 8.60 m 36:57:12.2 N 076:09:04.0 W 1	1.18	134/101	Shoal	5.97 m	36:57:46.2 N	076:06:47.5 W	
1.21 332/77 Obstruction 6.29 m 36:57:30.4 N 076:08:46.8 W 1.22 762/63 Obstruction 6.84 m 36:57:51.4 N 076:09:12.9 W 1.23 87/182 Obstruction 6.60 m 36:57:49.4 N 076:09:07.0 W 1.24 447/79 Obstruction 6.58 m 36:57:48.8 N 076:09:13.7 W 1.25 257/146 Obstruction 7.56 m 36:55:65.0.0 N 076:07:22.5 W 1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:22.5 W 1.27 402/151 Obstruction 5.27 m 36:55:16.0 N 076:06:34.8 W 1.28 Obstruction 1004/26 Obstruction 6.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:09:04.0 W 1.31 293/42 Obstruction 5.97 m 36:55:48.N 076:10:34.4 W 1.	1.19	1083/23	Obstruction	7.00 m	36:56:28.9 N	076:10:01.9 W	
1.22 762/63 Obstruction 6.84 m 36:57:51.4 N 076:09:12.9 W 1.23 87/182 Obstruction 6.60 m 36:57:49.4 N 076:09:07.0 W 1.24 447/79 Obstruction 6.58 m 36:57:48.8 N 076:09:13.7 W 1.25 257/146 Obstruction 7.56 m 36:56:50.0 N 076:07:55.2 W 1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:55.2 W 1.27 402/151 Obstruction 5.27 m 36:55:16.0 N 076:06:234.8 W 1.28 Obstruction 1004/26 Obstruction 6.61 m 36:55:45.1 N 076:06:25.1 W 1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:10:02.9 W 1.31 293/42 Obstruction 8.60 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.97 m 36:57:04.1 N 076:10:03.9 W	1.20	1511/97	Obstruction	7.04 m	36:56:29.5 N	076:10:03.0 W	
1.23 87/182 Obstruction 6.60 m 36:57:49.4 N 076:09:07.0 W 1.24 447/79 Obstruction 6.58 m 36:57:48.8 N 076:09:13.7 W 1.25 257/146 Obstruction 7.56 m 36:56:50.0 N 076:07:22.5 W 1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:55.2 W 1.27 402/151 Obstruction 5.27 m 36:55:16.0 N 076:06:34.8 W 1.28 Obstruction 1004/26 Obstruction 6.61 m 36:55:48.1 N 076:06:25.1 W 1.29 771/166 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 8.60 m 36:59:07.4 N 076:10:02.9 W 1.31 293/42 Obstruction 5.97 m 36:56:54.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.	1.21	332/77	Obstruction	6.29 m	36:57:30.4 N	076:08:46.8 W	
1.24 447/79 Obstruction 6.58 m 36:57:48.8 N 076:09:13.7 W 1.25 257/146 Obstruction 7.56 m 36:56:50.0 N 076:07:22.5 W 1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:55.2 W 1.27 402/151 Obstruction 5.27 m 36:55:16.0 N 076:06:34.8 W 1.28 Obstruction 1004/26 Obstruction 6.61 m 36:55:45.1 N 076:06:25.1 W 1.29 771/166 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:09:04.0 W 1.31 293/42 Obstruction 5.97 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.33 845/4 Obstruction 5.15 m 36:57:20.2 N 076:06:42.0 W 1	1.22	762/63	Obstruction	6.84 m	36:57:51.4 N	076:09:12.9 W	
1.25 257/146 Obstruction 7.56 m 36:56:50.0 N 076:07:22.5 W 1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:55.2 W 1.27 402/151 Obstruction 5.27 m 36:55:16.0 N 076:06:34.8 W 1.28 Obstruction 1004/26 Obstruction 6.61 m 36:55:48.2 N 076:06:25.1 W 1.29 771/166 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:09:04.0 W 1.31 293/42 Obstruction 8.60 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.97 m 36:56:54.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.34 3130/98 Obstruction 5.15 m 36:57:21.7 N 076:06:42.0 W	1.23	87/182	Obstruction	6.60 m	36:57:49.4 N	076:09:07.0 W	
1.26 283/68 Wreck 7.42 m 36:57:47.9 N 076:07:55.2 W 1.27 402/151 Obstruction 5.27 m 36:55:16.0 N 076:06:34.8 W 1.28 Obstruction 1004/26 Obstruction 6.61 m 36:55:45.1 N 076:06:25.1 W 1.29 771/166 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:09:04.0 W 1.31 293/42 Obstruction 8.60 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.97 m 36:56:54.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:50.0 W 1.34 3130/98 Obstruction 5.15 m 36:57:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:37.8 W	1.24	447/79	Obstruction	6.58 m	36:57:48.8 N	076:09:13.7 W	
1.27 402/151 Obstruction 5.27 m 36:55:16.0 N 076:06:34.8 W 1.28 Obstruction 1004/26 Obstruction 6.61 m 36:55:45.1 N 076:06:25.1 W 1.29 771/166 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:09:04.0 W 1.31 293/42 Obstruction 8.60 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.97 m 36:55:48.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.34 3130/98 Obstruction 5.15 m 36:55:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:55:21.7 N 076:06:63.7.8 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:71.0 W <td>1.25</td> <td>257/146</td> <td>Obstruction</td> <td>7.56 m</td> <td>36:56:50.0 N</td> <td>076:07:22.5 W</td> <td></td>	1.25	257/146	Obstruction	7.56 m	36:56:50.0 N	076:07:22.5 W	
1.28 Obstruction 1004/26 Obstruction 6.61 m 36:55:45.1 N 076:06:25.1 W 1.29 771/166 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:09:04.0 W 1.31 293/42 Obstruction 8.60 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.97 m 36:56:54.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.34 3130/98 Obstruction 5.15 m 36:55:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:37.8 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:31.4 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W	1.26	283/68	Wreck	7.42 m	36:57:47.9 N	076:07:55.2 W	
1.29 771/166 Obstruction 4.61 m 36:55:48.2 N 076:10:02.9 W 1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:09:04.0 W 1.31 293/42 Obstruction 8.60 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.97 m 36:56:54.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.34 3130/98 Obstruction 5.15 m 36:55:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:42.0 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:55:23.9 N 076:07:31.4 W 1.37 466/184 Pile 8.49 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:55:38.7 N 076:06:53.6 W	1.27	402/151	Obstruction	5.27 m	36:55:16.0 N	076:06:34.8 W	
1.30 344/231obstruction Obstruction 6.01 m 36:57:12.2 N 076:09:04.0 W 1.31 293/42 Obstruction 8.60 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.97 m 36:56:54.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.34 3130/98 Obstruction 5.15 m 36:55:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:37.8 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:31.4 W 1.37 466/184 Pile 8.49 m 36:56:48.3 N 076:07:17.0 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.	1.28	Obstruction 1004/26	Obstruction	6.61 m	36:55:45.1 N	076:06:25.1 W	
1.31 293/42 Obstruction 8.60 m 36:59:07.4 N 076:10:43.4 W 1.32 192/143 Obstruction 5.97 m 36:56:54.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.34 3130/98 Obstruction 5.15 m 36:55:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:37.8 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:31.4 W 1.37 466/184 Pile 8.49 m 36:56:48.3 N 076:07:17.0 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:09:52.9 W 1.41	1.29	771/166	Obstruction	4.61 m	36:55:48.2 N	076:10:02.9 W	
1.32 192/143 Obstruction 5.97 m 36:56:54.8 N 076:10:50.0 W 1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.34 3130/98 Obstruction 5.15 m 36:55:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:37.8 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:31.4 W 1.37 466/184 Pile 8.49 m 36:56:48.3 N 076:07:17.0 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.30	344/231obstruction	Obstruction	6.01 m	36:57:12.2 N	076:09:04.0 W	
1.33 845/4 Obstruction 5.70 m 36:57:04.1 N 076:10:02.9 W 1.34 3130/98 Obstruction 5.15 m 36:55:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:37.8 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:31.4 W 1.37 466/184 Pile 8.49 m 36:56:48.3 N 076:07:17.0 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.31	293/42	Obstruction	8.60 m	36:59:07.4 N	076:10:43.4 W	
1.34 3130/98 Obstruction 5.15 m 36:55:20.2 N 076:06:42.0 W 1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:37.8 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:31.4 W 1.37 466/184 Pile 8.49 m 36:56:48.3 N 076:07:17.0 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.32	192/143	Obstruction	5.97 m	36:56:54.8 N	076:10:50.0 W	
1.35 9672/89 Obstruction 7.05 m 36:57:21.7 N 076:06:37.8 W 1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:31.4 W 1.37 466/184 Pile 8.49 m 36:56:48.3 N 076:07:17.0 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.33	845/4	Obstruction	5.70 m	36:57:04.1 N	076:10:02.9 W	
1.36 Obstruction 18764/100 Obstruction 8.66 m 36:56:23.9 N 076:07:31.4 W 1.37 466/184 Pile 8.49 m 36:56:48.3 N 076:07:17.0 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.34	3130/98	Obstruction	5.15 m	36:55:20.2 N	076:06:42.0 W	
1.37 466/184 Pile 8.49 m 36:56:48.3 N 076:07:17.0 W 1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.35	9672/89	Obstruction	7.05 m	36:57:21.7 N	076:06:37.8 W	
1.38 519/1 Obstruction 2.65 m 36:55:38.7 N 076:07:27.5 W 1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.36	Obstruction 18764/100	Obstruction	8.66 m	36:56:23.9 N	076:07:31.4 W	
1.39 423/9 Obstruction 7.86 m 36:57:29.8 N 076:06:53.6 W 1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.37	466/184	Pile	8.49 m	36:56:48.3 N	076:07:17.0 W	
1.40 612/11 Obstruction 3.38 m 36:55:46.6 N 076:10:03.3 W 1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.38	519/1	Obstruction	2.65 m	36:55:38.7 N	076:07:27.5 W	
1.41 1583/234 Obstruction 4.52 m 36:55:50.2 N 076:09:52.9 W	1.39	423/9	Obstruction	7.86 m	36:57:29.8 N	076:06:53.6 W	
	1.40	612/11	Obstruction	3.38 m	36:55:46.6 N	076:10:03.3 W	
1.42 110/52 Obstruction 10.48 m 36:58:06.0 N 076:06:30.3 W	1.41	1583/234	Obstruction	4.52 m	36:55:50.2 N	076:09:52.9 W	
	1.42	110/52	Obstruction	10.48 m	36:58:06.0 N	076:06:30.3 W	



1.1) 703/91

Survey Summary

Survey Position: 36:56:16.8 N, 076:09:34.7 W

Least Depth: 7.44 m = 24.41 ft = 4.068 fm = 4 fm 0.41 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 1.252 m; TVU (TPEv) \pm 0.243 m

Timestamp: 2005-174.17:31:49.877 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 215_1731

Profile/Beam: 703/91

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

This is one of two Obstns in area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/215_1731	703/91	0.00	000.0	Primary
h11323/1005_100/2005-153/138_1648	0002	9.29	044.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-130/203_1547	0001	9.50	030.5	Secondary (grouped)

Hydrographer Recommendations

Chart Obstn

Cartographically-Rounded Depth (Affected Charts):

24ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.439 m

VERDAT - 12:Mean lower low water

AHB: Concur w/ clarification. Chart 24 Obstn

1.2) 277/31 obstruction

Survey Summary

Survey Position: 36:57:07.0 N, 076:09:02.0 W

Least Depth: $5.82 \text{ m} = 19.09 \text{ ft} = 3.182 \text{ fm} = 3 \text{ f$

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-126.19:04:20.745 (05/06/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-126 / 065_1904

Profile/Beam: 277/31

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-126/065_1904	277/31	0.00	0.000	Primary
h11323/1005_100/2005-164/152_1907	0001	2.16	253.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-115/258_1506	0001	6.79	196.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.820 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

AHB: Chart Obstruction at $36^\circ57'06.995"N$, $076^\circ09'02.028"W$ least depth 19.09 feet.

1.3) 239/2

Survey Summary

Survey Position: 36:57:14.7 N, 076:09:06.7 W

Least Depth: 5.74 m = 18.82 ft = 3.137 fm = 3 fm 0.82 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-126.18:51:09.288 (05/06/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-126 / 792_1851

Profile/Beam: 239/2

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

small item found

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-126/792_1851	239/2	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-115/257_1417	0001	0.40	052.2	Secondary (grouped)

Hydrographer Recommendations

Chart Depth

Cartographically-Rounded Depth (Affected Charts):

19ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

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

VALSOU - 5.737 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

1.4) 207/97

Survey Summary

Survey Position: 36:57:02.9 N, 076:08:12.0 W

Least Depth: 6.32 m = 20.73 ft = 3.456 fm = 3 fm 2.73 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-129.21:03:41.769 (05/09/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-129 / 145_2104

Profile/Beam: 207/97

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-129/145_2104	207/97	0.00	0.000	Primary
h11323/1005_100/2005-164/154_1807	0001	2.33	287.5	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-115/256_1349	0001	2.87	190.9	Secondary (grouped)
h11323/tj_3101_reson8125/2006-129/145_2104	220/220	10.28	077.6	Secondary (grouped)

Hydrographer Recommendations

Chart an Obstn

Cartographically-Rounded Depth (Affected Charts):

20ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.320 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

1.5) Obstruction 89/57

Survey Summary

Survey Position: 36:57:49.9 N, 076:07:03.7 W

Least Depth: 7.99 m = 26.23 ft = 4.371 fm = 4 fm 2.23 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.18:19:58.753 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 040_1819

Profile/Beam: 89/57

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/040_1819	89/57	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-112/240_1558	0001	1.21	304.9	Secondary (grouped)
h11323/1005_100/2005-154/170_2043	0001	4.30	313.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/241_1622	0004	12.16	332.6	Secondary (grouped)

Hydrographer Recommendations

Chart Obstruction with least depth 7.99 meters (26.23 feet).

Cartographically-Rounded Depth (Affected Charts):

26ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.994 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Feature Images

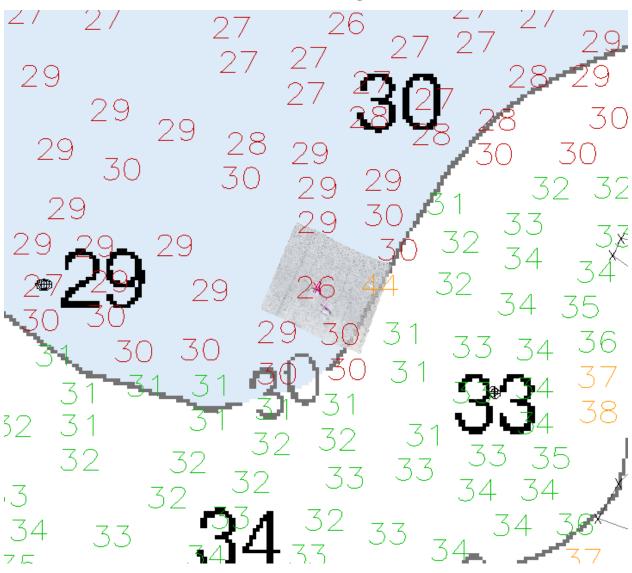


Figure 1.5.1

1.6) 187/82

Survey Summary

Survey Position: 36:56:24.5 N, 076:08:13.5 W

Least Depth: 8.05 m = 26.42 ft = 4.403 fm = 4 fm 2.42 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-130.19:29:22.665 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 152_1929

Profile/Beam: 187/82

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/152_1929	187/82	0.00	0.000	Primary
h11323/1005_100/2005-165/145_1413	0003	2.26	057.5	Secondary (grouped)

Hydrographer Recommendations

Chart a Depth

Cartographically-Rounded Depth (Affected Charts):

26ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 8.052 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

AHB: Do not concur. Chart obstruction least depth 26.42 feet at $36^{\circ}56'24.490"N$, $076^{\circ}08'13.502"W$

1.7) Obstruction 126/153

Survey Summary

Survey Position: 36:57:43.4 N, 076:07:16.5 W

Least Depth: 8.19 m (= 26.88 ft = 4.479 fm = 4 fm 2.88 ft)

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.18:26:44.694 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 718_1826

Profile/Beam: 126/153

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/718_1826	126/153	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-112/243_1716	0001	1.39	313.3	Secondary

Hydrographer Recommendations

Chart Obstruction with least depth 8.19 meters (26.88 feet).

Cartographically-Rounded Depth (Affected Charts):

27ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 8.192 m

VERDAT - 12:Mean lower low water

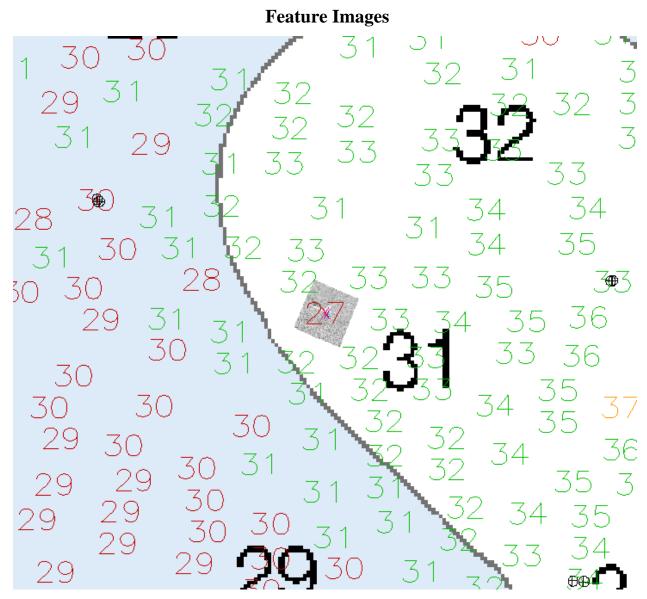


Figure 1.7.1

1.8) 268/83

Survey Summary

Survey Position: 36:57:22.1 N, 076:07:37.0 W

Least Depth: $6.82 \text{ m} = 22.38 \text{ ft} = 3.729 \text{ fm} = 3 \text{ f$

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.18:53:23.306 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 742_1853

Profile/Beam: 268/83

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/742_1853	268/83	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/015_2022	0001	0.96	351.1	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-130/201_1318	0001	3.44	129.8	Secondary (grouped)

Hydrographer Recommendations

Chart as per digital data.

Cartographically-Rounded Depth (Affected Charts):

22ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 3 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.820 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

AHB: Concur w/ clarification. Chart 22 Obstn

1.9) 281/175

Survey Summary

Survey Position: 36:57:55.4 N, 076:08:09.4 W

Least Depth: 7.52 m = 24.66 ft = 4.110 fm = 4 fm 0.66 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.18:46:03.649 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 1013a

Profile/Beam: 281/175

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/1013a	281/175	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/053_1428	0001	2.10	034.2	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/243_1715	0002	3.46	183.6	Secondary (grouped)

Hydrographer Recommendations

Chart obstruction least depth 24.66 feet.

Cartographically-Rounded Depth (Affected Charts):

24ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.516 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Concur.

1.10) 3649/5

Survey Summary

Survey Position: 36:57:44.4 N, 076:08:06.1 W

Least Depth: 6.66 m = 21.85 ft = 3.641 fm = 3 fm = 3.85 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.981 m; TVU (TPEv) \pm 0.368 m

Timestamp: 2006-109.15:30:28.622 (04/19/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-109 / 011_1524

Profile/Beam: 3649/5

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-109/011_1524	3649/5	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/011_1524	0001	1.10	170.1	Secondary
h11323/tj_3102_klein5000_sss200/2006-113/246_1417	0001	3.16	102.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.659 m

VERDAT - 12:Mean lower low water

AHB: Chart obstruction at $36^{\circ}57'44.376"N$, $076^{\circ}08'06.131"W$, least depth 21.85 feet.

1.11) Obstruction 2195/36

Survey Summary

Survey Position: 36:55:50.9 N, 076:08:31.9 W

Least Depth: 5.71 m = 18.74 ft = 3.123 fm = 3 fm = 0.74 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.369 m

Timestamp: 2006-109.18:55:28.163 (04/19/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-109 / 047_1852

Profile/Beam: 2195/36

Charts Affected: 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-109/047_1852	2195/36	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-114/287_1928	0008	2.28	121.7	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/286_2003	0001	4.65	284.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/287_1928	0006	6.49	163.6	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/371_1436	222/8	20.74	037.2	Secondary (grouped)

Hydrographer Recommendations

Chart obstruction with least depth 5.71 meters (18.7 feet).

Cartographically-Rounded Depth (Affected Charts):

18ft (12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2) 3fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.711 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Feature Images

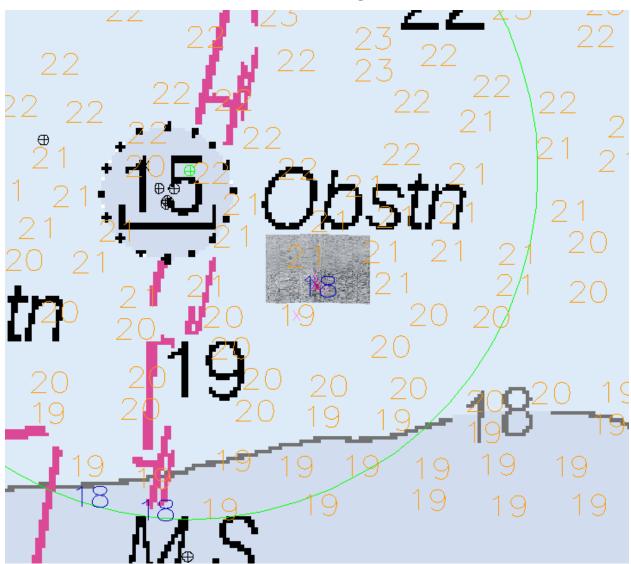


Figure 1.11.1

1.12) Obstruction 227/22

Survey Summary

Survey Position: 36:57:23.9 N, 076:06:36.5 W

Least Depth: 7.69 m = 25.23 ft = 4.205 fm = 4 fm 1.23 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.369 m

Timestamp: 2006-122.19:07:19.671 (05/02/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-122 / 722_1906

Profile/Beam: 227/22

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-122/722_1906	227/22	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-110/222_2042	0002	1.76	047.8	Secondary (grouped)

Hydrographer Recommendations

Chart Obstruction with least depth 7.69 meters (25.23 feet).

Cartographically-Rounded Depth (Affected Charts):

25ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.690 m

VERDAT - 12:Mean lower low water

AHB: Concur

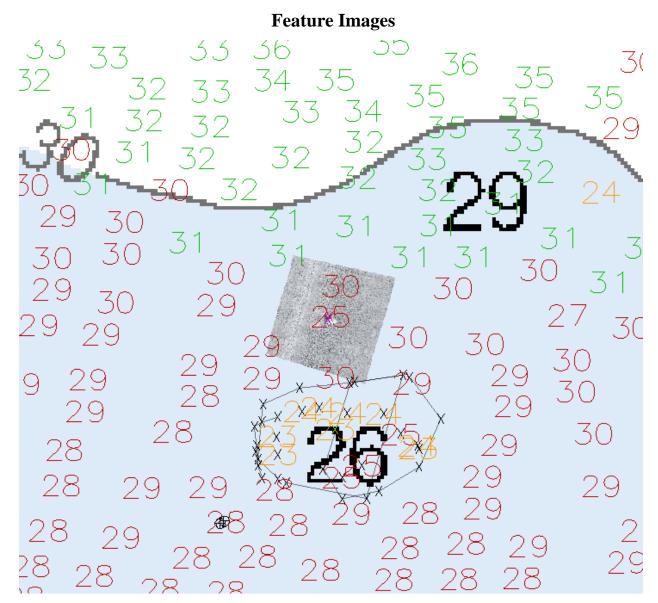


Figure 1.12.1

1.13) Obstruction 331/10

Survey Summary

Survey Position: 36:57:31.2 N, 076:06:26.0 W

Least Depth: 8.59 m = 28.18 ft = 4.697 fm = 4 fm = 4.18 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.981 m; TVU (TPEv) \pm 0.369 m

Timestamp: 2006-122.18:52:53.692 (05/02/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-122 / 732_1852

Profile/Beam: 331/10

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-122/732_1852	331/10	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-108/037_1546	0001	1.58	127.4	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-110/220_2003	0001	1.60	179.6	Secondary (grouped)

Hydrographer Recommendations

Chart Obstruction with least depth 8.59 meters (28.18 feet).

Cartographically-Rounded Depth (Affected Charts):

28ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4 ³4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 8.590 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Concur

Feature Images

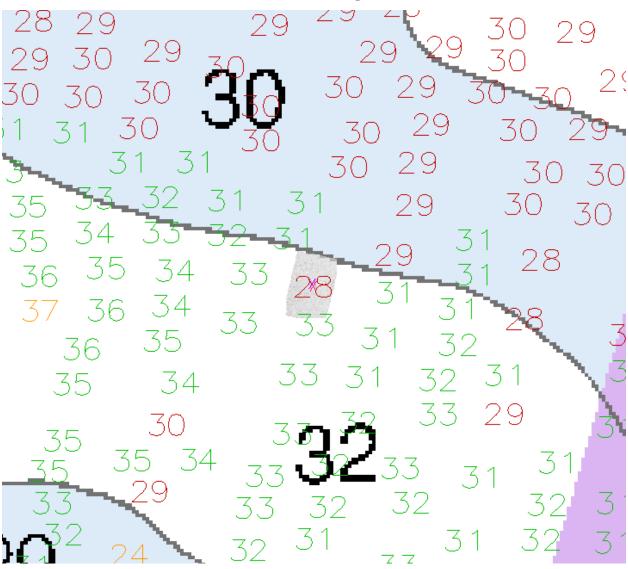


Figure 1.13.1

1.14) Obstruction 386/81

Survey Summary

Survey Position: 36:56:52.3 N, 076:06:56.8 W

Least Depth: 7.82 m = 25.65 ft = 4.275 fm = 4 fm 1.65 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.369 m

Timestamp: 2006-122.16:44:27.461 (05/02/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-122 / 737_1643

Profile/Beam: 386/81

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status	
h11323/tj_3102_reson8101/2006-122/737_1643	386/81	0.00	0.000	Primary	
h11323/tj_3102_klein5000_sss100/2006-108/040_1330	0001	1.57	354.8	Secondary	l

Hydrographer Recommendations

Chart Obstruction with least depth 7.82 meters (25.65 feet).

Cartographically-Rounded Depth (Affected Charts):

25ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.819 m

VERDAT - 12:Mean lower low water

AHB: Concur

Feature Images

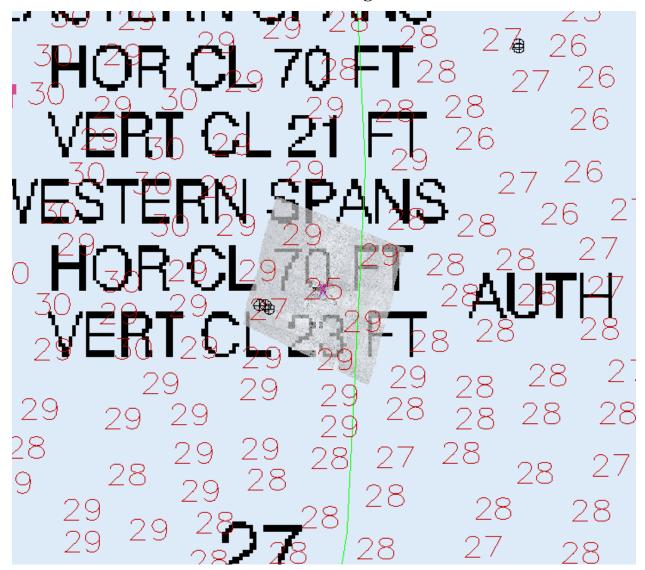


Figure 1.14.1

1.15) 224/3 obstruction

Survey Summary

Survey Position: 36:56:04.6 N, 076:10:36.2 W

Least Depth: 7.15 m = 23.47 ft = 3.911 fm = 3 fm = 5.47 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.981 m; TVU (TPEv) \pm 0.369 m

Timestamp: 2006-130.19:41:28.778 (05/10/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-130 / 057_1940

Profile/Beam: 224/3

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-130/057_1940	224/3	0.00	0.000	Primary
h11323/1005_100/2005-165/131_1700	0001	3.62	111.2	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-114/292_1841	0002	5.13	130.6	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.153 m

VERDAT - 12:Mean lower low water

AHB: Chart 23 Obstn

1.16) 205/196 Obstruction

Survey Summary

Survey Position: 36:57:43.3 N, 076:06:56.6 W

Least Depth: 11.56 m = 37.93 ft = 6.321 fm = 6 fm = 1.93 ft**TPU** ($\pm 1.96 \sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.18:12:15.393 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 1113

Profile/Beam: 205/196

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/1113	205/196	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/024_1353	0001	8.38	076.5	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

38ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 6 \(^1\)4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 11.560 m

VERDAT - 12:Mean lower low water

Chart 38 Obstruction.

1.17) 193/194

Survey Summary

Survey Position: 36:58:05.8 N, 076:06:32.8 W

Least Depth: 11.19 m (= 36.72 ft = 6.120 fm = 6 fm 0.72 ft)

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 1.314 m; **TVU** (**TPEv**) ± 0.229 m

Timestamp: 2005-165.21:02:22.839 (06/14/2005)

Survey Line: h11323 / 1014_mb / 2005-165 / 585_2102

Profile/Beam: 193/194

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1014_mb/2005-165/585_2102	193/194	0.00	0.000	Primary
h11323/1970tj_3102_klein5000_sss200/2006-126/200_1258	0002	7.42	150.2	Secondary (grouped)

Hydrographer Recommendations

Chart an Obstn.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 11.193 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Do not Concur. There are shoaler obstructions in the immediate vacinity. Updating the 36 foot contour will also resolve this obstruction.

1.18) 134/101

Survey Summary

Survey Position: 36:57:46.2 N, 076:06:47.5 W

Least Depth: 5.97 m = 19.58 ft = 3.264 fm = 3 fm = 1.58 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.368 m

Timestamp: 2006-108.13:20:34.713 (04/18/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-108 / 042_1320

Profile/Beam: 134/101

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Rip wrap is extending further out. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-108/042_1320	134/101	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-112/214_1321	0003	19.96	299.5	Secondary

Hydrographer Recommendations

Chart contours as per sounding data and side scan.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Geo object 2: Shoreline Construction (SLCONS)

Attributes: CATSLC - 8:rip rap

WATLEV - 3:always under water/submerged

Office Notes

AHB: Concur

1.19) 1083/23

Survey Summary

Survey Position: 36:56:28.9 N, 076:10:01.9 W

Least Depth: 7.00 m = 22.97 ft = 3.829 fm = 3 fm = 4.97 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 1.263 m; TVU (TPEv) \pm 0.241 m

Timestamp: 2005-174.17:16:30.308 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 224_1715

Profile/Beam: 1083/23

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstn was found. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/224_1715	1083/23	0.00	0.000	Primary
h11323/1005_100/2005-153/139_1622	0002	1.90	093.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-113/272_1860	0002	5.07	079.4	Secondary (grouped)
h11323/1005_100/2005-153/139_1622	0004	47.73	019.2	Secondary (grouped)
h11323/1005_mb/2005-174/228_1713	902/90	47.99	015.1	Secondary (grouped)
h11323/tj_3102_reson8101/2006-113/272_1859	8766/18	55.84	020.9	Secondary (grouped)
h11323/1005_100/2005-153/139_1622	0005	59.14	013.4	Secondary (grouped)

Hydrographer Recommendations

Chart Obstns (plural) least depth of 7.00 meters (22.97 feet) see feature 4.23 (1511/97)

Cartographically-Rounded Depth (Affected Charts):

23ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

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

VALSOU - 7.002 m

VERDAT - 12:Mean lower low water

Office Notes

AHB: Concur

1.20) 1511/97

Survey Summary

Survey Position: 36:56:29.5 N, 076:10:03.0 W

Least Depth: 7.04 m = 23.10 ft = 3.850 fm = 3 fm = 5.10 ft

TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.291 m; TVU (TPEv) ± 0.251 m

Timestamp: 2005-174.17:10:13.440 (06/23/2005)

Survey Line: h11323 / 1005_mb / 2005-174 / 226_1709

Profile/Beam: 1511/97

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstn was found. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1005_mb/2005-174/226_1709	1511/97	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-113/271_2036	0001	2.15	257.7	Secondary (grouped)
h11323/1005_100/2005-153/139_1622	0003	6.50	098.7	Secondary (grouped)

Hydrographer Recommendations

Chart Obstns (plural) least depth of 7.04 meters (23.10 feet).

Cartographically-Rounded Depth (Affected Charts):

23ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.041 m

VERDAT - 12:Mean lower low water

AHB: Concur. Other obstruction in the immediate vicinity. Chart OBSTNS

1.21) 332/77

Survey Summary

Survey Position: 36:57:30.4 N, 076:08:46.8 W

Least Depth: 6.29 m = 20.63 ft = 3.438 fm = 3 fm 2.63 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-126.15:44:56.350 (05/06/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-126 / 517_1545

Profile/Beam: 332/77

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstn was found. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-126/517_1545	332/77	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-130/205_1254	0010	35.15	249.5	Secondary (grouped)

Hydrographer Recommendations

Chart an Obstn least depth of 6.29 meters (20.63 feet).

Cartographically-Rounded Depth (Affected Charts):

20ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.287 m

VERDAT - 12:Mean lower low water

AHB: Concur.

1.22) 762/63

Survey Summary

Survey Position: 36:57:51.4 N, 076:09:12.9 W

Least Depth: 6.84 m = 22.44 ft = 3.740 fm = 3 fm = 4.44 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-129.20:02:48.509 (05/09/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-129 / 1023

Profile/Beam: 762/63

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstn was found. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-129/1023	762/63	0.00	0.000	Primary
h11323/tj_3101_reson8125/2006-129/1023	750/88	3.15	265.0	Secondary (grouped)

Hydrographer Recommendations

AHB: Shoaler obstructions in the immediate vicinity. Do not Chart.

S-57 Data

[None]

Office Notes

AHB: Chart obstruction area.

1.23) 87/182

Survey Summary

Survey Position: 36:57:49.4 N, 076:09:07.0 W

Least Depth: 6.60 m = 21.64 ft = 3.607 fm = 3 fm 3.64 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-129.19:51:53.326 (05/09/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-129 / 1024

Profile/Beam: 87/182

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstn was found. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status	
h11323/tj_3101_reson8125/2006-129/1024	87/182	0.00	0.000	Primary	
h11323/tj_3102_klein5000_sss200/2006-114/248_1311	0002	12.78	286.6	Secondary	l

Hydrographer Recommendations

Chart an Obstn least depth of 6.60 meters (21.64 feet).

Cartographically-Rounded Depth (Affected Charts):

21ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.596 m

VERDAT - 12:Mean lower low water

Concur.

1.24) 447/79

Survey Summary

Survey Position: 36:57:48.8 N, 076:09:13.7 W

Least Depth: 6.58 m = 21.60 ft = 3.600 fm = 3 fm 3.60 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-129.19:50:13.010 (05/09/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-129 / 1027

Profile/Beam: 447/79

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstn was found. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-129/1027	447/79	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/014_2050	0001	11.00	036.8	Secondary
h11323/tj_3102_reson8101/2006-109/014_2049	10631/98	32.21	233.3	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.583 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Chart obstruction with least depth 21.60 feet at $36^{\circ}57'48.812"N$, $076^{\circ}09'13.737"W$.

1.25) 257/146

Survey Summary

Survey Position: 36:56:50.0 N, 076:07:22.5 W

Least Depth: 7.56 m = 24.79 ft = 4.132 fm = 4 fm 0.79 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.19:08:32.213 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 147_1908

Profile/Beam: 257/146

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

A submerged pile was found. This relates to AWOIS 3726 which is already addressed. The entire search radius was covered by 200% sidescan sonar with the exception of the area between the twin spans of the Chesapeake Bay Bridge Tunnel. Acquisition over the charted pile was covered by 100% Reson 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/147_1908	257/146	0.00	0.000	Primary
h11323/1005_100/2005-164/154_1808	0002	0.67	271.3	Secondary (grouped)

Hydrographer Recommendations

Chart submerged pile least depth 7.56 meters (24.79 feet) at the surveyed position.

Cartographically-Rounded Depth (Affected Charts):

25ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

TECSOU - 3: found by multi-beam

VALSOU - 7.557 m

VERDAT - 12:Mean lower low water

AHB: Do not concur. Swath shows object too wide to be a pile. Chart obstruction least depth 24.79 ft.

1.26) 283/68

Survey Summary

Survey Position: 36:57:47.9 N, 076:07:55.2 W

Least Depth: 7.42 m = 24.34 ft = 4.057 fm = 4 fm 0.34 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-130.18:37:39.218 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 713_1837

Profile/Beam: 283/68

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/713_1837	283/68	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-112/244_1738	0001	4.09	247.2	Secondary (grouped)
h11323/tj_3101_reson8125/2006-130/713_1837	291/167	6.46	187.8	Secondary (grouped)
h11323/tj_3102_klein5000_sss100/2006-109/010_1460	0002	7.85	263.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

24ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

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

VALSOU - 7.419 m

VERDAT - 12:Mean lower low water

AHB: Chart dangerous wreck least depth 24.34 feet at $36^{\circ}57'47.947"N$, $076^{\circ}07'55.232"W$.

1.27) 402/151

Survey Summary

Survey Position: 36:55:16.0 N, 076:06:34.8 W

Least Depth: $5.27 \text{ m} = 17.28 \text{ ft} = 2.879 \text{ fm} = 2 \text{ f$

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.16:46:13.351 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 950_1645

Profile/Beam: 402/151

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status	
h11323/tj_3101_reson8125/2006-130/950_1645	402/151	0.00	0.000	Primary	

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2) 2 ³4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.266 m

VERDAT - 12:Mean lower low water

AHB: Chart obstruction Submerged Pile least depth 17.28 feet at $36^{\circ}55'16.011"N$, $076^{\circ}06'34.792"W$

1.28) Obstruction 1004/26

Survey Summary

Survey Position: 36:55:45.1 N, 076:06:25.1 W

Least Depth: 6.61 m = 21.68 ft = 3.613 fm = 3 fm = 3.68 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.17:18:11.532 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 1018b

Profile/Beam: 1004/26

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/1018b	1004/26	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-110/228_1757	0001	12.78	336.3	Secondary (grouped)

Hydrographer Recommendations

Chart obstruction with least depth 6.61 meters (21.68 feet).

Cartographically-Rounded Depth (Affected Charts):

21ft (12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.607 m

VERDAT - 12:Mean lower low water

AHB: Concur

Feature Images

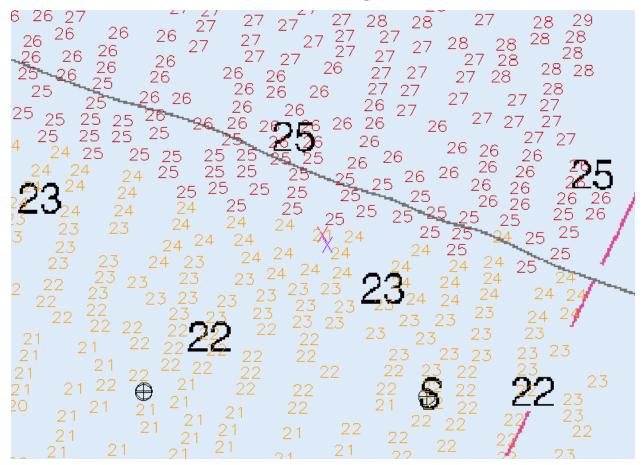


Figure 1.28.1

1.29) 771/166

Survey Summary

Survey Position: 36:55:48.2 N, 076:10:02.9 W

Least Depth: 4.61 m (= 15.12 ft = 2.520 fm = 2 fm 3.12 ft)

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.980 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-130.12:43:34.901 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 1126

Profile/Beam: 771/166

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/1126	771/166	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-109/022_1728	0003	15.55	171.5	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

15ft (12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2) 2 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 4.608 m

VERDAT - 12:Mean lower low water

AHB: Chart obstruction at $36^\circ 55' 48.183"N$, $076^\circ 10' 02.886"W$ with least depth 15.12 feet.

1.30) 344/231obstruction

Survey Summary

Survey Position: 36:57:12.2 N, 076:09:04.0 W

Least Depth: 6.01 m (= 19.71 ft = 3.285 fm = 3 fm 1.71 ft)

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-171.19:09:15.727 (06/20/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-171 / 074_1908

Profile/Beam: 344/231

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-171/074_1908	344/231	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-115/257_1417	0002	3.52	231.3	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.008 m

VERDAT - 12:Mean lower low water

AHB: Chart obstruction at $36^{\circ}57'12.242"N$, $076^{\circ}09'03.985"W$ with least depth 19.71 feet.

1.31) 293/42

Survey Summary

Survey Position: 36:59:07.4 N, 076:10:43.4 W

Least Depth: 8.60 m = 28.23 ft = 4.705 fm = 4 fm = 4.23 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-171.15:03:09.935 (06/20/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-171 / 078_1502

Profile/Beam: 293/42

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-171/078_1502	293/42	0.00	0.000	Primary
h11323/1005_100/2005-154/175_1829	0001	6.63	117.8	Secondary (grouped)

Hydrographer Recommendations

Chart Obstn

Cartographically-Rounded Depth (Affected Charts):

28ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 4 ³4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

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

VALSOU - 8.604 m

VERDAT - 12:Mean lower low water

AHB: Concur. Chart obstruction least depth 28.23 feet at $36^{\circ}59'07.440"N$, $076^{\circ}10'43.390"W$.

1.32) 192/143

Survey Summary

Survey Position: 36:56:54.8 N, 076:10:50.0 W

Least Depth: 5.97 m = 19.57 ft = 3.262 fm = 3 fm = 3.57 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-172.14:28:40.217 (06/21/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-172 / 043_1428

Profile/Beam: 192/143

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status	
h11323/tj_3101_reson8125/2006-172/043_1428	192/143	0.00	0.000	Primary	

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3 ¹/₄fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20060621

SORIND - US, US, survy, H11323

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

VALSOU - 5.966 m

VERDAT - 12:Mean lower low water

AHB: Chart obstruction least depth 19.57 feet at $36^\circ 56' 54.805"N$, $076^\circ 10' 49.959"W$.

1.33) 845/4

Survey Summary

Survey Position: 36:57:04.1 N, 076:10:02.9 W

Least Depth: 5.70 m = 18.70 ft = 3.117 fm = 3 fm 0.70 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-172.14:53:44.599 (06/21/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-172 / 124_1453

Profile/Beam: 845/4

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-172/124_1453	845/4	0.00	0.000	Primary
h11323/tj_3101_reson8125/2006-126/798_1938	488/105	0.29	180.0	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-115/263_1706	0001	1.68	302.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12255_1, 12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 3fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.701 m

VERDAT - 12:Mean lower low water

AHB: Chart obstruction at $36^{\circ}57'04.122"N$, $076^{\circ}10'02.940"W$ with least depth 18.70

1.34) 3130/98

Survey Summary

Survey Position: 36:55:20.2 N, 076:06:42.0 W

Least Depth: $5.15 \text{ m} = 16.90 \text{ ft} = 2.816 \text{ fm} = 2 \text{ fm} = 2.816 \text{ f$

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.370 m

Timestamp: 2006-107.15:59:49.036 (04/17/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-107 / 059_1556

Profile/Beam: 3130/98

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Shoaling was found. Acquisition over theitem was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status	
h11323/tj_3102_reson8101/2006-107/059_15	56 3130/98	0.00	000.0	Primary	

Hydrographer Recommendations

Chart a sounding least depth of 5.15 meters (16.90 feet).

Cartographically-Rounded Depth (Affected Charts):

17ft (12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2) 2 ³4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

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

VALSOU - 5.150 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Geo object 2: Sounding (SOUNDG)

Attributes: QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

AHB: Do Not Concur. Chart obstruction with least depth 16.90 feet.

1.35) 9672/89

Survey Summary

Survey Position: 36:57:21.7 N, 076:06:37.8 W

Least Depth: 7.05 m = 23.14 ft = 3.857 fm = 3 fm = 3.14 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.981 m; TVU (TPEv) \pm 0.368 m

Timestamp: 2006-110.20:55:27.980 (04/20/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-110 / 222_2041

Profile/Beam: 9672/89

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-110/222_2041	9672/89	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 3 34fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20060621

SORIND - US, US, survy, H11323

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

VALSOU - 7.053 m

VERDAT - 12:Mean lower low water

AHB: Chart Obstructions least depth 23.14 feet at $36^{\circ}57'21.699"N$, $076^{\circ}06'37.771"W$.

1.36) Obstruction 18764/100

Survey Summary

Survey Position: 36:56:23.9 N, 076:07:31.4 W

Least Depth: 8.66 m = 28.41 ft = 4.735 fm = 4 fm = 4.41 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.369 m

Timestamp: 2006-115.17:29:28.026 (04/25/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-115 / 263_1706

Profile/Beam: 18764/100

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

Uncharted Obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and preliminary tide zoning. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-115/263_1706	18764/100	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss200/2006-113/300_1740	0001	5.22	020.2	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-115/263_1708	0001	6.01	180.3	Secondary (grouped)
h11323/1005_100/2005-165/147_1315	0001	6.50	121.2	Secondary (grouped)

Hydrographer Recommendations

Chart Obstruction with least depth 8.66 meters (28.41 feet).

Cartographically-Rounded Depth (Affected Charts):

28ft (12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2) 4 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 8.660 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AHB: Concur.

Feature Images

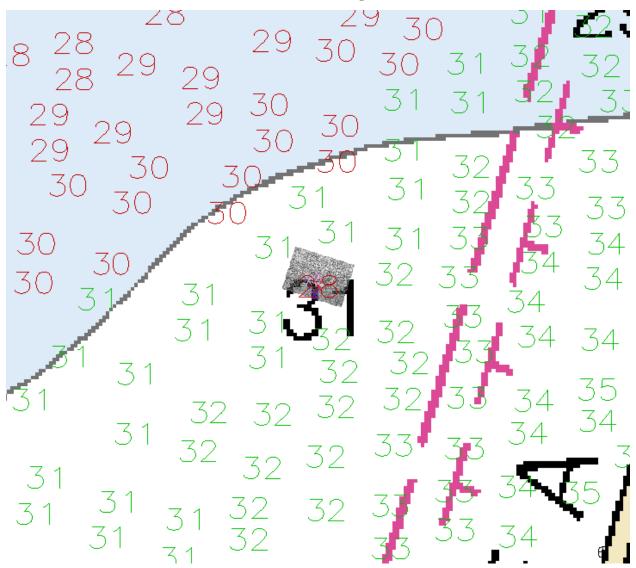


Figure 1.36.1

1.37) 466/184

Survey Summary

Survey Position: 36:56:48.3 N, 076:07:17.0 W

Least Depth: 8.49 m (= 27.87 ft = 4.645 fm = 4 fm 3.87 ft)

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.19:07:11.473 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 1137

Profile/Beam: 466/184

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/1137	466/184	0.00	000.0	Primary

Hydrographer Recommendations

chart submerged pile

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: CATPLE - 3:post

CONDTN - 2:ruined

CONVIS - 2:not visual conspicuous

Geo object 2: Sounding (SOUNDG)

Attributes: QUASOU - 6:least depth known

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

VERDAT - 12:Mean lower low water

AHB: Do not concur. No significant contacts in the data at this position.

1.38) 519/1

Survey Summary

Survey Position: 36:55:38.7 N, 076:07:27.5 W

Least Depth: 2.65 m = 1.448 fm = 1 fm 2.69 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) ± 0.981 m; **TVU** (**TPEv**) ± 0.367 m

Timestamp: 2006-108.13:49:50.005 (04/18/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-108 / 060_1349

Profile/Beam: 519/1

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

Shoalest depth from outside beam, conforms to average height of both SSS contacts.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-108/060_1349	519/1	0.00	000.0	Primary
h11323/tj_3102_klein5000_sss200/2006-110/098_1625	0001	0.68	277.6	Secondary (grouped)
h11323/tj_3102_klein5000_sss200/2006-112/225_1305	0001	1.51	124.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

8ft (12254_1, 12256_1, 12222_1, 12205_1, 12207_1, 12221_1, 12280_2) 1 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 2.649 m

VERDAT - 12:Mean lower low water

AHB: Concur. Chart obstruction least depth 8.69 feet.

1.39) 423/9

Survey Summary

Survey Position: 36:57:29.8 N, 076:06:53.6 W

Least Depth: 7.86 m = 25.79 ft = 4.298 fm = 4 fm 1.79 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.981 m; TVU (TPEv) \pm 0.369 m

Timestamp: 2006-122.19:43:56.147 (05/02/2006)

Survey Line: h11323 / tj_3102_reson8101 / 2006-122 / 228_1943

Profile/Beam: 423/9

Charts Affected: 12254_1, 12256_1, 12222_1, 12205_1, 12221_1, 12280_2, 13003_1

Remarks:

An Obstn was found. Acquisition over the item was covered by a combination of 100% and 200% Klein 5000 sidescan sonar and Reson 8101 and 8125 multibeam sonar.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3102_reson8101/2006-122/228_1943	423/9	0.00	0.000	Primary
h11323/tj_3102_klein5000_sss100/2006-107/042_1606	0007	4.20	006.1	Secondary (grouped)
h11323/tj_3102_reson8101/2006-122/229_1945	321/29	34.23	204.6	Secondary

Hydrographer Recommendations

Chart an Obstn least depth of 7.86 meters (25.79 feet).

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 7.860 m

VERDAT - 12:Mean lower low water

AHB: Falls within limits of Obstruction area. Do not chart.

1.40) 612/11

Survey Summary

Survey Position: 36:55:46.6 N, 076:10:03.3 W

Least Depth: 3.38 m = 1.848 fm = 1 fm 5.09 ft

TPU (\pm **1.96** σ): THU (TPEh) \pm 0.980 m; TVU (TPEv) \pm 0.367 m

Timestamp: 2006-130.12:45:02.354 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 1008

Profile/Beam: 612/11

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

remnants of pile or fish trap

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/tj_3101_reson8125/2006-130/1008	612/11	0.00	0.000	Primary

Hydrographer Recommendations

Chart Obstn Least Depth 3.38 meters(11.09 feet)

Cartographically-Rounded Depth (Affected Charts):

11ft (12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2)
1 34fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 3.379 m

VERDAT - 12:Mean lower low water

AHB: Concur

1.41) 1583/234

Survey Summary

Survey Position: 36:55:50.2 N, 076:09:52.9 W

Least Depth: 4.52 m = 14.82 ft = 2.470 fm = 2 fm 2.82 ft

TPU ($\pm 1.96\sigma$): **THU** (**TPEh**) $\pm 0.980 \text{ m}$; **TVU** (**TPEv**) $\pm 0.367 \text{ m}$

Timestamp: 2006-130.13:05:06.487 (05/10/2006)

Survey Line: h11323 / tj_3101_reson8125 / 2006-130 / 297_1303

Profile/Beam: 1583/234

Charts Affected: 12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status	
h11323/tj_3101_reson8125/2006-130/297_1303	1583/234	0.00	0.000	Primary	

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

15ft (12255_1, 12254_1, 12256_1, 12222_1, 12207_1, 12221_1, 12280_2) 2 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20060621

SORIND - US, US, survy, H11323

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

VALSOU - 4.518 m

VERDAT - 12:Mean lower low water

AHB: Chart obstruction least depth 14.85 feet at $36^\circ 55' 50.241"N$, $076^\circ 09' 52.935"W$

1.42) 110/52

Survey Summary

Survey Position: 36:58:06.0 N, 076:06:30.3 W

Least Depth: 10.48 m (= 34.39 ft = 5.732 fm = 5 fm 4.39 ft)

TPU (\pm 1.96 σ): THU (TPEh) \pm 1.286 m; TVU (TPEv) \pm 0.228 m

Timestamp: 2005-165.20:00:25.568 (06/14/2005)

Survey Line: h11323 / 1014_mb / 2005-165 / 586_2000

Profile/Beam: 110/52

Charts Affected: 12254_1, 12256_1, 12222_1, 12221_1, 12280_2, 13003_1

Remarks:

Obstruction discovered during normal operations.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11323/1014_mb/2005-165/586_2000	110/52	0.00	0.000	Primary
h11323/1970tj_3102_klein5000_sss200/2006-126/201_1253	0002	3.66	017.0	Secondary
h11323/1970tj_3102_klein5000_sss200/2006-126/200_1258	0001	3.82	194.4	Secondary
h11323/1005_100/2005-154/177_1705	0001	4.08	097.0	Secondary

Hydrographer Recommendations

Chart 34 Obstn at surveyed location.

Cartographically-Rounded Depth (Affected Charts):

34ft (12254_1, 12256_1, 12222_1, 12221_1, 12280_2) 5 3/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3: found by multi-beam

VALSOU - 10.482 m

VERDAT - 12:Mean lower low water

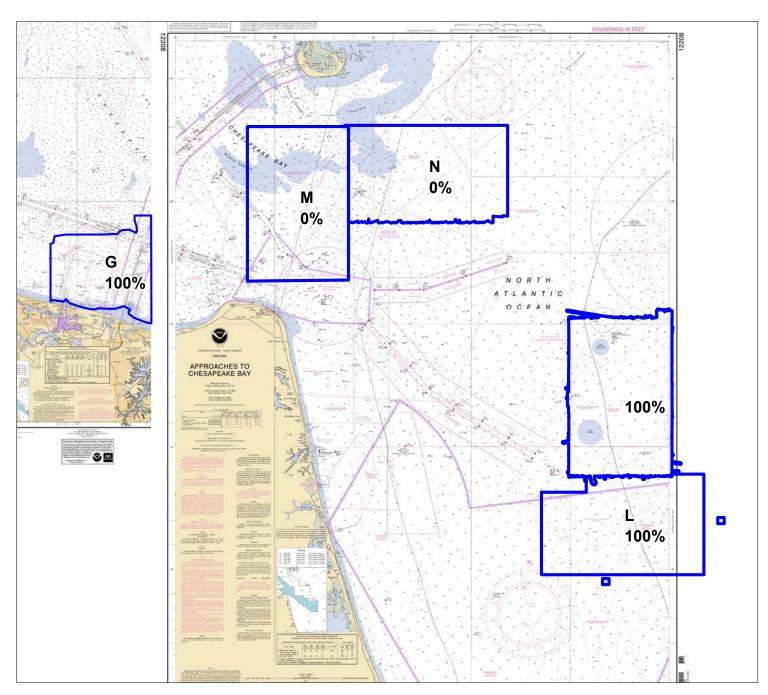
WATLEV - 3:always under water/submerged

Office Notes

Concur.

APPENDIX III

PROGRESS SKETCH



Project	Sheet_Letter	H_num	HQ_Est_SNM	CumlPercCompPrev	CumlPercCompCui	SNM_CompCurN	CumSNMcom
D304	G	H11323	13	100	100	0	16
D304		H11303	28	95	100	1	28
D304	М		27	0	0	0	0
D304	N		27	0	0	0	0
D304	L	H11568	27	100	100	0	26

Project	Month	LNM_Hydr	LNM_MB	SV_Casts	Bottom_Samı	AWOIS_Items	Tide_Guage_Inst	DAS	DTime_equip_H	DTime_Weather_	D_Time_other_l
D304-TJ-	June	0.00	1,622.10	528.00	0.00	8.00	0.00	15.00	51.00	61.00	3.00
D304-TJ-	July	0.00	79.90	33.00	0.00	44.00	0.00	2.00	0.00	0.00	0.00

APPENDIX IV

TIDES AND WATER LEVELS

5.0. TIDES

- **5.1. Purpose:** All tide requirements in these instructions are in direct support of hydrographic survey operations.
- **5.2 through 5.6.** Refer to SI.
- **5.7. Vertical Datums:** Refer to SI.
- **5.7.1.** The operating National Water Level Observation Network (NWLON) station at Chesapeake Bay Bridge Tunnel, VA (863-8863) will serve as datum control for the survey area. Therefore, it is critical that these stations remain in operation during all periods of hydrography.
- **5.7.1.1.** Water level data acquisition monitoring Refer to SI.
- **5.7.1.2.** Water level station operation and maintenance Refer to SI.
- **5.7.1.3.** No leveling is required at Chesapeake Bay Bridge Tunnel, VA (863-8863) or Rudee Inlet, VA (863-9207) by NOAA Ship Thomas Jefferson personnel.
- **5.8. Water Level Station Requirements:** The operating water level stations at Chesapeake Bay Bridge Tunnel, VA (863-8863) and Rudee Inlet, VA (863-9207) will also provide water level reducers for this project, reiterating the importance of their operation during all periods of hydrography. See Sections 5.7.1.1. and 5.7.1.2. concerning responsibilities.
- 5.8.1. There are no subordinate water level stations required for this project.
- 5.8.1.2. This section is not applicable for this project.
- **5.8.1.3 Tide Component Error Estimation**: The estimated tidal error contribution to the total survey error budget in the vicinity of Chesapeake Bay Entrance is 0.18 meters at the 95% confidence level, and includes the estimated gauge measurement error, tidal datum computation error, and tidal zoning error. Based on this analysis a station will not be required in the vicinity of Chesapeake Bay Entrance. It should be noted that the tidal error component can be significantly greater than stated if a substantial meteorological event or condition should occur during time of hydrography.
- **5.9. Zoning:** For hydrography in the area of Chesapeake Bay Entrance, Chesapeake Bay Bridge Tunnel, VA (863-8863) and Rudee Inlet, VA (863-9207) are the reference stations for predicted tides. Predictions may be retrieved in one month increments over the Internet from the CO-OPS Home Page at http://140.90.121.76/ and then clicking on "Predictions." Predictions are sixminute time series data relative to MLLW in metric units on Greenwich Mean Time. Apply the following time and height correctors to the predicted tides at Chesapeake Bay Bridge Tunnel, VA (863-8863) and Rudee Inlet, VA (863-9207) during the acquisition and preliminary

processing phases of this project for correcting all sounding data.

Zone Time Range Predicted

Name	Corrector(mins)	Ratio	Reference
SCB2	-6	x1.25	863-8863
SCB1	-12	x1.25	863-8863
SCB4	-12	x1.20	863-8863
SCB3	0	x1.20	863-8863
SCB6	0	x1.14	863-8863
SCB5	-12	x1.14	863-8863
SA46	-18	x1.07	863-9207
SA50B	-6	x1.33	863-8863
SA50C	-12	x1.33	863-8863
SA50D	-24	x1.33	863-8863
SA50E	+6	x0.99	863-9207
SA54	-6	x1.10	863-9207
SA55	-12	x1.10	863-9207

NOTE: The tide corrector values referenced to Chesapeake Bay Bridge Tunnel, VA (863-8863) and Rudee Inlet, VA (863-9207) are provided in the zoning file "D304TJ2005CORP" for this project and are in the fourth set of correctors designated as TS4. Longitude and latitude coordinates are in decimal degrees. Negative (-) longitude is a MapInfo representation of west longitude.

NOTE: For time corrections, a negative (-) time correction indicates that the time of tide in that zone is earlier than (before) the predicted tides at the reference station, whereas, a positive (+) time correction indicates that the time of tide in that zone is later than (after) the predicted tides at the reference station. For height corrections, the water level heights **relative to MLLW** at the reference station are multiplied by the range ratio to estimate the water level heights relative to MLLW in the applicable zone.

Water level gauges for this project have been installed by CO-OPS prior to the start of the survey. Upon completion of project OPR-D304-TJ-2006, submit a Pydro generated request for smooth tides, with times of hydrography abstract and mid/mif tracklines attached. Forward this request to smooth.tides@noaa.gov.

CO-OPS will review the times of hydrography, final tracklines, and six-minute water level data from all applicable water level gauges. After review, CO-OPS will send a notice indicating that the tidal zoning scheme sent with the project instructions has been approved for final zoning. If there are any discrepancies, CO-OPS will make the appropriate adjustments and forward a revised tidal zoning scheme to the field group and processing branch for final processing.

- **5.9.1. Zoning Diagram**(s) A zoning diagram, created in MapInfo, is to assist with the zoning provided in Section 5.9.
- **5.9.2.** Preliminary six minute water level time series data may be retrieve from the CO-OPS

database via TideBot. TideBot delivers timely preliminary/verified tidal and Great Lakes six minute water level observations via email to users on a scheduled, recurring basis. To access TideBot through an email account, send an email to TideBot@noaa.gov with the word "help" as the subject. An email reply will be sent with instructions on how to subscribe to TideBot for time series data retrieval.

5.10. Tidal Records:

Refer to Standing Instructions on what data records, reports and requests to submit to CO-OPS and the address where these documents should be submitted to.

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

FROM: CMD Raymond C Slagle, Thomas Jefferson S222

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

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

Transmit data to:

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-06

Registry No.: H11323

State: VA

Locality: Appoaches to Chesapeake
Sublocality: 2 NM North of Little Creek

Attachments containing:

- 1) an Abstract of Times of Hydrography,
- 2) digital MID MIF files of the track lines from pydro on CD/diskette

cc: N/CS33

Year_DOY	Min Time	Max Time
2005_153	12:49:30	20:40:06
2005_154	12:19:36	21:50:04
2005_164	17:55:00	21:49:03
2005_165	12:23:05	21:33:56
2005_174	14:37:26	19:44:26
2005_238	16:18:13	22:29:06
2006_107	15:54:52	18:39:02
2006_108	13:07:13	21:21:47
2006_109	13:06:28	21:25:45
2006_110	13:33:02	21:39:05
2006_112	13:05:40	19:17:20
2006_113	13:23:44	21:29:28
2006_114	13:11:52	21:33:55
2006_115	12:48:00	21:21:24
2006_122	16:21:20	21:43:02
2006_125	12:34:00	21:36:36
2006_126	12:49:39	20:59:25
2006_129	14:48:24	21:32:11
2006_130	12:28:18	21:40:16
2006_171	12:56:50	19:26:19
2006_172	12:33:51	15:43:12



UNITED STATES DEPARMENT OF COMMERCE National Oceanic and Atmospheric Administration

National Ocean Service Silver Spring, Maryland 20910



Final tide zone node point locations for OPR-D304-TJ-2006, H11323

Format: Tide Station (in recommended order of use)

Average Time Correction (in minutes)

Range Correction

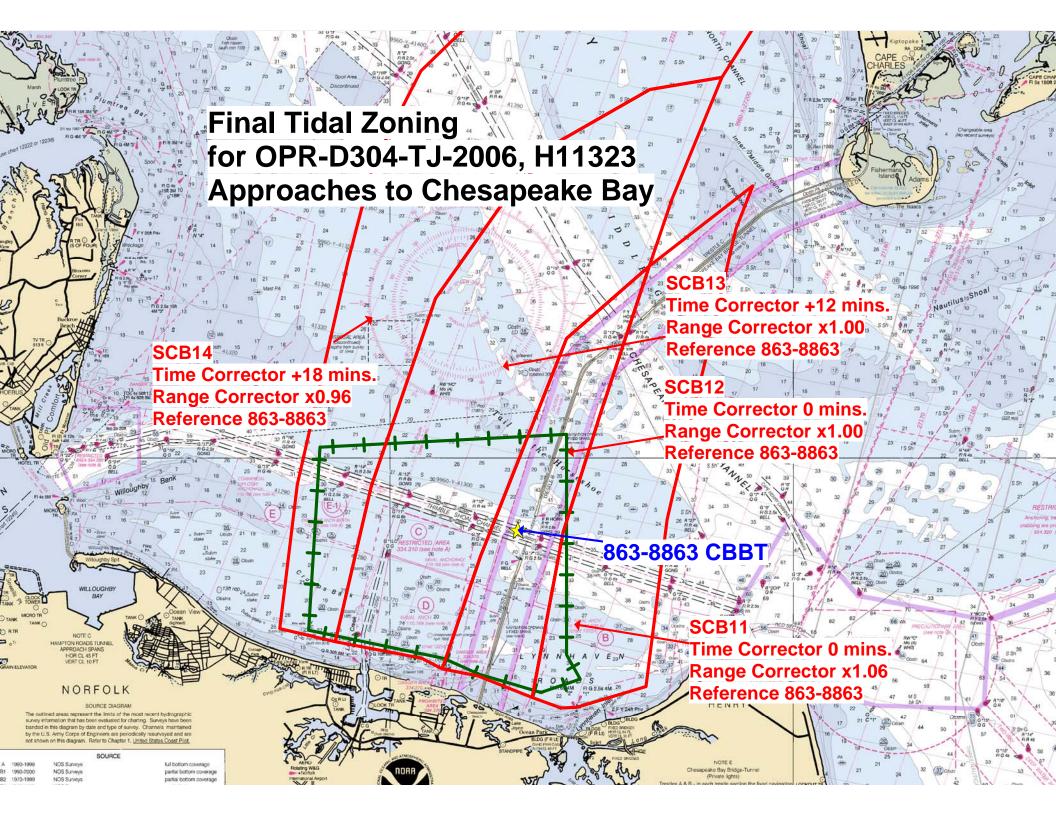
Longitude in decimal degrees (negative value denotes Longitude West),

Latitude in decimal degrees

	Tide Station Order	AVG Time Correction	Range Correction
SCB11	863-8863	0	x1.06
-76.095515 36.907555			
-76.089047 36.907765			
-76.060333 36.914695			
-76.051592 36.970121			
-76.049023 36.979157			
-76.035425 37.023945			
-76.02312 37.066542			
-76.016137 37.080838			
-76.058976 37.054218			
-76.07942 37.004665			
-76.094573 36.965986			
-76.10743 36.911065			
-76.095515 36.907555	0.62.00.62	0	1.00
SCB12	863-8863	0	x1.00
-76.12884 36.957857			
-76.144631 36.920553			
-76.129908 36.918213			
-76.10743 36.911065			
-76.094573 36.965986			
-76.07942 37.004665			
-76.058976 37.054218			
-76.093198 37.030238			
-76.12884 36.957857	0.62, 00.62	. 10	1.00
SCB13	863-8863	+12	x1.00
-76.153146 36.924084			
-76.188887 36.929581 -76.172027 26.001200			
-76.173937 36.981299			
-76.147388 37.043519			
-76.120621 37.073917			
-76.09646 37.095501			
-76.058741 37.112765			
-76.028926 37.116792 -76.049574 37.076445			
-76.058976 37.054218			

```
-76.093198 37.030238
-76.12884 36.957857
-76.144631 36.920553
-76.153146 36.924084
SCB14
-76.058741 37.112765
-76.09646 37.095501
-76.120621 37.073917
-76.147388 37.043519
-76.173937 36.981299
-76.188887 36.929581
-76.211829 36.933927
-76.204611 36.981712
-76.183584 37.055941
-76.173299 37.087722
-76.153467 37.118903
-76.129964 37.137135
-76.067789 37.155508
-76.040154 37.156614
-75.995156 37.158338
-76.008949 37.141903
-76.028926 37.116792
-76.058741 37.112765
```

863-8863 +18 x0.96



APPENDIX V

SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDENCES

V.1. COAST PILOT REPORT, NOAA FORM 77-6

The Hydrographer has no particular recommendation for the Coast Pilot

V.2. BOTTOM SAMPLE, NOAA FORM 75-44

No Bottom samples were taken on this survey.

V.3. AIDS TO NAVIGATION, NOAA FORM 76-40

A complete investigation of ATON's should be conducted by Marine Charting Division. Fourteen ATON's display discrepancies. These are itemized in feature reports Appendix I

V.4 CORRESPONDENCE

Subject: Complete AWOIS .mdb file for OPR-D304-TJ-05 **From:** "Jeremy McHugh" <Jeremy.McHugh@noaa.gov>

Date: Tue, 06 Sep 2005 14:04:20 -0400 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

Hi Pete,

I attached the complete AWOIS .mdb file for OPR-D304-TJ-05. It includes all items assigned for sheets G, K, and L. Let me know if you have any questions.

_-

Jeremy McHugh, Physical Scientist NOAA's National Ocean Service, Office of Coast Survey $301-713-2698\ x117$

Complete_OPR-D304-TJ-05_AWOIS.zip

application/x-zip-compressed

Content-Encoding: base64

Content-Type:

Subject: DR

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Thu, 22 Feb 2007 13:20:01 -0800 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

Pete,

Attached is the updated version of your DR. You may notice that some of your original text has been taken out completely. If you have any concerns about this, let me know. - FOO

LT Chris van Westendorp, NOAA <<u>christiaan.vanwestendorp@noaa.gov</u>>
Field Operations Officer
NOAA Ship THOMAS JEFFERSON

H11323_DR.doc

Content-Type: application/msword

Content-Encoding: base64

Subject: [Fwd: Re: [Fwd: Re: Possible lost anchor]]

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Tue, 09 Jan 2007 17:38:59 -0800 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

Hi, Pete,

Please update the electronic copy of your DR features report to reflect this and include this e-mail in your correspondence appendix.

- F00

Subject: Re: [Fwd: Re: Possible lost anchor]

From: "Shawn Maddock" <shawn.maddock@noaa.gov>

Date: Tue, 09 Jan 2007 09:47:07 -0500

To: Jeremy McHugh <Jeremy.McHugh@noaa.gov>

CC: Castle E Parker < Castle.E.Parker@noaa.gov>, xo rude < XO.Rude@noaa.gov>, Lawrence T Krepp

<Lawrence.T.Krepp@noaa.gov>, Michael Riddle <Michael.Riddle@noaa.gov>, Doug Baird

<Doug.Baird@noaa.gov>, Tod Schattgen < Tod.Schattgen@noaa.gov>, Christiaan VanWestendorp

<Christiaan.VanWestendorp@noaa.gov>

Hi Jeremy,

I hope you had a good holiday.

We did the dive on the anchor, and as it turns out, it's not a Navy submarine anchor. It's an old Navy Stock anchor. There may be some interest that the Virginia State Historical Preservation Officer (SHPO) would have on this due to it's vintage, but it certainly isn't a submarine anchor. Attached is a .PDF which includes 2 drawings of the anchor.

The .PDF also includes the dive operations log. In case their remarks are unclear to read in the .PDF, here they are again:

Old Anchor, iron metal w/ exposed & elevated fluke. Chain fused together on seafloor & down in the sediment. Other fluke buried in sediment.

We received data from the TJ (a chartlet we made from that data is part of the attached .PDF). I don't know if that survey has already been turned in. In case it hasn't, the TJ might like this information as well to submit with the survey.

This was a visual investigation to determine if it was indeed a submarine anchor, with implications of future removal. Therefore, least depth was not determined via DLDG.

Please let me know if you have problems opening the attachment.

Thanks.

Shawn

Jeremy McHugh wrote:

Hi Shawn and Gene,

Could one of you please send me the dive results/details for this item so that I can update AWOIS

1 of 2 2/26/2007 9:30 PM

accordingly? Thanks.

-Jeremy

Jeremy McHugh wrote:

Hi Holly,

I can't speak for everyone here, but I have not seen or heard anything about the dive results. Please forward details to me so that I can update the AWOIS database. I want to know how to assign it for investigation on an upcoming TJ survey. Thanks.

-Jeremy

xo rude wrote:

Hey Jeremy,

Shawn & the CO are on leave this week, but we did this dive quite awhile ago. Gene Parker, Ed Owens, and Neil Lamartin dove on that contact. It was a very large old stock anchor...not a submarine anchor. Are you sure no one sent the information in or phoned about this already?

Holly

Jeremy McHugh wrote:

Hi Larry,

It has been a while, but....were you able to send a dive team down to look for this lost sub anchor? If so, could you please share your results. Thanks.

-Jeremy

Lawrence.T.Krepp@noaa.gov wrote:

Yes, I spoke with Schattgen. Once I get divers back aboard (next week) we will be planning on making the dive.

LT Chris van Westendorp, NOAA <<u>christiaan.vanwestendorp@noaa.gov</u>> Field Operations Officer

NOAA Ship THOMAS JEFFERSON

Re: [Fwd: Re: Possible lost anchor]

Content-Type: message/rfc822

Content-Encoding: 7bit

Anchor_Dive.pdf

Content-Type: application/pdf

Content-Encoding: base64

2 of 2 2/26/2007 9:30 PM

```
Subject: [Fwd: Fwd: Smooth Tides for OPR-D304-TJ-2006, H11323]]
From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>
Date: Mon, 18 Dec 2006 08:04:24 -0800
To: Peter Lewit <Peter.Lewit@noaa.gov>

Hi, Pete,

I guess they forgot about us. The smooth tides files are attached. However, because we are so far along in the process, I would say just write in the DR that smooth tides were received 15 December but not applied, and attach the smooth tides letter in the appropriate DR appendix.

- F00
```

Subject: [Fwd: Smooth Tides for OPR-D304-TJ-2006, H11323]

From: Craig Martin < Craig. Martin@noaa.gov>

Date: Fri, 15 Dec 2006 13:56:34 -0500

To: foo.thomas.jefferson@noaa.gov, Jeremy McHugh <Jeremy.McHugh@noaa.gov>

CC: Brooke McMahon <brooke.mcmahon@noaa.gov>, Robbie Roberson <Robert.G.Roberson@noaa.gov>

Jeremy,

Looks like we sent them to the processing branch but errantly forgot to send them to the vessel. Our protocol has now changed and we are sending to both the ship and processing branch to make sure our bases are covered, but there may be some early season ones that got sent only to the processing branch. If you need, continue to email me about missing smooth tides, or go to Robbie Robberson (AHB) or Brooke McMahon (PHB) to see if they have received them.

```
Thanks,
Craig

------ Original Message ------
Subject:Smooth Tides for OPR-D304-TJ-2006, H11323
Date:Thu, 27 Jul 2006 10:04:38 -0400
From:Carolyn Lindley <a href="mailto:Carolyn.Lindley@noaa.gov">Carolyn.Lindley@noaa.gov</a>
```

Reply-To: Carolyn.Lindley@noaa.gov

Organization: National Ocean Service

To:Robert G Roberson <a href="

CC:Craig Martin < Craig.Martin@noaa.gov>

```
>> >> > Dear Robbie.
>>
>>>> >
>>> > Attached is a zipped filed containing all of the smooth tide
>>>> files for
>>>> > project OPR-D304-TJ-2006, Sheet H11323. Below is a
>>> > description of those files. If you have any problems retrieving
>>>> any of
>>>> the information give me a call. The original documents will be
>>> > sent out shortly by regular mail, so you should be receiving them
>>>> soon.
>>>> >
>>>> > The following files are included in the zipped attachment
>>>> > H11323.zip for project OPR-D304-TJ-2006:
>>>> > H11323.pdf
>>>> > H11323CORF.mix
>>>> > H11323CORF-ATT.wpd
>>>> > H11323CORF.zdf
>>>> >
>>>> There is one (1) smooth tide note for OPR-D304-TJ-2006 in this
>>>> email. Tide station
>>> > data for 863-8863 Chesapeake Bay Bridge Tunnel, VA may be retrieved via the
>>>> Internet
>>>> from the CO-OPS Home Page at at <a href="http://www.tidesandcurrents.noaa.gov">http://www.tidesandcurrents.noaa.gov</a>
and then clicking on "Verified Water Level." Under "Retrieve Verified Historic Water Level" use the pull down menu to select the station of
interest. Type in the Begin and End dates of the survey, select the
correct data units, and appropriate Time zone then press the "View
Data" button. The *.pdf file is the tide note in Adobe Acrobat format with the graphic and *CORF-ATT.doc files included.
The *CORF-ATT.doc file is the Microsoft Word document explaining the *.MIX file.
The *CORF.mix file is the MapInfo zoning file.
>>>> The following files are the MapInfo zoning files:
```

>>>> > H11323CORF.DAT

```
>>>> > H11323CORF.ID
>>>> > H11323CORF.IND
>>>> > H11323CORF.MAP
>>>> > H11323CORF.TAB
>>>> > H11323LABF.DAT
>>>> > H11323LABF.MAP
>>>> > H11323LABF.TAB
>>>> > H11323LABF.ID
>>>> > H11323STNF.DAT
>>>> > H11323STNF.MAP
>>>> > H11323STNF.TAB
>>>> > H11323STNF.ID
>>>> > H11323STNF.IND
>>>> >
>>>> Again, official copies with zoning diagrams will follow in the mail
>>>> > shortly. Please e-mail me when you have captured all files
>>> > successfully. Give me a call at (301)713-2897 ext. 161, if there are
>>>> > any problems.
>>>> >
>>>> > Carolyn Lindley
>>>> > Hydro Planning Team
>>>> >
>>>> >
>>>> >
>>>> >
>>>> >
>>>> >
>>>
>>>
>>>
>>
>>
```

LT Chris van Westendorp, NOAA <<u>christiaan.vanwestendorp@noaa.gov</u>>
Field Operations Officer
NOAA Ship THOMAS JEFFERSON

[Fwd: Smooth Tides for OPR-D304-TJ-2006, H11323]

Content-Type: message/rfc822 Content-Encoding: 7bit

H11323.ZIP Content-Type: application/x-zip-compressed Content-Encoding: base64

H11303.ZIP Content-Type: application/x-unknown-content-type-winzip Content-Encoding: base64

2 of 2

Subject: DTON Report #2 - H11323 - Little Creek

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Fri, 03 Nov 2006 15:44:13 -0800

To: mcd.dton@noaa.gov, lyn.preston@noaa.gov, Tod Schattgen < Tod.Schattgen@noaa.gov>,

jwalters@lantd5.uscg.mil

CC: "raymond.c.slagle" <raymond.c.slagle@noaa.gov>, Gerd Glang <Gerd.Glang@noaa.gov>

Attached is the second DTON report from survey H11323 (Project OPR-D304-TJ-06). These 11 dangers to navigation were found during routine survey operations in the vicinity of Little Creek. Of note, two of the DTON least depths (Obstruction 980/100 and Obstruction 691/101) were acquired during 2005 but have been verified with additional 2006 MBES data. Please contact me with any questions you may have.

Very Respectfully,

LT Chris van Westendorp

LT Chris van Westendorp, NOAA <<u>christiaan.vanwestendorp@noaa.gov</u>>
Field Operations Officer
NOAA Ship THOMAS JEFFERSON

H11323_DTON2_110306.zip

Content-Type: application/x-zip-compressed

Content-Encoding: base64

Subject: DTON Report #1 - H11323 - Little Creek

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Mon, 09 Oct 2006 14:56:47 -0700

To: mcd.dton@noaa.gov, lyn.preston@noaa.gov, Tod Schattgen < Tod.Schattgen@noaa.gov>,

jwalters@lantd5.uscg.mil

CC: raymond.c.slagle@noaa.gov, Gerd Glang < Gerd.Glang@noaa.gov>, vicepres@vapilotassn.com

Attached is the first DTON report from survey H11323 (Project OPR-D304-TJ-06). These 5 dangers to navigation were found during routine survey operations in the vicinity of Little Creek. Please contact me with any questions you may have.

Very Respectfully,

LT Chris van Westendorp

LT Chris van Westendorp, NOAA <<u>christiaan.vanwestendorp@noaa.gov</u>>
Field Operations Officer
NOAA Ship THOMAS JEFFERSON

Subject: Re: pydro block

From: "peter.lewit" <peter.lewit@noaa.gov>
Date: Wed, 04 Oct 2006 19:14:15 +0000

To: Barry Gallagher <Barry.Gallagher@noaa.gov>, Christiaan VanWestendorp

<christiaan.vanwestendorp@noaa.gov>

We are also experiencing some network problems Ive saved PSS at times and it has crashed, Ive also switched from meters to feet during a network disconnect. Some of the CPU's are not up to snuff and others appear to working with Pydro but I don't have a time slot available to try them out yet.

My initial problem was on Processor 11 . I opened my backup PSS on this CPU it looked like it was going to work but the icon for viewing entire survey didn't work, I thought i'd better stop before I corrupted a good copy. Dave Miles the ET has a better handle on this.

Barry Gallagher wrote:

I'll work on it Friday and get you're PSS straghtened out. You shouldn't lose any work. Please send me your PSS in the meantime.

Subject: pydro block

From: "Barry Gallagher" <Barry.Gallagher@noaa.gov>

Date: Wed, 04 Oct 2006 14:17:15 -0400 **To:** Peter Lewit < Peter. Lewit@noaa.gov>

I'll work on it Friday and get you're PSS straghtened out. You shouldn't lose any work. Please send me your PSS in the meantime.

Subject: Re: Navy Anchor

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Tue, 03 Oct 2006 16:29:34 -0700

To: Tod Schattgen < Tod. Schattgen @ noaa.gov>

CC: raymond.c.slagle@noaa.gov, "james.m.crocker" <james.m.crocker@noaa.gov>, "peter.lewit"

<peter.lewit@noaa.gov>

Thank you, CDR. I appreciate you getting back to us on this.

V/R,

LT Chris van Westendorp

Tod Schattgen wrote:

Chris,

The RUDE dove on the item thought to be a submarine's anchor.

The item was an old fashion stock anchor. Your position is dead on.

Best Regards,

Tod

LT Chris van Westendorp, NOAA <<u>christiaan.vanwestendorp@noaa.gov</u>>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

NOAA SHIP RUDE DIVE OPERATIONS LOG

Project: H11205					Date: 03 607 2006				
Sheet: [" " sheet, H- 1(705									
	investigati	on: J&g	F WK	245	L DEPT	+ An	CHOR	2	
Location: Side-scar	contact #s	s:		Fa	tho/Seabat	fix #s:			
									
Contact C				(Y/N))			
Contact U	JS Coast G	uard		(Y/N))			
Divers	Surface Interval	RNT	Pres	Ssure Out	In T	ime Out	Bottom Time	Max Depth	
LAMARTIN		33	2900	1800	14/2	1420	14	38	
Owens			2750	1350	1472	1426	14	39	
PARKER			2900	2000	1412	1426	14	39	
			. /						
			Current:					degrees	
				7		Depth (r	p		
MOD III Depth Gage SN 68336			+ Tide corre		m				
MOD III S	urface Pressu	ıre:	psia		= Corrected	Least Depth (m	1)	m	
MOD III at	t least depth:		psia	1	Detached Position Fix #:			#	
Time of Least Depth (UTC) : Barometric Pressure: 1023		: UTC							
		1023.7 mb	,	LORAN Rates:					
Sound Velo	ocity Cast #:			-	LORAN Rate	US.			
	Comp		m						

mod3divelog.wpd

ANCITOR DIVE

TITANIUM GLEVATED FLUKE 224 25A PS&USON FLUSH ON BOTTOM THIS SPECTON FUSED GHAIN - HAMD CORR CYTON FUSE ENCRISTED SOLIDMASS i enchisten

CHAMAS

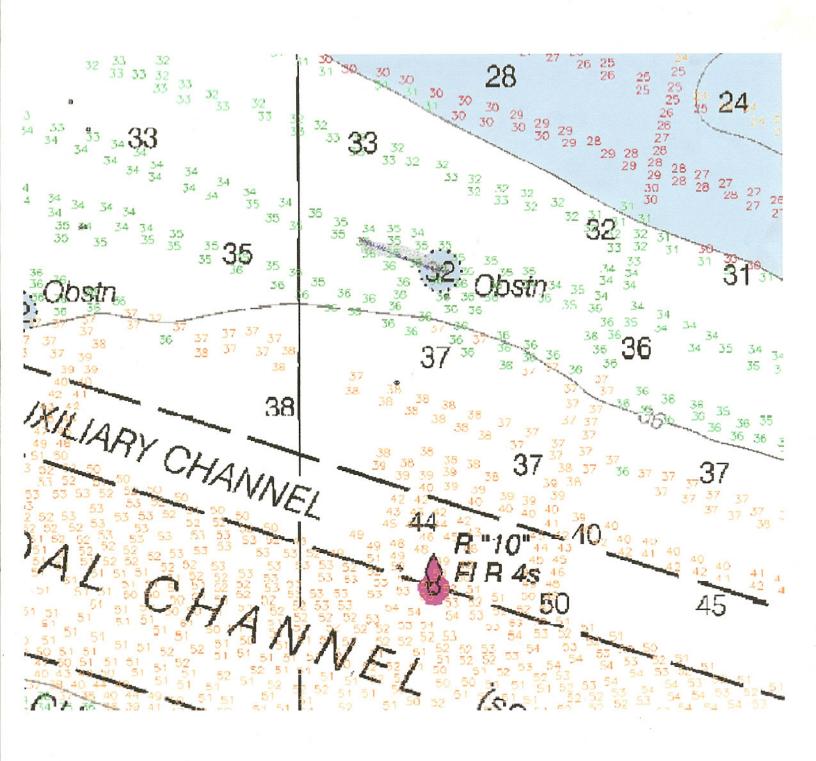
W/SORT CORAC

W/BRYA ZOAN ENCRUSTA TION

india Trevenistan 187-248 BURLEM IN SERIM - CONAL PARCHUSTOD

HAND

SOFTCARÁS GOUD NASS - BRYAZDAN ENGRUSTED META N RUKE



DIVE ((COURTESY OF THOMMS JEFF.)

Subject: Queried AWOIS items from H11323...

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Mon, 11 Sep 2006 07:43:08 -0700

To: Jeremy.McHugh@noaa.gov **CC:** Howard.Danley@noaa.gov

Hi, Jeremy,

Pete Lewit looked into your (and Howard's) AWOIS questions and gave me the following:

1. AWOIS 834, PA sunken wreck: 36/56/54.52 N, 076/08/16.76 W (NAD 83)

There are 410 contacts within the 2000 meter search radius 121 of them are significant. There are 7 items scattered around up to 100m of the PA symbol which may be the remains of some other Object but are scattered. The entire 2000 meter radius was covered by 100% and 200% Klein5000 SSS. and the imediate items were covered by 100% MBES. The item is listed as a 15 foot outboard. I am going to reccommend removing the the WK PA and chart the soundings or Obstns we have found around the area. This AWOIS Item should be regarded as resolved and removed.

2. AWOIS 3691, ED sunken wreck: 36/58/00.52 N, 076/06/46.76 W (NAD 83)

Two separate sightings of broken wrecks were reported in 1972 and `1980 on 20 and/or 30 foot sailboats(maybe the same item).

The item was completely covered by 100% SSS (image included). The rest of the Awois circle was covered by 100% and 200% sss. Once again there are other items in the area that will probably be charted as Obstructions and are unrelated. The imagery only shows identifiable Rip Wrap with no evidence of a disturbance in the area that would indicate a wreck. 200% SSS was not acquired because the Coxs'n refused to go in to the tight spot. No diver was willing or permitted to go in either. Two previous surveys by the Pierce and the Mitchell couldn't make any more progress and they felt the wreck was washed out to sea. I am going to recomend removing the wreck symbol. On one of my days surveying I saw Divers out on the North Rip Wrap face, if it is still felt that there is insufficient data on this item after three surveys from NOAA we should consider hiring a professional dive team willing to go out there.

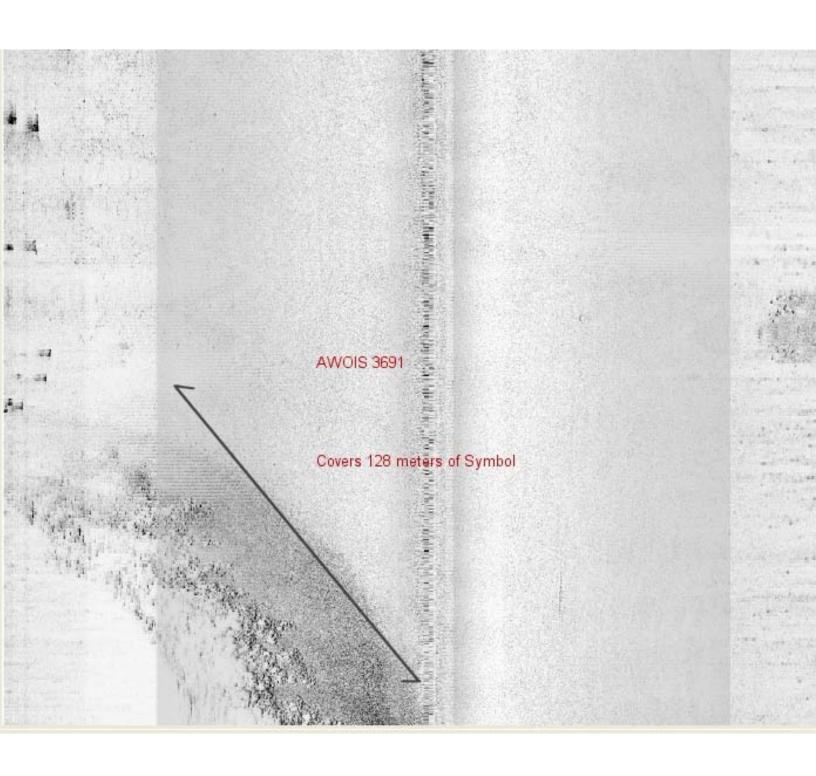
3.	AWOIS 1	.0595 an	d 10596 were	found and	covered by	100 SS	S and	100%	multibeam	(includes	both
se	arch radii).	ì									

I hope this answers your questions. If not, please let me know.

Have a great week,

Chris

LT Chris van Westendorp, NOAA <<u>christiaan.vanwestendorp@noaa.gov</u>>
Field Operations Officer
NOAA Ship THOMAS JEFFERSON



Subject: [Fwd: Re: Disproved Wrecks near Lynnhaven?]

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Please get back to me on this as well.

- FOO

Subject: Re: Disproved Wrecks near Lynnhaven?

From: "Howard Danley" <Howard.Danley@noaa.gov>

Date: Thu, 07 Sep 2006 10:25:29 -0400

To: Jeremy McHugh < Jeremy. McHugh@noaa.gov>

CC: Christiaan VanWestendorp < Christiaan. VanWestendorp@noaa.gov>

Jeremy and Chris,

What about the obstructons also, especially the ones in the channel and channel edge?

Thanks Howard

Jeremy McHugh wrote:

Hi Chris,

Can you tell us the outcome of the AWOIS investigations for the two items listed below and shown on the attached graphic? Specifically, we are interested to know if they were disproved by TJ's recent data from H11323 of your D304 Approaches to Chesapeake Bay project. Any other info you have on those wrecks such as a new position or sss image would be greatly appreciated too.

Thanks, Jeremy

Howard,

TJ completed a survey a few months ago that is slightly NW of the area labeled on the chart as Lynnhaven Roads (see attached graphic). Within that survey area, we assigned two wrecks for full investigation:

- 1. AWOIS 834, PA sunken wreck: 36/56/54.52 N, 076/08/16.76 W (NAD 83)
- 2. AWOIS 3691, ED sunken wreck: 36/58/00.52 N, 076/06/46.76 W (NAD 83)

All the other AWOIS items assigned to that project were obstructions. FYI, we have a survey planned for RU that will junction with the eastern edge of the survey done by TJ shown on the graphic.

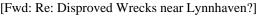
Jeremy McHugh, Physical Scientist NOAA's National Ocean Service, Office of Coast Survey 301-713-2702 x117

[Image]

Re: Disproved Wrecks near Lynnhaven?

Content-Type: message/rfc822

Content-Encoding: 7bit



2 of 2

Subject: [Fwd: Disproved Wrecks near Lynnhaven?]

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Pete,

Please get back to me on this. As I recall, the AWOIS item next to the fishing pier was not disproved. Is this correct?

Thanks, FOO

Subject: Disproved Wrecks near Lynnhaven?

From: "Jeremy McHugh" <Jeremy.McHugh@noaa.gov>

Date: Thu, 07 Sep 2006 10:02:45 -0400

To: Christiaan VanWestendorp < Christiaan. VanWestendorp@noaa.gov>, Howard Danley < Howard. Danley@noaa.gov>

Hi Chris

Can you tell us the outcome of the AWOIS investigations for the two items listed below and shown on the attached graphic? Specifically, we are interested to know if they were disproved by TJ's recent data from H11323 of your D304 Approaches to Chesapeake Bay project. Any other info you have on those wrecks such as a new position or sss image would be greatly appreciated too.

Thanks, Jeremy

Howard,

TJ completed a survey a few months ago that is slightly NW of the area labeled on the chart as Lynnhaven Roads (see attached graphic). Within that survey area, we assigned two wrecks for full investigation:

- 1. AWOIS 834, PA sunken wreck: 36/56/54.52 N, 076/08/16.76 W (NAD 83)
- 2. AWOIS 3691, ED sunken wreck: 36/58/00.52 N, 076/06/46.76 W (NAD 83)

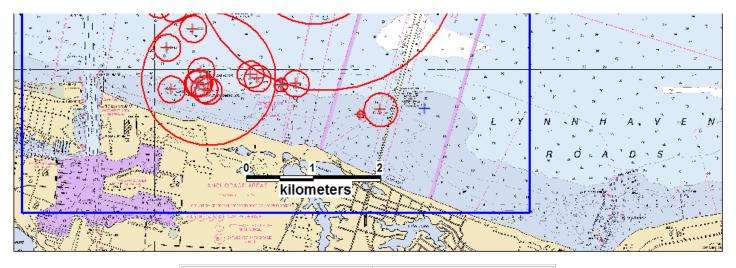
All the other AWOIS items assigned to that project were obstructions. FYI, we have a survey planned for RU that will junction with the eastern edge of the survey done by TJ shown on the graphic.

Jeremy McHugh, Physical Scientist NOAA's National Ocean Service, Office of Coast Survey 301-713-2702 x117

ED sunken wreck
AWOIS 3691

PA sunken wreck
AWOIS 834

G



Disproved Wrecks near Lynnhaven? Content-Type: message/rfc822 Content-Encoding: 7bit

LynnhavenAWOIS_TJ.png | Content-Type: image/png Content-Encoding: base64

2 of 2

Subject: Possible DTON

From: "douglas.wood" <douglas.wood@noaa.gov>

Hi Pete,

I also found a possible DToN west of the Bridge Tunnel on sheet 33: There is a wreck with a mast which rises to 16 feet of depth at:

36:56:33 north by 076:07:28 west

I made a small fieldsheetlet called $Wreck_40cm$.

Check it out.

Subject: Tides and your sheet

From: "douglas.wood" <douglas.wood@noaa.gov>

Hi SST Lewit,

I have been cleaning your sheet; (by the way, I have cleaned and dedicated soundings on Fieldsheets 30, 31,32, 34, 35), I have noticed about a 1/2 meter variation between launch 1005 data and 3101 data, (see the crossing of lines:

1005 2005-164 153_1832 and 3102 2006-113 215_1522

It looks like tide is the issue, I am wondering what we may do about this.

Doug

Subject: chart updates

From: "marc.s.moser" <marc.s.moser@noaa.gov>

Date: Sat, 15 Jul 2006 13:48:41 -0400 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

http://ocsdata.ncd.noaa.gov/nm/Listing.asp?Chart=12256 http://ocsdata.ncd.noaa.gov/nm/Listing.asp?Chart=12255

Subject: Re: [Fwd: H11323 AWOIS question] **From:** "peter.lewit" <peter.lewit@noaa.gov> **Date:** Fri, 14 Jul 2006 20:47:53 +0000

To: Christiaan VanWestendorp < christiaan.vanwestendorp@noaa.gov>

The two charted items were saturated with multibeam and sss but probably only within the project limits which extend to the outer edge of the eastern most obstruction AW 10596. The search radius' extend past the survey limit. Until the system comes up in the next couple of days I won't be able to give an exact status of whether it was disproved or not and how much overlap we have got. The channel area was supposed to be full bottom coverage.

Christiaan VanWestendorp wrote:

```
Pete,
Please look at your survey to see if we had contact with these, and if so, did we
prove/disprove them?
Thanks,
Chris
Subject:
H11323 AWOIS question
"Jeremy McHugh" <Jeremy.McHugh@noaa.gov>
Date:
Thu, 13 Jul 2006 15:50:55 -0400
Marc S Moser <Marc.S.Moser@noaa.gov>, Christiaan VanWestendorp
<Christiaan.VanWestendorp@noaa.gov>
Marc S Moser <Marc.S.Moser@noaa.gov>, Christiaan VanWestendorp
<Christiaan.VanWestendorp@noaa.gov>
Marc and Chris,
We are assigning a sheet to RU that will junction with the eastern side of your sheet G
(H11323) in the Southern Chesapeake Bay. There are two AWOIS items (10595 and 10596)
on the eastern edge of H11323. Both are 39 ft obstns. Did you verify or disprove those?
If the results were inconclusive for some reason, I will assign them to RU. Please let
me know. Thanks.
-Jeremy
```

Subject: Return Receipt (displayed) - H11323_smoothtides From: "SmoothTides" <Smooth.Tides@noaa.gov> Date: Mon, 10 Jul 2006 10:07:23 -0400 To: Peter.Lewit@noaa.gov

This is a Return Receipt for the mail that you sent to Smooth.Tides@noaa.gov.

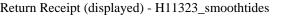
Note: This Return Receipt only acknowledges that the message was displayed on the recipient's computer. There is no guarantee that the recipient has read or understood the message contents.

```
Reporting-UA: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.8.0.4) Gecko/20060516
Thunderbird/1.5.0.4
Original-Recipient: rfc822;Smooth.Tides@aqua.nos.noaa.gov
Final-Recipient: rfc822; Smooth.Tides@noaa.gov
Original-Message-ID: <44B2535B.9020504@noaa.gov>
Disposition: manual-action/MDN-sent-manually; displayed
Return-path: <Peter.Lewit@noaa.gov>
Disposition-notification-to: Peter.Lewit@noaa.gov
Received: from fleethubprime.omao.noaa.gov
 (fleethubprime.omao.noaa.gov [140.90.144.67])
 by aqua.nos.noaa.gov (iPlanet Messaging Server 5.2 HotFix 2.01 (built Aug 26
 2004)) with ESMTP id <0J2600E8MXGHHI@aqua.nos.noaa.gov> for
 Smooth.Tides@noaa.gov; Mon, 10 Jul 2006 09:57:53 -0400 (EDT)
Received: from moamail.moa.noaa.gov ([205.156.48.201])
 by fleethubprime.omao.noaa.gov (Netscape Messaging Server 4.15)
 with ESMTP id J26XF100.CLA for <smooth.tides@noaa.gov>; Mon,
 10 Jul 2006 09:57:01 -0400
Received: (from root@localhost) by TJMTA (Switch-2.2.6/Switch-2.2.1)
 id Y6AD0I0931571
                       for smooth.tides@noaa.gov; Mon,
 10 Jul 2006 13:18:00 +0000 (GMT)
Received: from tjnems.jefferson.nmao.noaa.gov
 (tjnems.jefferson.nmao.noaa.gov [10.48.16.4] (may be forged))
        by TJMTA (Switch-2.2.6/Switch-2.2.1) with ESMTP id Y6AD1HN531567
                                                                                 for
 <smooth.tides@noaa.gov>; Mon, 10 Jul 2006 13:17:59 +0000 (GMT)
Received: from [10.48.16.194] ([10.48.16.194])
 by tjnems.jefferson.nmao.noaa.gov (Netscape Messaging Server 4.15)
 with ESMTP id J26VM900.81B; Mon, 10 Jul 2006 13:18:09 +0000
Date: Mon, 10 Jul 2006 06:17:15 -0700
From: "peter.lewit" <Peter.Lewit@noaa.gov>
Subject: H11323_smoothtides
To: Smooth.Tides@noaa.gov, "marc.s.moser" <Marc.S.Moser@noaa.gov>,
 Christiaan VanWestendorp < Christiaan . VanWestendorp@noaa.gov>
Message-id: <44B2535B.9020504@noaa.gov>
MIME-version: 1.0
Content-type: multipart/mixed; boundary=----010902040204050806040407
X-Accept-Language: en-us, en
User-Agent: Mozilla Thunderbird 1.0.8 (Windows/20060417)
Original-recipient: rfc822;Smooth.Tides@aqua.nos.noaa.gov
                                               message/disposition-notification
                              Content-Type:
```

MDNPart3.txt Content-Type: text/rfc822-headers
Content-Encoding: 7bit

Content-Encoding: 7bit

MDNPart2.txt



2 of 2

Subject: H11323_smoothtides

From: "peter.lewit" <peter.lewit@noaa.gov> Date: Mon, 10 Jul 2006 06:17:15 -0700

 $\textbf{To:} \ smooth.tides@noaa.gov, "marc.s.moser" < marc.s.moser@noaa.gov>, Christiaan VanWestendorp < christiaan.vanwestendorp@noaa.gov>$

Attached is the Smooth tide request for $\ensuremath{\text{OPR-D304-TJ-06}}$ $\ensuremath{\text{H11323}}$

Subject: verified tides

From: "marc.s.moser" <marc.s.moser@noaa.gov>

Date: Thu, 06 Jul 2006 12:22:49 -0400

To: Christiaan VanWestendorp christiaan.vanwestendorp@noaa.gov, Matthew Jaskoski wanwestendorp@noaa.gov, Matthew Jaskoski wanwestendorp@noaa.gov, Matthew Jaskoski wanwestendorp@noaa.gov, kimberly glomb

<kimberly.glomb@noaa.gov>

 ${\tt Kim}$ has downloaded the verified water levels for D304 and S-F910, with the exception of June for gauge 8651370.

Please check in with her today if you would like her to apply tides to your sheets.

Subject: Re: [Fwd: D304 AWOIS database] **From:** "Jack Riley" <Jack.Riley@noaa.gov> **Date:** Fri, 23 Jun 2006 16:01:12 -0400

To: "marc.s.moser" <Marc.S.Moser@noaa.gov>, Peter.Lewit@noaa.gov **CC:** jeremy.mchugh@noaa.gov, Christiaan.VanWestendorp@noaa.gov

There's only one valid table in the database--the one named "delete". Choose the table definition named "delete" in the Pydro Insert AWOIS dialog (not any of the 3 named " \sim TMPCLP*")

jack

marc.s.moser wrote:

----- Original Message -------- Subject: D304 AWOIS database

Date: Fri, 23 Jun 2006 08:40:33 -0400

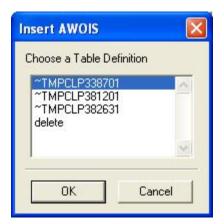
From: Jeremy McHugh <jeremy.mchugh@noaa.gov>

To: Marc S Moser <Marc.S.Moser@noaa.gov>

CC: Christiaan VanWestendorp christiaan.VanWestendorp@noaa.gov>

good Morning Marc,

The D304 AWOIS database is zipped and attached. I opened it up just before zipping it and it works ok on my end. Let me know if you have any more problems with it or if you need anything else.



Subject: Re: Fwd: Complete AWOIS .mdb file for OPR-D304-TJ-05

From: "Jack Riley" <Jack.Riley@noaa.gov> Date: Fri, 23 Jun 2006 14:10:48 -0400

To: "peter.lewit" < Peter.Lewit@noaa.gov>, Marc Moser < Marc.S.Moser@noaa.gov>,

Jeremy.McHugh@noaa.gov

can someone send me the file in question

peter.lewit wrote:

```
Peter Lewit wrote:
 I placed this into OPR-D304_TJandRU_05_OtherUpdates. Will this be considered a
 change 4??? Peter
 Subject:
 Complete AWOIS .mdb file for OPR-D304-TJ-05
 From:
 "Jeremy McHugh" <Jeremy.McHugh@noaa.gov>
 Tue, 06 Sep 2005 14:04:20 -0400
 Peter Lewit <Peter.Lewit@noaa.gov>
 Peter Lewit <Peter.Lewit@noaa.gov>
 Hi Pete,
 I attached the complete AWOIS .mdb file for OPR-D304-TJ-05. It includes all items
 assigned for sheets G, K, and L. Let me know if you have any questions.
Peter Lewit wrote:
The files sent are exactly the same as what I already have ( the same date and time)
aparrantly Pydro can not read them properly.
Pydro messages:
```

Subject: [Fwd: D304 AWOIS database]

From: "marc.s.moser" <marc.s.moser@noaa.gov>

Date: Fri, 23 Jun 2006 11:19:41 -0400 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

ZIP file downloaded to the D304 AWOIS directory.

----- Original Message -----

Subject: D304 AWOIS database

Date: Fri, 23 Jun 2006 08:40:33 -0400

From: Jeremy McHugh <jeremy.mchugh@noaa.gov>
To: Marc S Moser <Marc.S.Moser@noaa.gov>

CC: Christiaan VanWestendorp < Christiaan. VanWestendorp@noaa.gov>

good Morning Marc,

The D304 AWOIS database is zipped and attached. I opened it up just before zipping it and it works ok on my end. Let me know if you have any more problems with it or if you need anything else.

Jeremy McHugh, Physical Scientist NOAA's National Ocean Service, Office of Coast Survey 301-713-2702 x117

OPR-D304-TJ-06_AWOIS.zip

Content-Type: application/x-zip

Content-Encoding: base64

Subject: Re: H11323 Pydro Awois

From: "marc.s.moser" <marc.s.moser@noaa.gov>

what are you doing with the file? Opening in MI Opening in Pydro Opening in Access

peter.lewit wrote:

Currently I am using the Complete_OPR-D304-TJ-05_Awois.mdb. It loaded with no problem. The one for this year OPR-D304-TJ-06_AWOIS.mdb comes up with the following table definitions to choose and an error message

Data type mismatch in expression of . and a 2nd message MS file has no [valid] records (or all records outside of clipping area.)which work. The default clipping Area was used.

I did not try the delete option for fear of what that might do to the table.

- ~TMPCLP338701
- ~TMPCLP381201
- ~TMPCLP382631

delete

Subject: D304 Coast Pilot Report

From: "marc.s.moser" <marc.s.moser@noaa.gov>

Date: Wed, 21 Jun 2006 20:22:50 -0400

To: Matthew Jaskoski < Matthew. Jaskoski @noaa.gov>, Christiaan Van Westendorp

<christiaan.vanwestendorp@noaa.gov>, Peter Lewit <peter.lewit@noaa.gov>

CC: Uther Gardner < Uther.Gardner@noaa.gov>

Please review the Coast Pilot sections in the following directory: $\mbox{H:\ProjectInstructions\OPR-D304-TJ-06_AppChesBay\Coast\Pilot\Sections }$

Each Sheet Manager should review those sections of the CP report relative to their sheets and make recommendations to modify the document.

This process is part of the Sheet Manager responsibilities. The completion of your review is due before the survey is ready for CO review.

Subject: Re: H11323

From: "uther.gardner" <uther.gardner@noa.gov>

Date: Fri, 16 Jun 2006 19:07:15 -0700

To: "marc.s.moser" <marc.s.moser@noaa.gov>

CC: Peter Lewit <peter.lewit@noaa.gov>

Hey Guys,

There is some Launch SSS that requires scanning Please allow me time to scan for acception/rejection before finalizing line plan for Tuesday.

marc.s.moser wrote:

We will probably have an opprotunity to acquire some more data on H11323 this Tuesday. I would like to review the line plan you said is ready before then. Please put a copy on my desk.

Subject: H11323

From: "marc.s.moser" <marc.s.moser@noaa.gov>

Date: Fri, 16 Jun 2006 17:46:21 -0400 **To:** Peter Lewit <peter.lewit@noaa.gov>

CC: Uther Gardner < Uther.Gardner@noaa.gov>

We will probably have an opprotunity to acquire some more data on H11323 this Tuesday. I would like to review the line plan you said is ready before then. Please put a copy on my desk.

Subject: 126 sss

From: "marc.s.moser" <marc.s.moser@noaa.gov>

Date: Sun, 07 May 2006 07:27:02 -0400 **To:** Peter Lewit <peter.lewit@noaa.gov>

CC: Uther Gardner < Uther.Gardner@noaa.gov>

There was a minor problem with the date on the $dn126\ data$. I am using another Jack Pydro macro to change the date so we can convert.

I am in the process of doing this now, so don't mess with the sss yet.

Please make a holiday line plan for the 200% lines identified by CST.

Subject: rejected datafiles

From: "uther.gardner" <uther.gardner@noaa.gov>

Date: Sun, 07 May 2006 00:15:03 +0000 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

CC: Marc S Moser < Marc.S. Moser@noaa.gov>

OK Guys,

I've finally complete the review and rejection of datafiles I felt needed to be rerun.

The list goes as follows;

200% 3102

Dn. 113

Line#'s

All of # 248

All of # 249

All of # 268

All of # 273

Dn.114

All of Line #103

Dn. 114

Line#'s

249_1331

251_1428

252_1519

253_2118

274_1634

274_1635

276_1726

278_1914

283_1743

There's a butt load of contacts to be entered Not to exclude check scanning. Anyway, good night

The Buck <Uther.Gardner@noaa.gov>

Subject: H11323 Verified Tides

From: "william.winner" <william.winner@noaa.gov>

Date: Sat, 06 May 2006 14:26:06 -0400 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

Pete,

I noticed that there was a slight tides issue in some of the lines on your field sheet. I also noticed that the lines were still using the preliminary tides for 2005. I spoke with the FOO, and he said I should go ahead and load the Verified Tides. The lines for 2005 have the tides reloaded and they've been remerged.

V/R, Bill

Subject: Re: SSS Holidays

From: "uther.gardner" <uther.gardner@noaa.gov>

Date: Fri, 05 May 2006 23:14:35 +0000

To: "marc.s.moser" <marc.s.moser@noaa.gov>

CC: Peter Lewit <peter.lewit@noaa.gov>

OK guys,

All SSS data has been checked and acknowledged as good or rejected. Pete I couldn't help but reject two more lines that were marginal. The area they were in made me want to see a better image and they are as follows;

Dn: 109 047_1852

Dn. 112 084_1822 and 1828

Add these to your holiday plot and SSS coverage will be complete.

There is going to be a butt load of contact though I was trying to put them in as I check the refraction, but it took too much time, so I stopped in to finalize the checking of refraction. Jackson had been check scanning side scan data the Kim and Tayler had scan. I don't want them to do any check scanning from this day on for awhile. I'll let you know when I'm comfortable enough. I want to do the check scanning unconditionally.

Good night

marc.s.moser wrote:

Peter,

If Chief has checked out all of the side scan and has decided which lines should be re-run, please create the sss holiday plan today so we can finish the SSS on this sheet.

A crossline line plan is also required. You had mentioned wanting more over the previous years data.

Try to get those first two things together today.

The Buck <Uther.Gardner@noaa.gov>

Subject: SSS Holidays

From: "marc.s.moser" <marc.s.moser@noaa.gov>

Date: Fri, 05 May 2006 06:55:33 -0400 **To:** Peter Lewit <peter.lewit@noaa.gov>

CC: Uther Gardner < Uther.Gardner@noaa.gov>

Peter,

If Chief has checked out all of the side scan and has decided which lines should be re-run, please create the sss holiday plan today so we can finish the SSS on this sheet.

A crossline line plan is also required. You had mentioned wanting more over the previous years data.

Try to get those first two things together today.

Subject: Rejected data

From: "uther.gardner" <uther.gardner@noaa.gov>

Date: Wed, 03 May 2006 23:08:37 +0000 **To:** Peter Lewit < Peter. Lewit @ noaa.gov>

CC: Marc S Moser < Marc.S. Moser@noaa.gov>

Pete,

I've reject more datafile from H11323 because of refraction. Also contacts were selected and check scanned by inexperienced individuals. This may be OK, but for now, I'm the check scanner. Ensure that the folks you give a crash course in such is aware of this procedure. Quite a bit was missed and some weren't contacts at all. The refraction exaggerated the images. The reject files are as follows'

Dn: 107 Launch 3102 009_1718 037_1653 038_SS 038_SS1 042_1606 042-1607 059_1556 059_1600 060_1600 061_1626 107_1756 Dn: 108 Launch 3102

036_1750

Line# 038_1904 was began on the wrong range scale, then shifted. Please add rejected datafiles to your holiday line plan ASAP so it'll be up to date when entered into Hypack.

The Buck <Uther.Gardner@noaa.gov>

Subject: H11323_Rejected & deleted files

From: "uther.gardner" <uther.gardner@noaa.gov>

Date: Tue, 02 May 2006 19:33:49 +0000 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

CC: Marc S Moser <Marc.S.Moser@noaa.gov>

Pete,

Just following are SSS $_100$ % lines collected by Launch 3102 on Day number 107 that I rejected & deleted due to fraction and just bad imagery;

9_SS

9_ss1

9_SS2

17_SS

17a_SS

53_SS

53a_SS

53b_SS

53c_SS

53d_SS

Make sure you modify your SSS holiday plan to reflect the changes made to your data

The Buck <Uther.Gardner@noaa.gov>

Subject: [Fwd: Emailing: OPR-D304-TJ-06_AWOIS.zip]

From: "marc.s.moser" <marc.s.moser@noaa.gov>

Date: Wed, 11 Jan 2006 09:46:46 -0500 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

Awois files attached in zip

----- Original Message -----

Subject: Emailing: OPR-D304-TJ-06_AWOIS.zip

Date: Fri, 16 Dec 2005 16:06:26 -0500

From: Jeremy McHugh <jeremy.mchugh@noaa.gov>
To: Marc S Moser <Marc.S.Moser@noaa.gov>

Hi Marc,

Since you are scheduled to use a launch to work on sheet G in the Chesapeake Bay in a few weeks, I have attached an updated AWOIS database and corresponding MapInfo tables for sheet G (I also went ahead and included all the items that I have so far for the other sheets that are planned for that project in 2006.

Please note that this database should supersede what was provided previously and that several AWOIS items have been added mostly to the in the southern part of the sheet (didn't you start in the north part of the sheet?). Although I assigned them as Full Investigation items with search radii so that you could disprove them, I understand that some of these items may be in water depths that are too shallow to permit investigation. I am sure you will do your best. I hope that adding these does not cause too much more work or trouble, we are just trying to clean up the chart. Take care.

p.s. I met your protege, Chris VanWestendorp, a couple days ago. He stopped by Operations Branch and I gave him an overview of what we do as well as a preview of some of next season's projects. He sounds excited and was particularly impressed with resolution of some of the sss imagery we have hanging up on the walls of the cubes.

Jeremy McHugh, Physical Scientist NOAA's National Ocean Service, Office of Coast Survey 301-713-2698 x117

OPR-D304-TJ-06_AWOIS.zip

Content-Type: application/x-zip-compressed

Content-Encoding: base64

Subject: Re: [Fwd: H11323 Processing Problem]

From: "Deborah Ethridge" <deborah.ethridge@noaa.gov>

Date: Sun, 11 Sep 2005 19:57:43 +0000 **To:** Marc Moser <marc.s.moser@noaa.gov> **CC:** Peter Lewit <Peter.Lewit@noaa.gov>

Marc Moser wrote:

I have a feeling these data only have predicted tides applied. Try the following: H:\tide\2005\OPR-D304-TJ-RU-05\Preliminary\E350RU2005CORP_Rev.zdf.

Also, try loading the True Heave file, re-svp correcting and merge.

Deborah Ethridge wrote:

For some reason this did not go through.

----- Original Message -----

Subject: H11323 Processing Problem Date: Wed, 07 Sep 2005 20:07:18 +0000

From: deborah.ethridge <deborah.ethridge@noaa.gov>

To: Marc Moser

CC: Peter Lewit <peter.lewit@noaa.gov>, Uther Gardner <uther.gardner@noaa.gov>

Ηi

As I informed you there is a bust between data acquired on Launch 1014 and 3101. Attached is a query of some of the questionable data and a screen grab. Debbie $\,$

We did not have H:\tide\2005\OPR-D304-TJ-RU-05\Preliminary\E350RU2005CORP_Rev.zdf. at the time we were processing. Thank-you. As you know I'm working on it. Debbie

Subject: Re: Fwd: Complete AWOIS .mdb file for OPR-D304-TJ-05

From: "Marc Moser" <marc.s.moser@noaa.gov>

Date: Wed, 07 Sep 2005 07:30:31 -0400 **To:** Peter Lewit <peter.lewit@noaa.gov>

Peter Lewit < Peter.Lewit@noaa.gov>

no

Peter Lewit wrote:

Hi Pete,

```
I placed this into OPR-D304_TJandRU_05_OtherUpdates. Will this be considered a change 4??? Peter

Subject:
Complete AWOIS .mdb file for OPR-D304-TJ-05
From:
"Jeremy McHugh" <Jeremy.McHugh@noaa.gov>
Date:
Tue, 06 Sep 2005 14:04:20 -0400
To:
Peter Lewit <Peter.Lewit@noaa.gov>
```

I attached the complete AWOIS .mdb file for OPR-D304-TJ-05. It includes all items

assigned for sheets ${\tt G}, {\tt K}, {\tt and L}.$ Let me know if you have any questions.

Subject: Fwd: Complete AWOIS .mdb file for OPR-D304-TJ-05

From: "Peter Lewit" <peter.lewit@noaa.gov> Date: Wed, 07 Sep 2005 11:06:11 GMT

To: marc.s.moser@noaa.gov,survey.thomas.jefferson@noaa.gov

I placed this into $OPR-D304_TJandRU_05_OtherUpdates$. Will this be considered a change 4??? Peter

Subject: Complete AWOIS .mdb file for OPR-D304-TJ-05 **From:** "Jeremy McHugh" <Jeremy.McHugh@noaa.gov>

Date: Tue, 06 Sep 2005 14:04:20 -0400 **To:** Peter Lewit < Peter.Lewit@noaa.gov>

Hi Pete.

I attached the complete AWOIS .mdb file for OPR-D304-TJ-05. It includes all items assigned for sheets G, K, and L. Let me know if you have any questions.

Jeremy McHugh, Physical Scientist NOAA's National Ocean Service, Office of Coast Survey 301-713-2698 x117

Complete AWOIS .mdb file for OPR-D304-TJ-05.eml

Content-Type: message/rfc822

Content-Encoding: 7bit

Complete_OPR-D304-TJ-05_AWOIS.zip

Content-Type: application/x-zip-compressed

Content-Encoding: base64

Subject: Approval sheet notes

From: "Peter.Lewit" <peter.lewit@noaa.gov>

Date: Tue, 27 Feb 2007 17:35:16 +0000 To: "peter.lewit" <peter.lewit@noaa.gov>

- OPR-D304-TJ-06 Horizontal and Vertical Control Report.
 - o Dec 4, 2006 * Hydrographic Systems Certification Report.
 - o April 14 and 15
 - o May 17, 2005 and Addendum 1005_mb.HVF E-mail May 19, 2005 o May 12, 2006, May 20, 2006,
- * Data Acquisition and Processing Report.
 - o September 13 ,2005, March 14 2006
 - o Oct 6, 2006

Several submissions were made only the finals are listed in report

1 of 1 2/27/2007 5:36 PM

ATLANTIC HYDROGRAPHIC BRANCH EVALUATION REPORT to Accompany Survey H11323 (2006)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

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

CARIS HIPS/SIPS version 6.1 SP2 CARIS Bathy Manager version 2.1 SP1 HF 1-8 DKART INSPECTOR, version 5.0 Build 732 SP1 CARIS HOM version 3.3 SP3 HF8 CARIS S57 Composer version 1.0 HF1

B.2. QUALITY CONTROL

B.2.1. H-Cell

The AHB source depth grid for the survey's nautical chart update product entailed the field's original 1m grids, combined at 2 meter resolution, then using them to create a product surface grid with a resolution of 4m. The survey scale selected soundings were extracted from the 4m product surface. The selected sounding set is approximately 10 to 20 times the number of charted depths. The chart scale selected soundings are a subset of the survey scale selected soundings. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

The pre-compilation products or components (Stand Alone HOB files (SAHOB)) are detailed in the Pre-Compile Process Log attached at the end of this document. The SAHOB files included sounding selections (SOUNDG), features (SBDARE), Meta objects (M_COVR, M_QUAL, M_CSCL), and cartographic Blue Notes. The individual SAHOB files were inserted into one BASE Manager feature layer and exported to S57 format in order to create the H-Cell deliverable.

The completed H-Cell was exported as a Base Cell File (ENC.000) in S-57 format with all values in metric units. The metric equivalent ENC.000 file was then converted to NOAA chart units (ENC_CU.000) with all values measured in feet following NOAA sounding rounding rules.

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

The H11535 CARIS H-Cell final deliverables include the following products:

US511323_CS.000	1: <u>10</u> ,000 Scale	H11323 H-Cell with Chart Scale Selected Soundings
US511323_SS.000	1: <u>5</u> ,000 Scale	H11323 Selected Soundings
US511535_BlueNtoes.000	1: <u>10</u> ,000 Scale	H11323 Cartographic Notes

B.2.2. Junctions

No contemporary surveys exist for junctioning.

C. <u>VERTICAL AND HORIZONTAL CONTROL</u>

Sounding datum is Mean Lower Low Water (MLLW). Vertical datum is Mean High Water (MHW). See Descriptive Report C3 for discussion of Tide Zoning.

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 18. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements.

D. <u>RESULTS AND RECOMMENDATIONS</u>

D.1 CHART COMPARISON

12255 (16th Edition, Sep./05) Corrected through NM 09/03/2005 Corrected through LNM 08/30/2005 Scale 1:5,000

12254 (46th Edition, Feb./06 Corrected through NM 02/11/06 Corrected through LNM 02/07/06 Scale 1:20,000

12256 (15th Edition, Jul./05 Corrected through NM 07/30/05 Corrected through LNM 07/26/05 Scale 1:20,000

12222 (48th Edition, Mar./07 Corrected through NM 03/24/07 Corrected through LNM 03/20/07 Scale 1:40,000 12221 (79th Edition, Jun./07 Corrected through NM 06/30/07 Corrected through LNM 06/26/07 Scale 1:80,000

ENC Comparison

US5VA18M

Naval Amphibious Base Little Creek Edition 7 Update Application Date 2008-03-25 Issue Date 2008-03-25 References: Chart 12255

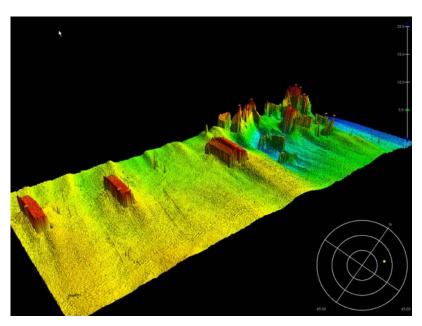
US5VA19M

Chesapeake Bay Cape Henry to Thimble Shoal Light Edition 13 Update Application Date 2008-03-28 Issue Date 2008-07-14 References: Chart 12254

D.1.1 Hydrography

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section "D" and Appendix 1&2 of the Descriptive Report. The following exception is noted:

The obstruction area located at 36-57-30 N by 076-06-54 W marks debris remaining from the collision between the USS Yancey and the Chesapeake Bay Bridge on January 21st, 1970. Per field submitted data the obstruction area has been cleared to **24 feet** and the danger limit revised to more accurately depict the debris field.



D.2. <u>MISCELLANEOUS</u>

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, 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.3. 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 BASE Cell File or the Blue Notes should be retained as charted. Refer to the Descriptive Report for further recommendations by the hydrographer.

AHB PRE-COMPILATION PROCESS

REGISTRY No.	H11323
PROJECT No.	OPR-D304-TJ-05; OPR-D304-TJ-06
FIELD UNIT	THOMAS JEFFERSON
PRE-COMPILER	RICHARD SULLIVAN
LARGEST SCALE CHART	12254, Ed. 46, 200602
	12255, Ed. 16, 200509
CHART SCALE	1:20,000
	1:5,000
SURVEY SCALE	1:10,000
DATE OF SURVEY	06.02.05 - 06.21.2006
CONTENT REVIEW DATE	06.05.2008

Components	File Names	
Product Surface Creation	PS_H11323_10k_100mrad_4mres.hns	
Shifted Surface	PS_H11323_10k_76mres_Interp_Shifted.hns	
Contour Layer	PS_H11323_10k_76mres_Interp_Contour.hob	
Survey Scale Soundings	H11323_SSSoundg.hob	
Chart Scale Soundings	H11323_CS_Soundings.hob	
Feature Layer	H11323_Features.hob	
Meta-Objects Layer	H11323_META.hob	
Blue Notes	H11323_BlueNotes.hob	

SPECIFICATIONS:

- I. COMBINED SURFACE:
 - a. File name: H11323_2m_Combined.hns
 - b. Resolution: 2 m
 - c. Fieldsheet Location:

 $H: \COMPILATION \H11323_D304-TJ \AHB_H11323 \ESAR_Final_Products \Grids \Compilation_Grids \ESAR_Final_Products \Grids \Compilation_Grids \ESAR_Final_Products \Grids \Compilation_Grids \ESAR_Final_Products \Grids \Compilation_Grids \ESAR_Final_Products \Grids \Grids$

- II. PRODUCT SURFACE (SOUNDINGS):
 - a. Scale: 1:10,000
 - b. Radius: 100 m
 - c. Resolution: 4 m
 - d. Depth
 - i. Minimum: <u>2.220</u> m ii. Maximum: <u>17.920</u> m

PRODUCT SURFACE (CONTOURS):

- a. Scale: 1:10000
- b. Radius: 100 m
- c. Resolution: 4 m
- III. SHIFTED SURFACE:
 - a. Single Shift Value: -0.229m (feet)
- IV. CONTOUR LAYER:
 - a. Depth List: 1.829, 3.658, 5.486, 7.315, 9.114, 10.973, 18.288, 27.432
 - b. Output Options:
 - i. Create contour lines:
 - 1. Line Object: <u>DEPCNT</u>

2. Value Attribute: <u>VALDCO</u>

- V. SOUNDING SELECTION:
 - a. Selection Criteria:
 - i. Radius
 - ii. Shoal biased
 - iii. Use Single-Defined Radius: 20/40 distance on ground (m)
 - iv. Filter: Generalized !=1
- VI. FEATURES:
 - a. Brought in from Survey

Total No. 76

b. Brought in from ENC

ENC: #US5VA19M, US5VA18M

Total No. 48

VII. META-OBJECTS:

a. M_COVR attributes

Acronym	Value	
INFORM	H11323	
CATCOV	Coverage Available	
SORDAT	20060621	
SORIND	US,US,survy,H11323	

b. DEPARE attributes

Acronym	Value
DRVAL1	2.220
DRVAL2	17.920
SORDAT	20060621
SORIND	US,US,nsurf,H11323

c. M_QUAL attributes

Acronym	Value
CATZOC	A2
INFORM	H11323,OPR-D304-TJ-05; OPR-D304-TJ-06,
	Thomas Jefferson
POSACC	10
SORIND	US,US,survy,H11323
SORDAT	20060621
SUREND	20060621
SURSTA	20050602

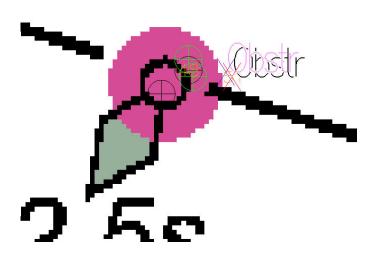
- 1: No evidence of submerged depth charge at 36-56-28.166N by 076-09-01.544W was found. However standard survey procedures are insufficient to disprove such an item.
- 2: The field refers to the bridge as mischarted. The positioning of the bridge is accurate, however renovations to the bridge on either side of the tunnel are not depicted in the chart.



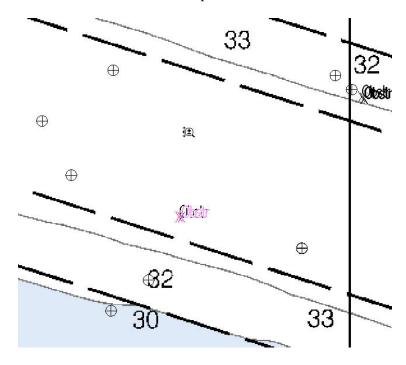


3: Just in side the channel at 36°58'15.613"N, 076°06'16.161"W is what appears to be an old buoy block at a depth of 51 feet. The controlling depth of the channel is 50 feet and the buoy

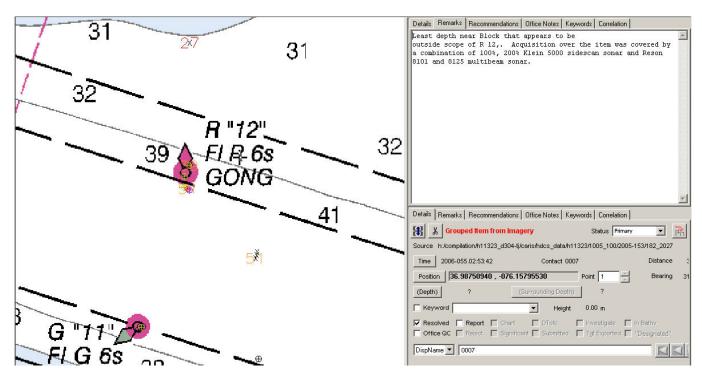
block is ~20 meters from a channel marker. The decision was made to not chart. Information regarding this buoy block was submitted to the local Navigation Manager.



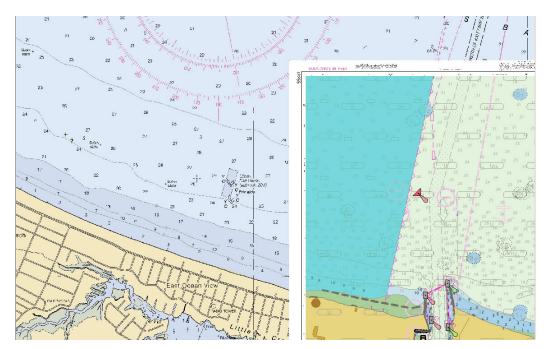
4: The Danger to Navigation 49- FT obstn Submitted DTON A 3772/148 at $36^{\circ}59'17.783"N$, $076^{\circ}10'12.686"W$, least depth 49.26 feet was removed by the Army Corp of Engineers on 2.02.2006. See attached documentation for complete details.



5: Buoy R-12, $36^{\circ}59'15.117"N$, $076^{\circ}09'28.759"W$, is not marking the shoalest depth in its vicinity. The Norfolk Navigation Manager has been informed.

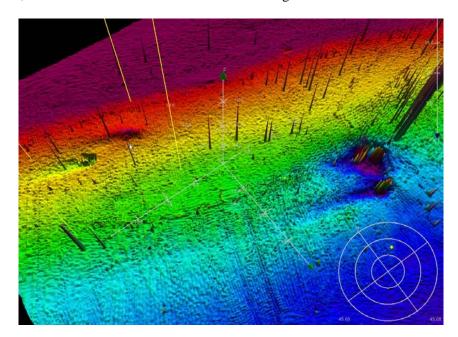


6: There is a Fishtrap area just to the west of the entrance to Little Creek. The Eastern limit of the fish trap exists on both charts 12255 and 12254, with the western limit extending beyond the range of both charts. However, the Fish trap is missing from ENC US5VA19M.

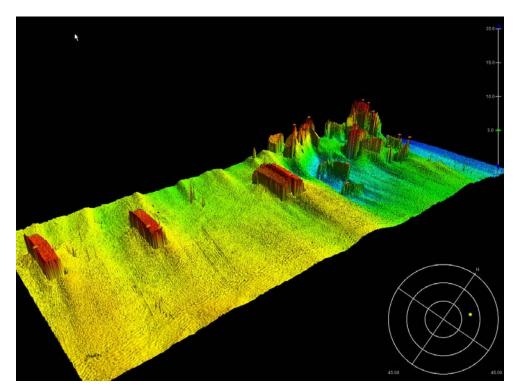


Fish Trap is in Blue

7: There are three blocks and one outlying block beneath buoy R"10" at 36° 58'51.204"N , $076^\circ07$ '53.316"W. The Norfolk Nav Manager has been informed.



8: The obstruction area located at 36-57-30 N by 076-06-54 W marks debris remaining from the collision between the USS Yancey and the Chesapeake Bay Bridge on January 21st, 1970. Per field submitted data the obstruction area has been cleared to 24 feet and the danger limit revised to more accurately depict the debris field.



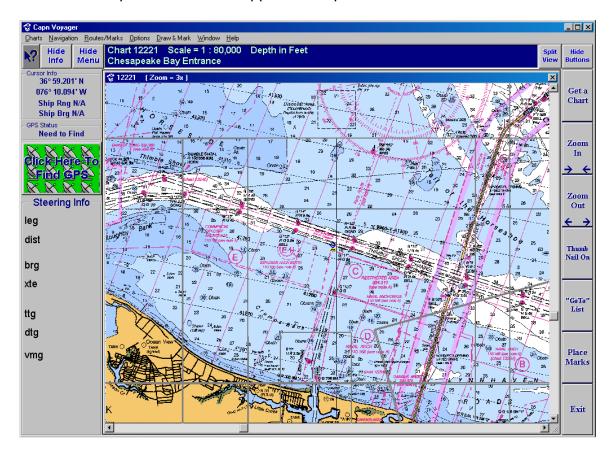
CONVERSATIO	ON RECORD	TIME	1510	1/12/06	DATE
TYPE	VISITCONFER	ENCE X TELEPHONE	X INCO	MING _ OUTGOING	
Location of Visit/Conference: From Robert Sweitzer to Steve Baum via telephone					
NAME OF PERSON	IN CONTACT WITH:	ORGANIZATION		TELEP	HONE NO.
Robert Sweitzer		USACE		(757) 201-7666	
SUBJECT:					
Notification of obstruction on the bottom of the Thimble Shoal channel SUMMARY:					

1/12/06 on or about 1510, Robert Sweitzer called Steve Baum and reported that our survey team found an object on the bottom of the Thimble Shoal channel while in the course of surveying the channel for normal duties. The object is approximately 5' X 5'. Normal channel depth in that location is supposed to be between 53' to 54', but the object reduces the depth in its location to 48.7'.

Reported position of obstruction:

LAT: 36 59 17.80170 N LON: 076 10 12.73119 W

See center of picture below for approximate position:



At or about 1518, Steve Baum called CG Sector Command and passed along the above information to Petty Officer Hamilton. PO Hamilton stated that he would have a notice to mariners issued.

1/13/05 at or about 1045, Steve Baum brief LT Clark (CG MSO) regarding information about this case.

At or about 1115, Robert Sweitzer called Steve Baum and stated that the position of the object was incorrect in the Notice to Mariners. Steve Baum asked Robert Sweitzer to contact CG Sector Command and have them immediately update the Notice with the correct information. Robert Sweitzer stated that the CG Cutter FRANK DREW was going to move a buoy over the position of the obstruction to provide a better navigation mark to mariners.

At or about 1118, Steve Baum called LT Clark and discussed the updated coordinates and moving the position of the buoy.

At or about 1247, Robert Sweitzer called Steve Baum and stated that FRANK DREW will attempt to remove the obstruction. If unsuccessful, they will reposition Buoy 11 over the position of the obstruction. Additionally, he stated that the John Walters (CG D5 ATON) had informed LT Clark of the current events via message traffic.

At or about 1509, Robert Sweitzer called Steve Baum and stated that FRANK DREW was unable to recover the object and that buoy 11 had been repositioned over or adjacent to the object as previously discussed.

At or about 1515, Steve Baum talked with LT Clark and stated that the ACOE would develop a plan to remove the object. The primary resource for removal was the vessel ELIZABETH, which would be going into the shipyard on 1/17 for emergent hull repair...repairs were anticipated to take approximately 2 days. Once repairs were determined, a plan would be put into place and Steve Baum would call the CG to let them know current course of action.

Subject: FW: SAFETY BROADCAST NOTICE TO MARINERS,
P 131915Z JAN 06 CCGDFIVE PORTSMOUTH VA//OAN//P 131915Z JAN 06 ZUI ASN-A02013000025 FM CCGDFIVE
PORTSMOUTH VA//OAN// TO AIG 11915 AIG 11914 INFO COGARD ANT HAMPTON ROADS VA COGARD STA LITTLE
CREEK VA VIRGINIA PILOTS ASSN NORFOLK VA SSNSLANT SSBNSLANT BT UNCLAS //N16502// SUBJ: SAFETY
BROADCAST NOTICE TO MARINERS BROADCAST VHF-FM EVERY SIX HRS UNTIL CANCELLED CCGD5 BNM 001706 VA - CHESAPEAKE BAY - THIMBLE SHOAL CHANNEL 1. THIMBLE SHOAL LIGHTED BUOY 11 (LLNR 9265) HAS
BEEN RELOCATED TO APPROX. POSN. 36-59-18.2N 076-10-16.5W TO MARK AN OBSTRUCTION DISCOVERED BY THE
US ARMY CORPS OF ENGINEERS. FLASHING CHARACTERISTIC HAS BEEN CHANGED TO GREEN QUICK FLASH. 2.
CANCEL AT TIME//270700Z JAN 06//. BT NNNN

1/18/06 Mike Anderson (ACOE Project Manager) spoke with Captain Councilman from the Virginia Pilots Association. At this time, he does not think there is a need to place a restriction on the Channel. He is concerned, but as long as we are taking action to remove the obstruction, there is no need to place restrictions. They understand this to be a temporary concern, and that the obstruction will be removed from the channel in the near future.

1/19/06 Coordination efforts to remove the obstruction are on-going. The tentative plan is that the ACOE Vessel ELIZABETH will recover the obstruction during the week of 1/23. ELIZABETH should be completed with emergent shipyard repairs by COB on 1/19. Chesapeake Bay Dive Services has been contacted to aid ELIZABETH with identification and connection of object to vessel's crane and will be providing a dive plan to the ACOE Dive Coordinator by COB 1/20. The Captain of CGC FRANK DREW has communicated with the Captain of the ELIZABETH and stated that buoy 11 is approximately 25 yards north of the target, so it will not need to be moved prior to the obstruction recovery.

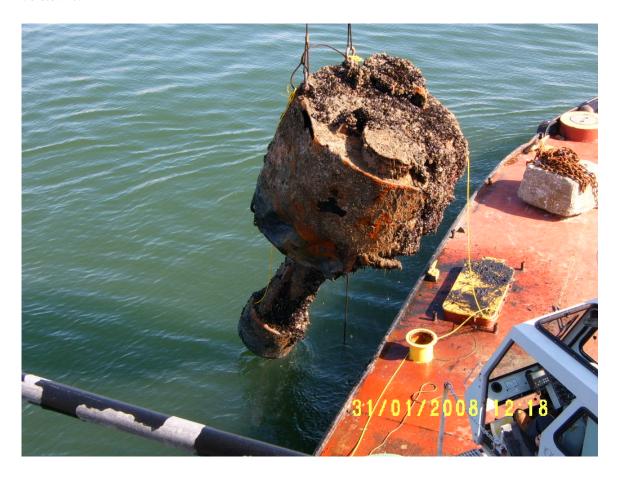
1/24/06 ACOE Vessel ELIZABETH is prepared to perform the operation and a dive team has been arranged to perform dive services once the vessel is at the sight. The Captain of the ELIZABETH awaits a weather window (seas/winds) to conduct the mission. When a firm deployment schedule is set, I will request that the CG set a safety zone around the work area for the duration of the mission.

2/2/06 at or about 0700 the vessels ELIZABETH, HARRELL and ADAMS II got underway with a commercial dive team to recover the object and re-survey the area after completion of task to ensure no other debris remains.

At or about 0820, Steve Baum called LT Clark and advised him of the ACOE's present actions. LT Clark will check to ensure a broadcasted safety zone message is issued.

At or about 1330, the ELIZABETH hoisted the obstruction (a CG Buoy) on deck and the ADAMS II performed a survey in the immediate area to ensure on other obstructions existed. ADAMS II survey findings were negative.

Steve Baum called LT Clark and advised him that the obstruction had been removed. LT Clark will take the action to cancel the safety broadcast (for the dive operation) and the Notice to Mariners.



CG Message to cancel Notice to Mariners:

P 031847Z FEB 06 ZUI ASN-A02034000018 FM CCGDFIVE PORTSMOUTH VA//OAN// TO AIG 11915 INFO COGARD ANT HAMPTON ROADS VA COGARD STA LITTLE CREEK VA VIRGINIA PILOTS ASSN NORFOLK VA SSNSLANT SSBNSLANT BT UNCLAS //N16502// SUBJ: SAFETY BROADCAST NOTICE TO MARINERS CCGD5 BNM 0051-06 VA - CHESAPEAKE BAY - THIMBLE SHOAL CHANNEL 1. THIMBLE SHOAL CHANNEL LIGHTED BUOY 11 (LLNR 9265) HAS BEEN RELOCATED ON AP AND IS SHOWING ASSINGED CHARACTERISTICS. 2. CANCEL AT TIME//170700Z FEB 06//. BT NNNN

Case closed.

ACTION REQUIRED:

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE
DATE	

Steven R. Baum (SRB) 1/12/06

ACTION TAKEN

ACOE followed up to CG to ensure a hazard to navigation is identified and or removed.

HRD/POD PM 1/12/06

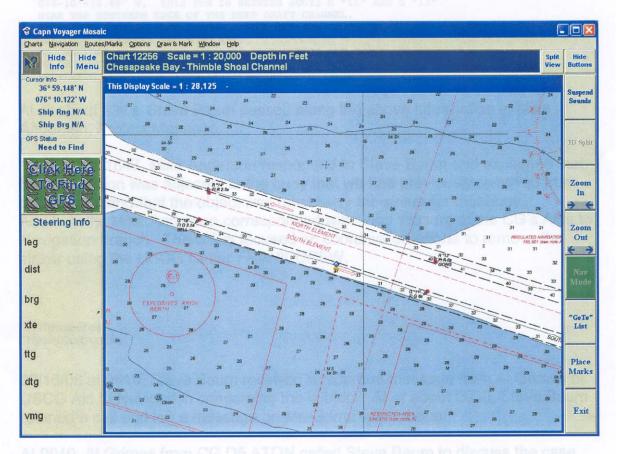
SIGNATURE TITLE DATE

CONVERSATION RECORD	TIME	10/10/06	DATE
TYPEVISITCONFE	RENCE X TELEPHONE	X INCOMING OUTGOING	ì
Location of Visit/Conference: From Ray Williams	to Steve Baum	ent a fex documb pome pal	unit Sie
NAME OF PERSON IN CONTACT WITH:	ORGANIZATION	TELEF	PHONE NO
Mike Anderson	USACE	(757) 2	201-7584
SUBJECT:			

Notification NOAA's Survey Finding Of Obstruction In Thimble Shoals Channel SUMMARY:

10/10/06 at 0937, Ray Williams from the Corps Survey Section informed Steve Baum that NOAA had conducted a survey of the Thimble Shoals area and had found an obstruction in the channel between buoy 11 and 13.

FW Thimble Shoal Channel dangers to n



At 1331, Steve Baum received the below email from LTGJ Francisco regarding the same obstruction.

From: Peter.F.Francisco@uscg.mil [mailto:Peter.F.Francisco@uscg.mil]
Sent: Tuesday, October 10, 2006 1:31 PM

To: Baum, Steven R NAO

Cc: Clark, Bill LT

Subject: Thimble Shoal Chnl Obstruction

Just wanted to relay this email we received from NOAA. In case the scanned copy of a fax doesn't come out well, the details are below. Coast Guard has issued "wreck" message and broadcast notice to mariners.

Thimble Shoal Channel

Lat 36-59'-17.78" N Lon 076-10'-12.69" W

Item, appearing to be a buoy sinker, is 140 feet in from the edge of the channel, with a least depth of 49 feet.

The following CG Notice to Mariners has been issued:

R 111743Z OCT 06 ZUI ASN-A05284000053 PSN 260724K21 FM COMCOGARD SECTOR HAMPTON ROADS VA TO ZEN/CCGDFIVE PORTSMOUTH VA//DPW/DRMC// INFO ZEN/COGARD ANT HAMPTON ROADS VA RHMFIUU/CDRUSAED NORFOLK VA ZEN/VIRGINIA PILOTS ASSN NORFOLK VA ZEN/BALTIMORE PILOTS ASSN BALTIMORE MD BT UNCLAS //N16670// SUBJ: WRECK REPORT/SUBMERGED OBJECT THIMBLE SHOAL CHANNEL 1. OWNER OF NAVIGATIONAL HAZARD

UNKNOWN AT THIS TIME.
2. CG HAS RECEIVED A REPORT FROM NOAA OF AN OBSTRUCTION BELIEVED TO

- 2. CG HAS RECEIVED A REPORT FROM NOAA OF AN OBSTRUCTION BELIEVED TO BE A BUOY SINKER IN THE THIMBLE SHOAL CHNL IN PSN 36-59'-17.78N/ 076-10'-12.69" W. THIS PSN IS BETWEEN BUOYS G "11" AND G "13" NEAR THE SOUTHERN EDGE OF THE DEEP DRAFT CHANNEL.
- 3. SUBMERGED OBJECT IS IN THIMBLE SHOAL CHANNEL, PROJECT DEPTH 50'. THE OBJECT REDUCES DEPTH TO 49'.
- 4. RECOMMENDATIONS: NOTIFY USACE OF OBSTRUCTION AND TRACK PROGRESSION OF OBSTRUCTION REMOVAL.
- 5. POC: LTJG PETER FRANCISCO 757/668-5580

At or about 1343, Steve Baum passed along the above information to Mike Anderson, Project Manager.

10/13/06 at 1647, Mike Anderson responded to Steve Baum and explained that the obstruction was adjacent to the buoy that we had previously removed from the channel and that the object was most likely the sinker for that buoy. Additionally, Mike Anderson corresponded with John Walters of the CG's Aids to Navigation branch. The CG is focused on coordination efforts to remove the sinker using the USCG Cutter FRANK DREW.

Thimble Shoal Channel Obstruction.

10/16/06 at 0610, Steve Baum received a recorded message from Al Grimes of USCG Aid to Navigation concerning the subject. At or about 0930, Steve Baum retuned a call and left a message on Mr. Grime's telephone.

At 0940, Al Grimes from CG D5 ATON called Steve Baum to discuss the case. Mr. Grimes stated that NOAA and the CG went to the sight within the last few days to commence salvage of the obstruction and NOAA could not find anything in the area. Apparently, the data that NOAA was looking at that opened this case was data taken before dredging, post surveys and removal of the sunken CG

buoy (which were all performed by the Corps), were taken. The bottom line is that there most likely was an error in opening this case file.

FW Fwd DTON Disproval H11323 .ms

At 0950, Steve Baum called LTJG Winn from CG Sector Hampton Roads (LTJG Francisco's replacement) to discuss the case. Steve Baum explained NOAA and CG's most recent findings and stated that the Program Manager from the Corps would contact NOAA and have them retract their information, so that the Notice to Mariners could be canceled and this case could be closed.

Case open.		
ACTION REQUIRED:		
NAME OF PERSON DOCUMENTING CONVERDATE	RSATION	SIGNATURE
Steven R. Baum (SRB)		10/10/06
ACTION TAKEN		
ACOE followed up to CG to determine action. HRD/POD PM		10/10/06
SIGNATURE	TITLE	DATE

APPROVAL SHEET H11323

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, representation 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 Evaluation Report.

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

Richard Sullivan

Hydrographic Intern Atlantic Hydrographic Branch

Wesley G Kitt

Physical Scientist 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.

Approved: _____

Shepard Smith

Lieutenant Commander, NOAA Chief, Atlantic Hydrographic Branch