

NOAA FORM 76-35A

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

**DESCRIPTIVE REPORT**

*Type of Survey*      **Field Examination**  
**Chart Validation**  
*Registry No.*        **F00548**

**LOCALITY**

*State/Territory*      North Carolina  
*General Locality*     Wilmington  
*Sub-locality*         Wilmington to Southport

**2007**

CHIEF OF PARTY  
**David B. Elliott -Team Leader**

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DATE

<p>NOAA FORM 77-28 U.S. DEPARTMENT OF COMMERCE (11-72) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</p> <p style="text-align: center;"><b>HYDROGRAPHIC TITLE SHEET</b></p>	<p>REGISTRY NUMBER:</p> <p style="text-align: center;"><b>F00548</b></p>
<p>INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.</p>	<p>FIELD NUMBER: N/A</p>
<p>State/Territory: <b>North Carolina</b></p> <p>General Locality: <b>Wilmington</b></p> <p>Sub-Locality: <b>Wilmington to Southport</b></p> <p>Scale: <b>1:10,000</b>                      Date of Survey: 06 Nov., 2007 to 12 Dec., 2007</p> <p>Instructions Dated: <b>14 Sept, 2006</b>                      Project Number: <b>OPR-G309-NRT2-07</b></p> <p>Vessel: <b>NOAA Launch 1210</b></p> <p>Chief of Party: <b>David B. Elliott - Team Leader</b></p> <p>Surveyed by: <b>David Elliott, Robert Ramsey, &amp; Aurel Piantanida (NRT2)</b></p> <p>Soundings by: <b>ODOM ECHOTRAC CV</b></p> <p>Graphic record scaled by: <b>DE, RR, AP</b></p> <p>Graphic record checked by: <b>DE, RR, AP</b></p> <p>Protracted by: <b>N/A</b>                      Automated Plot: <b>N/A</b></p> <p>Verification by: <b>Atlantic Hydrographic Branch</b></p> <p>Soundings in: <b>Meters <i>Feet</i> at MLLW</b></p> <p>Remarks:</p> <p><i>1) All Times are UTC.</i></p> <p><i>2) This is a basic Hydrographic Survey under the Navigable Area Concept.</i></p> <p><i>3) Projection is <b>NAD 83 UTM Zone 17. Red bold italic comments were made during office processing.</b></i></p>	

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**DESCRIPTIVE REPORT**

**to accompany**

**OPR-G309-NRT2-07**

**FIELD EXAMINATION SURVEY  
F00548**

**Scale of Survey: 1:10,000**

**Year of Survey: 2007**

**Navigation Response Team 2 - Launch 1210**

**David B. Elliott- Team Leader**

**A. AREA SURVEYED**

This hydrographic survey was conducted in accordance with Port Letter Instructions\* for project OPR-G309-NRT2-07, Wilmington, North Carolina. The instructions are dated Sept. 24, 2007.

***Concur.***

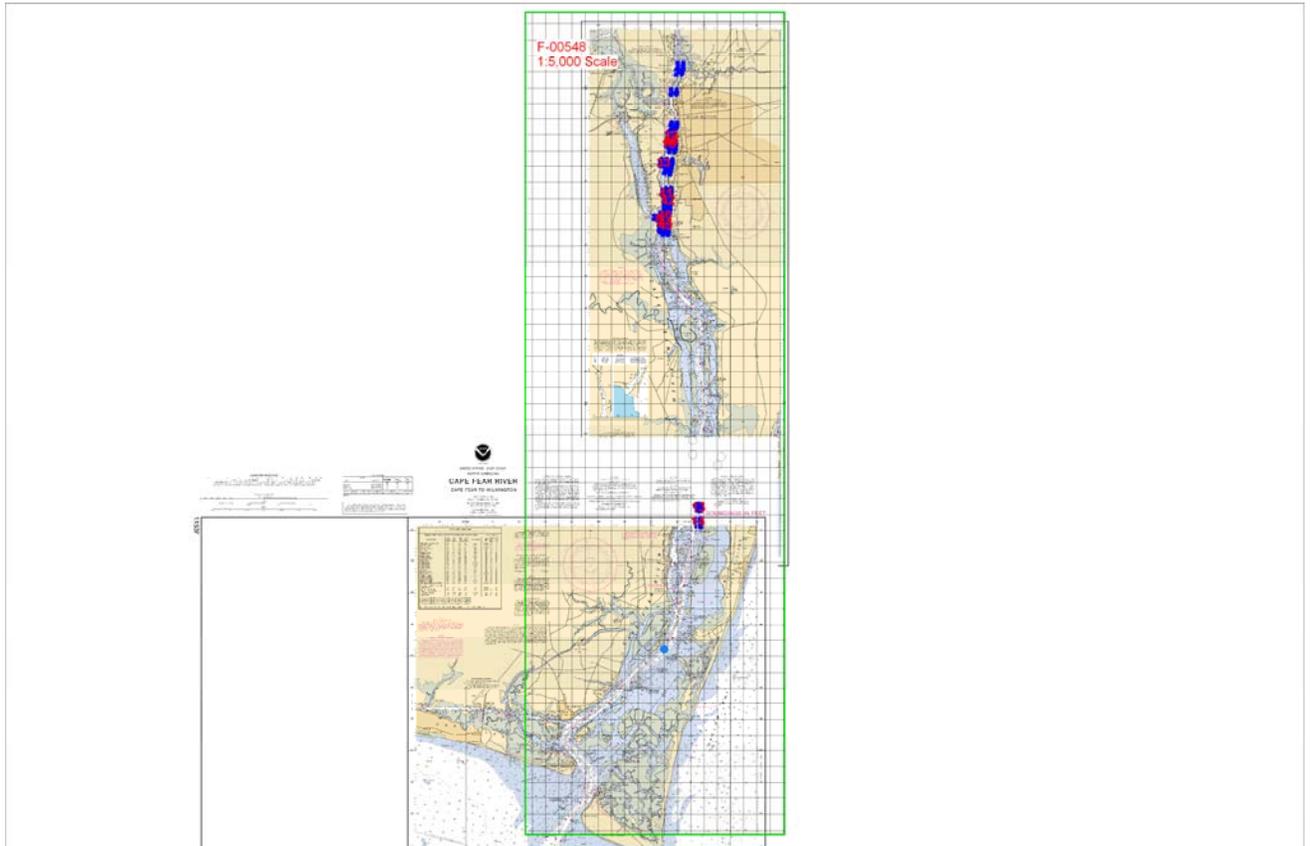
The purpose of this project is to collect new hydrography in the vicinity of Southport to the Approach to the Cape Fear River. The Port of Wilmington is the leading port in the State. Bathymetry data is needed to be collected from requests obtained by the Regional Navigation Manager and Hydrographic Surveys Division. In addition results from the contemporary hydrography and investigations will also serve as a chart evaluation for NOS Electronic Nautical Charts (ENC). The Remote Sensing Division, from the National Geodetic Survey, has released a Chart Evaluation File of the area for Wilmington, NC. The hydrographic data from this project will help ensure navigational safety through updated critical nautical charts and provide new information for emergency response organizations to use in the event of a marine casualty or coastal storm. ***Concur.***

Survey Dates: Nov. 06, 2006 (DN: 310) to Dec. 12, 2007 (DN: 346) ***Concur.***

Survey limits are displayed graphically in the chartlet on the following page .

***\* Filed with original field records.***

F00548 / NRT2



Total LNM of SB & SSS = 13.0      Total Crosslines = 1.0      Bottom Samples = 0

## **B. DATA ACQUISITION AND PROCESSING**

### **B.1. EQUIPMENT**

Data were acquired by Navigation Response Team 2 and survey Launch 1210. The vessel was configured as described in the Data Acquisition and Processing Report (DAPR)\* for this project. Major data acquisition systems are summarized below. *Concur.*

NOAA launch 1210, a 30-foot SeaArk with a draft of 0.5 meters, was used to collect all survey data. There were no unusual vessel configurations or problems encountered with the vessel. *Concur.*

An ODOM EchotracCV2, Fathometer, was used to collect all echo soundings on this survey. This echo sounder is a dual frequency instrument but is only used in high frequency with a single transducer. *Concur.*

A Klein 3000 side scan sonar, was used throughout this survey. The side scan sonar equipment was used to investigate AWOIS items. *Concur.*

A Trimble DGPS Beacon Receiver was used as the primary navigation station on launch 1210. *Concur.*

A Trimble Pathfinder ProXRS was used for all ENC high accuracy positioning and establishment of calibration points. *Concur.*

The Instruments used for determining corrections for the speed of sound through the water column were an ODOM Digibar Ser # 98295-020606 and a Seabird-Seacat Velocity Profiler, model 19-03, Ser# 198671-1477. CTD casts are downloaded and processed in the Velociwin program supplied by the Hydrographic Systems and Technology Program (HSTP). *Concur.*

### **B.2. QUALITY CONTROL**

Following the Field Procedures Manual and the NOS Hydrographic Surveys Specifications and Deliverables Manual, June 14, 2006 has insured the integrity of the survey data for F00548.

Differential GPS (DGPS) was used for all hydrographic data acquired on this survey. DGPS performance checks were conducted in accordance with FPM 3.4.4 by comparing the DGPS position of the vessel to a high accuracy (1<sup>st</sup> order) calibration point weekly. *Concur.*

*\* Filed with original field records.*

### **Echo Sounder Control**

Lead line comparisons were conducted weekly and compared to the digital depth and draft. The leadline log comparisons are in Appendix V\*. *Concur with clarification. Lead line comparisons were conducted and compared to the digital depth and draft three times throughout the duration of the survey.*

### **Side Scan Sonar Quality Control**

Daily confidence checks were conducted by observing side scan imagery in the vicinity of known contacts, such as buoys or sand waves. Side scan data were considered satisfactory if these contacts could be distinguished throughout the entire range of the side scan trace. The confidence checks were performed daily at 100/500kHz. *Concur.*

A coverage of 200% was obtained wherever possible in the required survey areas and where water depth and/or hazards permitted. Side scan sonar coverage was conducted to the 12-foot depth curve and single beam reduced line spacing was performed in other areas where warranted. The towfish was deployed off the starboard quarter of the vessel, which proved very stable. Distorted images caused by strong tidal currents, or sea state, were seen periodically. Significant contacts and shadows were processed with Caris HIPS/SIPS to determine the height off the bottom. The significant contacts were then compared by position, as well as common depth and relationship to channels to determine if further investigations were needed. All areas surveyed were track line/swath line plotted to insure complete coverage. *Concur.*

The system frequencies used were 100kHz and 500kHz. The recorder was set on one of either 50/75/100-meter range scales. There were no water depths greater than 35 meters. *Concur.*

When operating in shoaler waters (e.g. less than 30 meters deep), a short tow was required for the Klein system. When cable-out was approximately 4 meters or less, minor degradation of the side scan imagery resulted from the Odom EchoTrack CV2 echosounder. Traces were noted due to cross-talk between the two systems. *Concur.*

### **Junctions**

There are no Junctions for this survey. *Do not concur.*

<i>Registry Number</i>	<i>Year</i>	<i>Field Unit or Contractor</i>	<i>Scale</i>
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F00548 / NRT2

<i>H11411</i>	<i>2006</i>	<i>Thomas Jefferson</i>	<i>1:20,000</i>
<i>H11413</i>	<i>2007</i>	<i>Thomas Jefferson</i>	<i>1:20,000</i>
<i>H11722</i>	<i>2007</i>	<i>Thomas Jefferson</i>	<i>1:20,000</i>

*\* Filed with original field records.*

### **B.3. CORRECTIONS TO ECHO SOUNDING**

Velocwin SV and cast GP's have been inserted into the final Pydro PSS as suggested in the Field Procedures Manual. *Concur.*

The leadline log comparisons are in Appendix V\*. *Concur.*

There are no deviations to be discussed in this section. *Concur.*

### **C. VERTICAL AND HORIZONTAL CONTROL**

The Instruments used for determining corrections for the speed of sound through the water column were an ODOM Digibar and a Seabird-Seacat Velocity Profiler. CTD casts are downloaded and processed in the Velocwin program supplied by the Hydrographic Systems and Technology Program (HSTP). Corrections were applied to the sounding plot using the Carris HIPS. *Concur.*

Field soundings are corrected by verified tides data from NOAA/CO-OPS.

The Real Time Actual 6 min Tides are downloaded from:

"[http://co-ops.nos.noaa.gov/data\\_res.html](http://co-ops.nos.noaa.gov/data_res.html)", for all gauges required in the given projects defined by the ZDF file provided in the project letter, and instruction. Tide values are downloaded in blocks of data that covers the Times of Hydrography, and saved in a text file format. The MapInfo program is then used with the "HYDRO\_MI" pre-Survey function, of "Create Cowlis", this function converts the text file into a Caris tide file (.tid). The final soundings have discrete zoning (smooth tides) applied with ZDF from NOAA/CO-OPS. *Concur.*

All elevations and soundings on survey F00548 are based on MLLW unless otherwise specified. *Concur.*

A Request for Approved Tides letter was sent to <smooth.tides@noaa.gov> on Jan. 10, 2008. This request also includes the CORP.tab, the STNP.tab and LABP.tab all found in (Appendix IV\*). Final tidal zoning approval e-mail was received on Jan 25, 2008. *Concur.*

### **Horizontal Control**

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The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 17. The control reference station used for this survey was the USCG DGPS Beacon. *Concur.*

*\*Filed with original submission.*

Horizontal dilution of precision (HDOP) was monitored on Hypack daily on the survey platform. The value never exceeded 2.5 HDOP, and adequate satellite coverage was maintained throughout the survey period. All positioning equipment was operated in a manner consistent with the manufacturers requirements and as described in the DAPR. There were no equipment malfunctions which affected the positional quality of the data. *Concur.*

## D. RESULTS AND RECOMMENDATIONS

### **D.1 Chart Comparison**

There was one chart used for comparison on this survey: *Concur.*

<u>Chart Number</u>	<u>Edition</u>	<u>Edition Date</u>	<u>Scale</u>
11537	37th	Dec, 2006	1:40,000

<u>ENC Cell</u>	<u>Edition</u>	<u>Last Updated</u>	<u>Corresponding Chart</u>
US5NC12M	16	Jul. 27, 2007	11537

### **General Agreement with Charted soundings**

In general survey soundings compared with the charted soundings within two to three feet in the few regions where soundings were acquired. All charted soundings should be superseded by this survey. *Concur.*

**The following is a list of comparisons between the survey data and charted shoals or potentially hazardous features as well as notable sounding discrepancies on the chart:**

None *Concur.*

**The following is a list of comparisons with controlling depths, tabulated depths and reported depths of maintained channels:**

None *Concur with clarification. There were comparisons between controlling depths, tabulated depths and reported depths of maintained channels. Comparisons were done with no notable discrepancies.*

### **AWOIS Item Investigations**

There were eight AWOIS items within the survey limits of F00548. The detailed documentation for these features can be found in the PSS in Pydro and Appendix V. *Concur with clarification. The detailed documentation for these AWOIS items is not found in Appendix V.*

The AWOIS item search results are as follows:

<b><u>Record #</u></b>	<b><u>Method</u></b>	<b><u>Recommendation</u></b>
14061	200% SSS	Exists, buried wreck debris (insignificant)
14062	200% SSS	Exists, revise or remove (insignificant)
14063	200% SSS	Exists, revise or remove (insignificant)
14064	200% SSS	Does not exist, remove from chart
14065	200% SSS	Does not exist, remove from chart
14066	200% SSS	Exists, revise or remove (insignificant)
14067	200% SSS	Does not exist, remove from chart
14068	200% SSS	Exists, inside foul limit

**The following is a list of charted features that were investigated on F00548 that contain the label PA, ED, PD or Rep that were not assigned as AWOIS or CEF investigation:**

1. A pile at 34° 11' 26.93" N, 077° 57' 21.32" W, was found with 200% side scan sonar lying flat on the bottom. The pile is insignificant in projection and is of no danger to navigation. This feature should be removed from the chart. *Concur.*

### **Dangers to Navigation**

There were three DTONS and five Anti-DTON's within the confines of F00548. The Anti-Dton's were sent in advance to MCD in a zip file via e-mail transmission on Dec. 4, 2007 and the DTON's were sent on Jan. 9, 2008. Detailed information can be found in Appendix I. *Concur.*

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## **D. 2. ADDITIONAL RESULTS**

### **Aids to Navigation and Other Detached Positions**

Navigation Aids serve their intended purpose. Charted positions should be superseded by new survey positions. The MCD requested ATON Report F00548 is located in Appendix V. The .mdb database was submitted to Chris Hare at NSD via CD for distribution. No action by Atlantic Hydrographic Branch is required for these features. *Concur.*

### **Ferry Routes**

There are three ferry routes within the confines of F00548. *Concur.*

### **Submarine Cables and Pipelines**

There are numerous submerged cables and pipelines on the Cape Fear River. Visual examinations of these charted features find them adequately charted and noted. *Concur.*

### **Bridges**

There are two bridges within the confines of F00548. Horizontal and Vertical clearances are adequately charted. *Concur.*

## APPENDIX I

### DANGERS TO NAVIGATION REPORT

# DTON Report F00548

**Registry Number:** F00548  
**State:** North Carolina  
**Locality:** Wilmington  
**Sub-locality:** Wilmington to Southport  
**Project Number:** OPR-G309-NRT2-07  
**Survey Dates:** 11/06/2007 - 12/06/2007

## Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11537	37th	12/01/2006	1:40,000 (11537_1)	USCG LNM: 04/01/2008 (06/03/2008) NGA NTM: 06/21/1997 (06/07/2008)
11537	37th	12/01/2006	1:40,000 (11537_2)	USCG LNM: 04/01/2008 (06/03/2008) NGA NTM: 02/23/2002 (06/07/2008)
11534	34th	08/01/2006	1:40,000 (11534_1)	[L]NTM: ?
11539	18th	07/14/2001	1:80,000 (11539_1)	[L]NTM: ?
11536	18th	05/01/2005	1:80,000 (11536_1)	[L]NTM: ?
11520	42nd	09/01/2005	1:432,720 (11520_1)	[L]NTM: ?
11009	37th	07/01/2004	1:1,200,000 (11009_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	605/1 LD =22ft @ mllw in area of Awois# 14067	Wreck	6.78 m	34° 13' 28.0" N	077° 57' 15.4" W	14067
1.2	438/1 LD= 40ft @ mllw Awois# 14066	Sounding	12.12 m	34° 13' 19.4" N	077° 57' 15.1" W	14066
1.3	878/1 LD=18ft @ mllw Awois# 14065	Wreck	5.67 m	34° 13' 13.9" N	077° 57' 19.8" W	14065
1.4	1497/1 LD=33ft @ mllw Awois# 14064	Sounding	9.99 m	34° 12' 37.0" N	077° 57' 32.2" W	14064
1.5	669/1 LD=42ft @ mllw, near charted pile	Sounding	12.93 m	34° 11' 26.9" N	077° 57' 21.7" W	---
1.6	USCG LL # 39840	GP	[None]	34° 03' 04.0" N	077° 55' 28.5" W	---
1.7	USCG LL # 30380 FL R "2"	GP	[None]	33° 52' 39.4" N	078° 00' 07.3" W	---
1.8	USCG LL # 30375 FL G "1"	GP	[None]	33° 52' 40.1" N	078° 00' 06.6" W	---

**1.1) 605/1 LD =22ft @ mllw in area of Awois# 14067****DANGER TO NAVIGATION****Primary Feature for AWOIS Item #14067**

**Search Position:** 34° 13' 30.6" N, 077° 57' 17.0" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** VS, S2, ES, DI  
**Technique Notes:** [None]

**History Notes:**

L1693/74-- USPS; ADDED VISIBLE WRECK TO CHART AT 34/13/30.61 - 077/57/16.98, NAD 83. BUT THE CHART POSITION IS 34/13/28.52 - 077/57/15.88. (ENTERED CEH 9/2007).■■■OPR-G309-NRT2-07 F00548,2007: 200% sss operation were conducted in this area. The area in question is an active tug and barge operational wharf. No signs of a vis, or subm wreck were indintified. SSS imagery should bottom to shore underneath moored barges.■■■Recommend Removal of the charted Vis Wrk from the charts.RWR

**Survey Summary**

**Survey Position:** 34° 13' 28.0" N, 077° 57' 15.4" W  
**Least Depth:** 6.78 m (= 22.25 ft = 3.708 fm = 3 fm 4.25 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.15:14:37.976 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 005\_1513  
**Profile/Beam:** 605/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

200% sss operation were conducted in this area. The area in question is an active tug and barge operational wharf. No signs of a vis, or subm wreck were indintified. SSS imagery showed bottom to shore underneath moored barges. Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/005_1513	605/1	0.00	000.0	Primary
AWOIS	AWOIS # 14067	89.82	154.1	Secondary (grouped)

## Hydrographer Recommendations

Recommend Removal of the charted Vis Wrk from the charts.

### Cartographically-Rounded Depth (Affected Charts):

22ft (11537\_2, 11539\_1)

3 ¾fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
CONVIS - 2:not visual conspicuous  
INFORM - Awois 14067.  
SORDAT - 20071212  
SORIND - US,US,nsurf,FOO548  
TECSOU - 13:swept by side-scan sonar  
VALSOU - 6.782 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur with field unit assessment - remove Vis WK from charts.

Feature has already been removed from continual update raster chart, as of 11 APR 2008.

### Feature Images

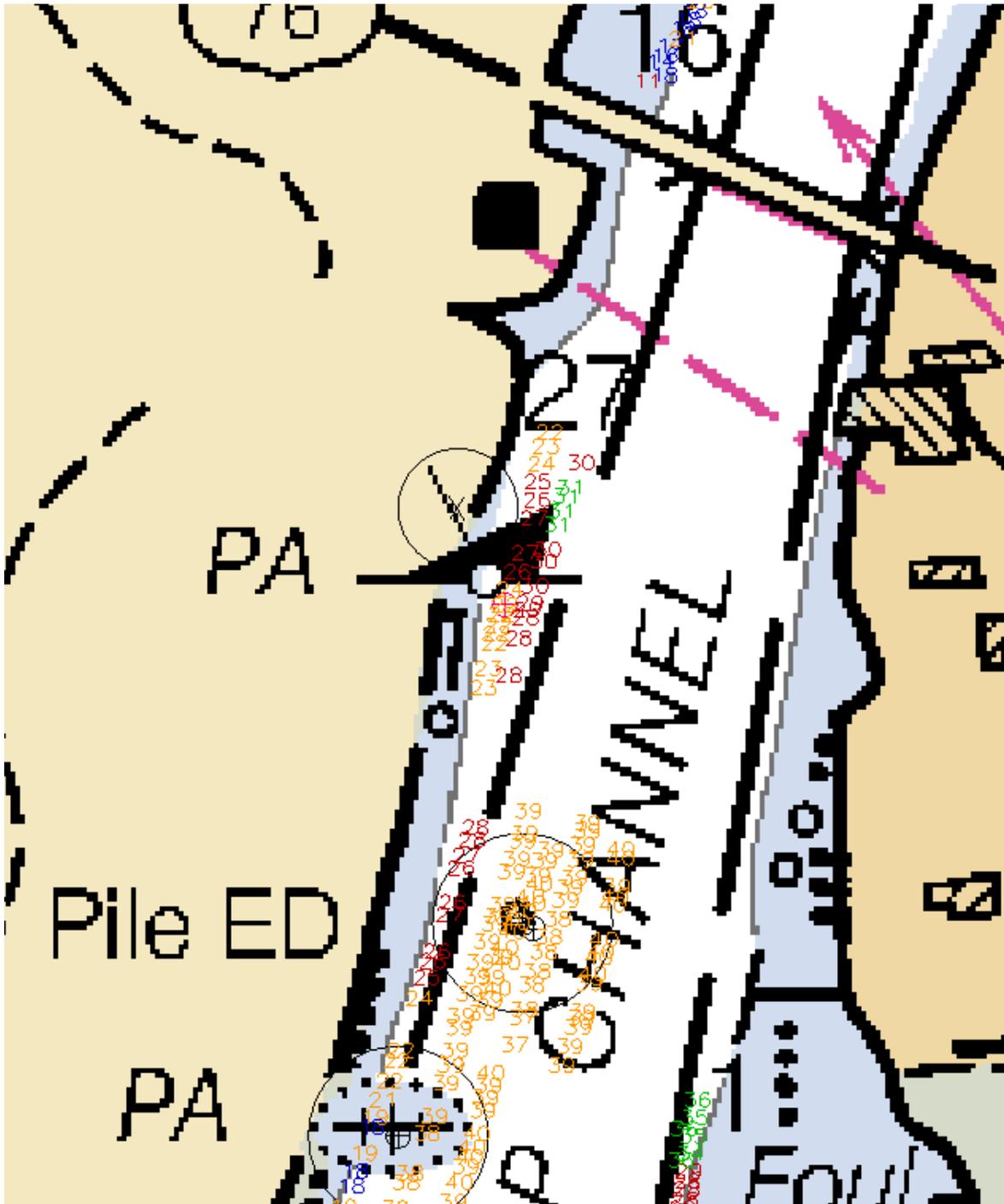


Figure 1.1.1

**1.2) 438/1 LD= 40ft @ mllw Awois# 14066****DANGER TO NAVIGATION****Primary Feature for AWOIS Item #14066**

**Search Position:** 34° 13' 19.4" N, 077° 57' 14.9" W  
**Historical Depth:** [None]  
**Search Radius:** 75  
**Search Technique:** VS, ES, S2, DI,  
**Technique Notes:** [None]

**History Notes:**

L1693/74- USPS; A VISIBLE PILE WAS ADDED AT 34/13.4 - 77/57.2 NAD27, CONVERT TO NAD83 IS 34/13/24.61 - 77/57/10.96. BUT THE CHART LOCATION ON THE CHART IS 34/13/19.42 - 77/57/14.87. THE OBSTRUCTION IS LABELED PA FOR APPROXIMATE POSITION. THIS WAS ADDED TO THE CHART SOMETIME BETWEEN 1974 - 1976. (ENTERED CEH 9/2007).■■■OPR-G309-NRT2-07 F00548,2007: 200% sss identified very small contact of a pile FOB. This item is deemed insignificant for charting.■■■Recommend Removal.RWR

**Survey Summary**

**Survey Position:** 34° 13' 19.4" N, 077° 57' 15.1" W  
**Least Depth:** 12.12 m (= 39.76 ft = 6.627 fm = 6 fm 3.76 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.15:30:53.660 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 008\_1530  
**Profile/Beam:** 438/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

200% sss identified very small contact of a pile FOB. This item is deemed insignificant for charting.

Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/008_1530	438/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106152100	0001	4.38	190.8	Secondary

AWOIS	AWOIS # 14066	4.71	276.1	Secondary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106152400	0003	14.62	290.9	Secondary

## Hydrographer Recommendations

Recommend Removal.

### Cartographically-Rounded Depth (Affected Charts):

40ft (11537\_2, 11539\_1)

6 ½fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Pile (PILPNT)

**Attributes:** CATPLE - 3:post

CONDTN - 2:ruined

CONVIS - 2:not visual conspicuous

INFORM - Awois# 14066 Recommend Removal

## Office Notes

Concur with clarification. Feature is deeper than controlling depth - remove charted pile from chart.

Feature has already been removed from continual update raster chart, as of 11 APR 2008.

### Feature Images

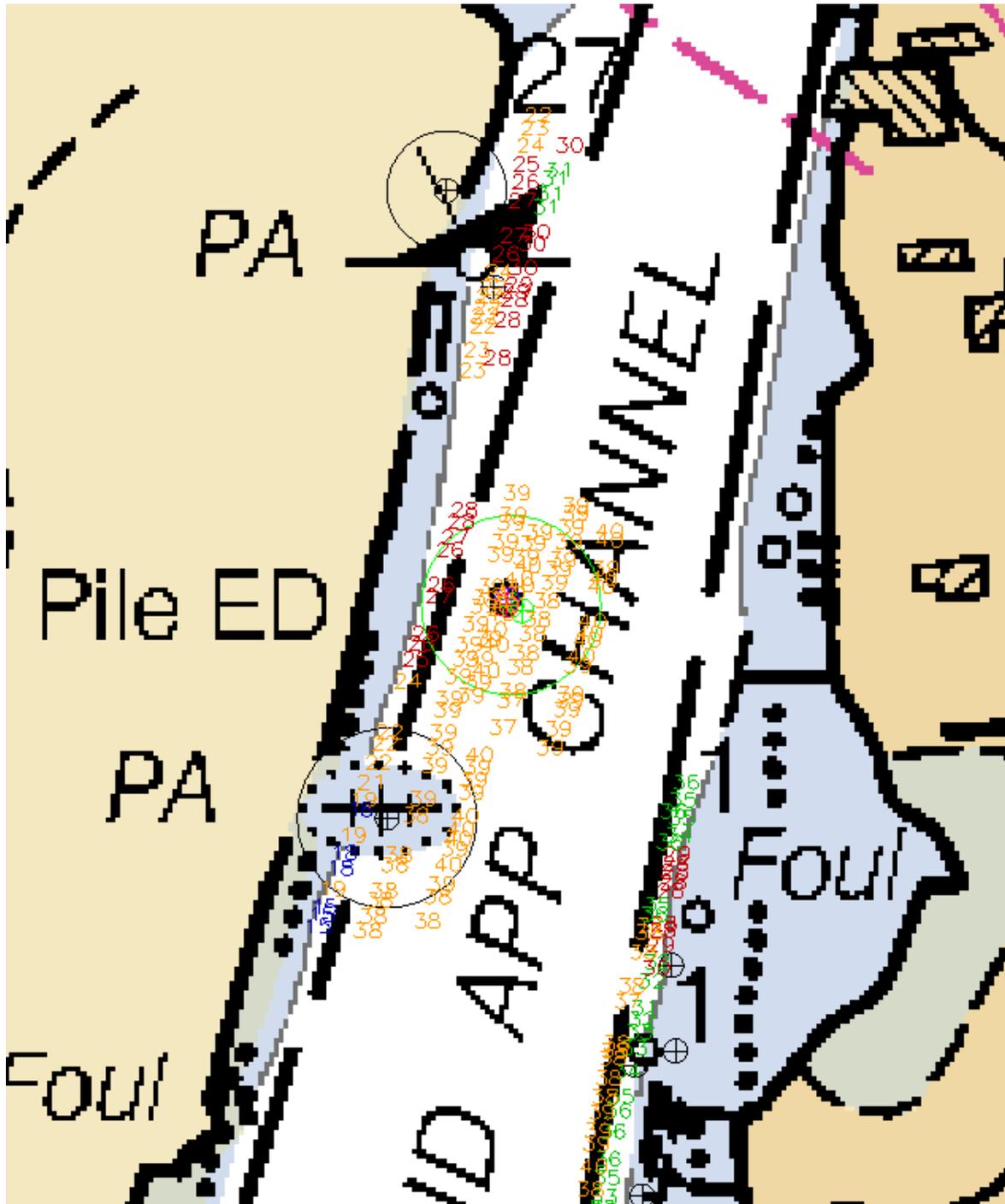


Figure 1.2.1

**1.3) 878/1 LD=18ft @ mllw Awois# 14065****DANGER TO NAVIGATION****Primary Feature for AWOIS Item #14065**

**Search Position:** 34° 13' 13.7" N, 077° 57' 18.9" W  
**Historical Depth:** [None]  
**Search Radius:** 75  
**Search Technique:** S2, ES, DI, SD  
**Technique Notes:** [None]

**History Notes:**

\*\*\*\*UNKNOWN SOURCE-- A SUBMERGED DANGEROUS WRECK WAS CHARTED AT 34°13'13.68" - 077°57'18.92", SOMETIME BETWEEN 1976 - 1978. (ENTERED CEH 9/2007)■■■OPR-G309-NRT2-07 F00548,2007: 200% sss was conducted in the search area, with no indication of the charted subm wreck identified.■■■ Recommend Removal of charted subm Wrk.■■■■Recommend Removal.RWR

**Survey Summary**

**Survey Position:** 34° 13' 13.9" N, 077° 57' 19.8" W  
**Least Depth:** 5.67 m (= 18.59 ft = 3.099 fm = 3 fm 0.59 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.15:39:43.227 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 012\_1538  
**Profile/Beam:** 878/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

200% sss was conducted in the search area, with no indication of the charted subm wreck identified. Recommend Removal of charted subm Wrk.

Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/012_1538	878/1	0.00	000.0	Primary
AWOIS	AWOIS # 14065	23.55	288.9	Secondary

## Hydrographer Recommendations

Remove Charted subm Wrk.

### Cartographically-Rounded Depth (Affected Charts):

18ft (11537\_2, 11539\_1)

3fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
CONVIS - 2:not visual conspicuous  
INFORM - Awois#14065.  
SORDAT - 20071212  
SORIND - US,US,nsurf,F00548  
TECSOU - 13:swept by side-scan sonar  
VALSOU - 5.667 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur with clarification. Feature has already been removed from continual update raster chart, as of 11 APR 2008. Concur with removal based upon the scale of the largest scale chart and the distance between the channel limits and shore. Additionally, it is not navigationally significant.

### Feature Images

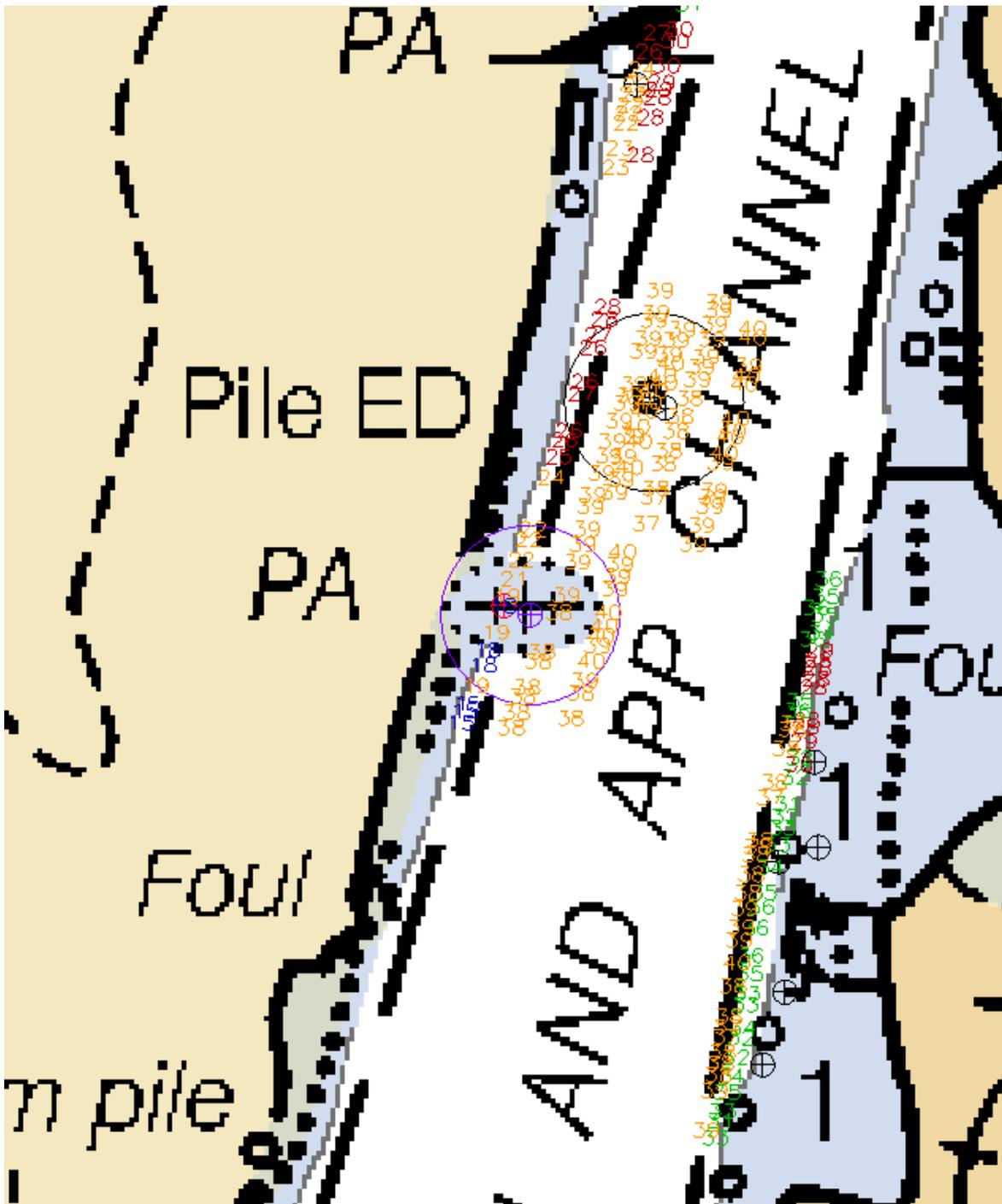


Figure 1.3.1

**1.4) 1497/1 LD=33ft @ mllw Awois# 14064****DANGER TO NAVIGATION****Primary Feature for AWOIS Item #14064**

**Search Position:** 34° 12' 37.0" N, 077° 57' 31.9" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** VS, DI, S2, ES  
**Technique Notes:** [None]

**History Notes:**

\*\*\*\*UNKNOWN SOURCE-- A VISIBLE LOG IS WAS CHARTED AT 34°12'36.95" - 077°57'31.87", IN THE CHANNEL, SOMETIME BETWEEN 1978- 1981. (ENTERED CEH 9/2007)■■■OPR-G309-NRT2-07 F00548,2007 : 200% sss was conducted in the search area, with no indication of the charted pile identified.■■■Recommend Removal.RWR

**Survey Summary**

**Survey Position:** 34° 12' 37.0" N, 077° 57' 32.2" W  
**Least Depth:** 9.99 m (= 32.76 ft = 5.460 fm = 5 fm 2.76 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.16:34:27.264 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 015\_1632  
**Profile/Beam:** 1497/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

200% sss was conducted in the search area, with no indication of the charted pile identified.  
 Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/015_1632	1497/1	0.00	000.0	Primary
AWOIS	AWOIS # 14064	8.90	282.5	Secondary

## Hydrographer Recommendations

Recommend Removal.

### Cartographically-Rounded Depth (Affected Charts):

33ft (11537\_2, 11539\_1)

5 ½fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
CONVIS - 2:not visual conspicuous  
INFORM - Awois #14064, Recommend Removal

## Office Notes

Concur with field unit assessment - remove charted pile.

Feature has already been removed from continual update raster chart, as of 11 APR 2008.

### Feature Images

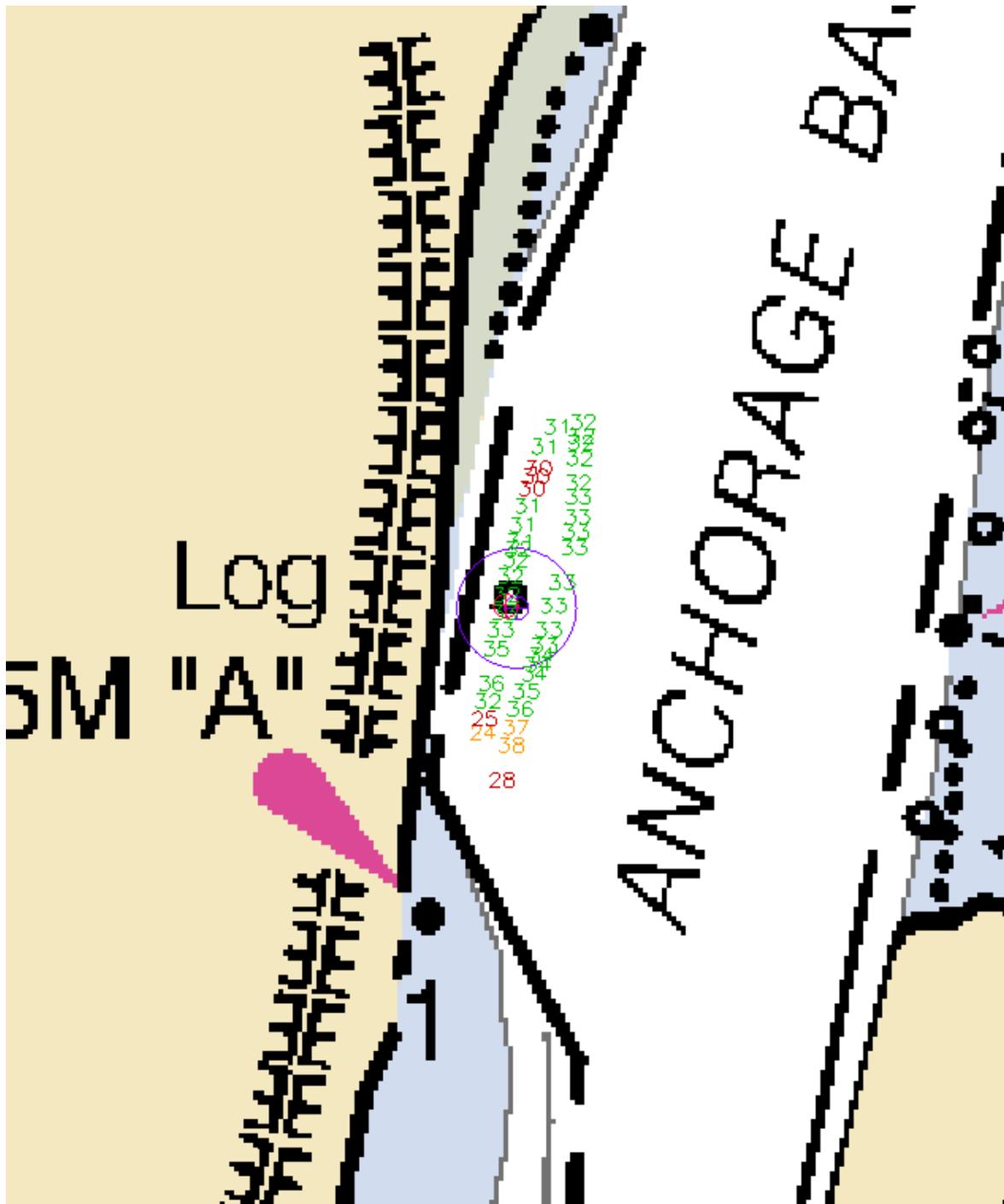


Figure 1.4.1

**1.5) 669/1 LD=42ft @ mllw, near charted pile****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 34° 11' 26.9" N, 077° 57' 21.7" W  
**Least Depth:** 12.93 m (= 42.41 ft = 7.069 fm = 7 fm 0.41 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.17:20:53.545 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 018\_1720  
**Profile/Beam:** 669/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

Subm pile FOB. This Item lies against the wharf face and poses no DTON as it is lying flat with no relief.  
 Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/018_1720	669/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106171700	0002	9.80	271.0	Secondary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106172000	0001	10.65	289.1	Secondary

**Hydrographer Recommendations**

Recommend Removal from the Charts.

**Cartographically-Rounded Depth (Affected Charts):**

42ft (11537\_2, 11539\_1)

7fm (11520\_1, 11009\_1)

**S-57 Data**

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined

CONVIS - 2: not visual conspicuous

INFORM - Recommend Removal

## Office Notes

Concur with field unit assessment - remove subm pile.

Feature has already been removed from continual update raster chart, as of 11 APR 2008.

### Feature Images

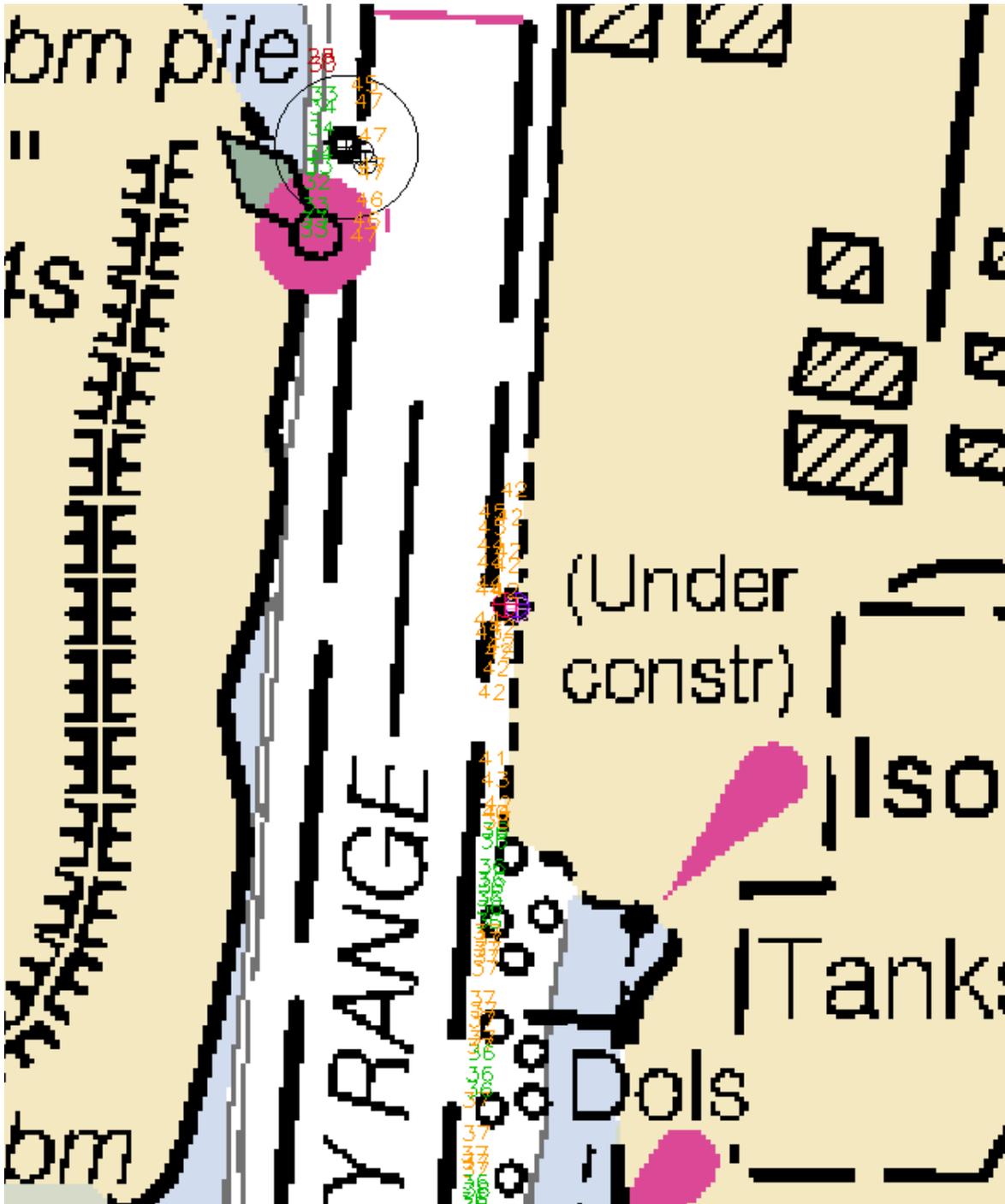
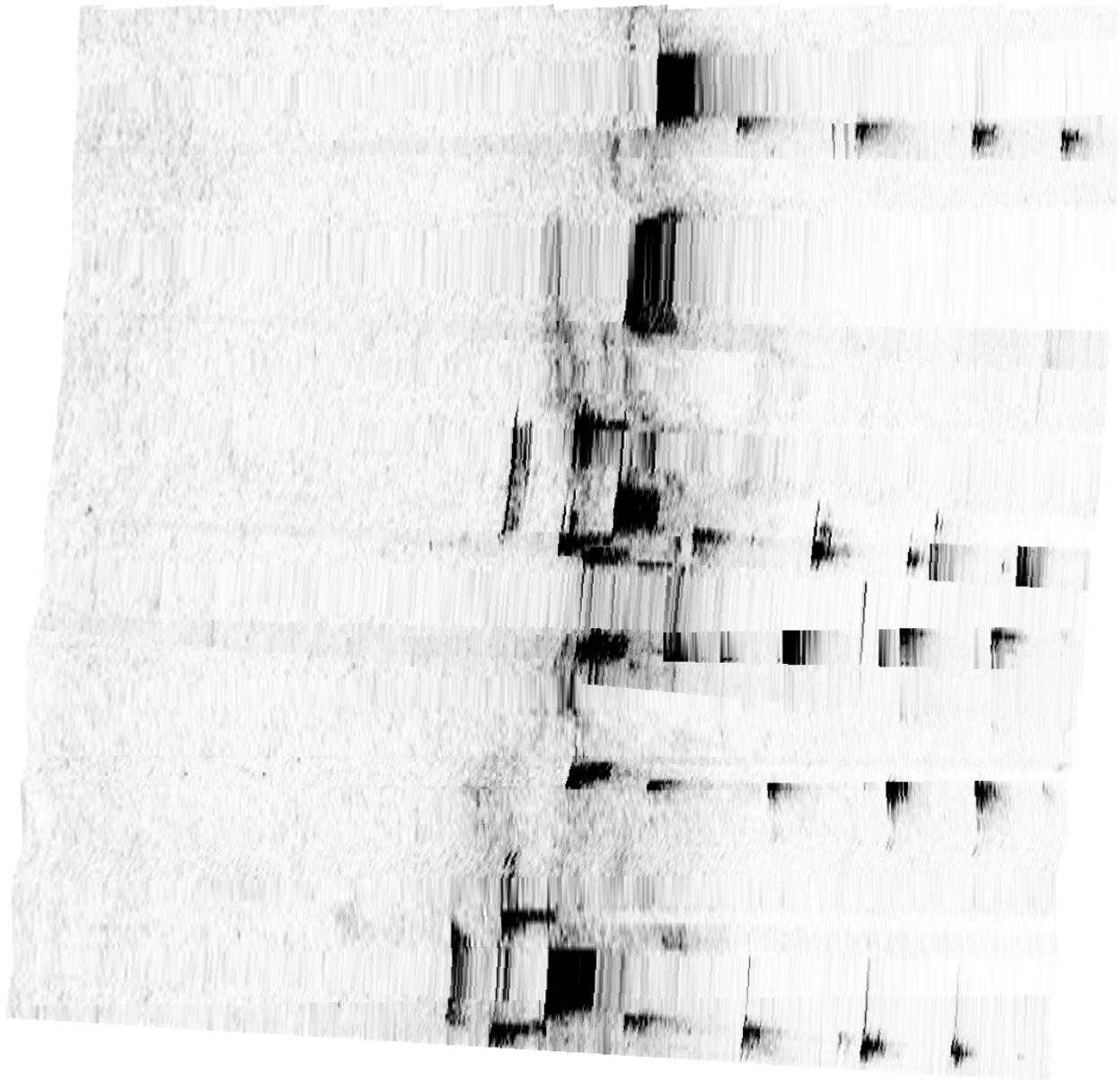


Figure 1.5.1



*Figure 1.5.2*

**1.6) USCG LL # 39840****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 34° 03' 04.0" N, 077° 55' 28.5" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-340.09:50:33.000 (12/06/2007)  
**GP Dataset:** 2007 340.mdb  
**GP No.:** 2  
**Charts Affected:** 11534\_1, 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

Q R

Trimble High Accuracy position obtained of this LT during ATON action request in project Instruction Letter.

39840 SNOWS CUT RANGE FRONT LIGHT B 34 03 19 N 77 55 23 W Q R 20 KWR-I on multi-pile structure.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
2007 340.mdb	2	0.00	000.0	Primary

**Hydrographer Recommendations**

Modify position

**S-57 Data**

**Geo object 1:** Beacon, safe water (BCNSAW)  
**Attributes:** BCNSHP - 3:beacon tower  
 COLOUR - 1,11:white,orange  
 COLPAT - 2,6:vertical stripes,border stripes  
 CONRAD - 1:radar conspicuous  
 HEIGHT - 6.38 m  
 INFORM - USCG LL # 39840

VERDAT - 3:Mean sea level

**Geo object 2:** Light (LIGHTS)

**Attributes:** CATLIT - 1,12:directional function,front  
COLOUR - 3:red  
HEIGHT - 6.38 m  
INFORM - USCG LL # 39840  
LITCHR - 4:quick-flashing  
VERDAT - 3:Mean sea level

## Office Notes

**Concur with clarification - defer to MCD for charting recommendation.**

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/Photos/Ranges Lights/Snows Cut FNT RNG LT B.JPG does not exist.]

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/USCG LL39840.png does not exist.]

**1.7) USCG LL # 30380 FL R "2"****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 33° 52' 39.4" N, 078° 00' 07.3" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-339.10:46:17.000 (12/05/2007)  
**GP Dataset:** 2007 339 300series.mdb  
**GP No.:** 1  
**Charts Affected:** 11534\_1, 11537\_1, 11536\_1, 11520\_1, 11009\_1

**Remarks:**

Baldhead Isl Marine Jetty LT 2 Fl R 2.5s

Trimble High Accuracy position obtained of this LT during ATON action request in project Instruction Letter.

30380 BALD HEAD ISLAND MARINE JETTY LIGHT 2 33 52 36 N 78 00 12 W Fl R 2.5s 12 On concrete wall.  
 Private aid.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
2007 339 300series.mdb	1	0.00	000.0	Primary

**Hydrographer Recommendations**

Add to charts.

**S-57 Data**

**Geo object 1:** Beacon, lateral (BCNLAT)  
**Attributes:** BCNSHP - 5:pile beacon  
 CATLAM - 2:starboard-hand lateral mark  
 COLOUR - 3:red  
 CONRAD - 1:radar conspicuous  
 HEIGHT - 4.61 m  
 INFORM - USCG LL # 30380 FL R "2"

VERDAT - 3:Mean sea level

**Geo object 2:** Light (LIGHTS)

**Attributes:** COLOUR - 3:red  
HEIGHT - 4.61 m  
INFORM - USCG LL # 30380 FL R "2"  
LITCHR - 2:flashing  
SIGPER - 2.5 s  
VERDAT - 3:Mean sea level

## Office Notes

**Concur with clarification - defer to MCD for charting recommendation.**

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/Photos/Ranges Lights/Baldhead Island Channel LTS inbound.JPG does not exist.]

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/Photos/Ranges Lights/Baldhead Island Channel LTS outbound.JPG does not exist.]

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/USCG LL30380.png does not exist.]

**1.8) USCG LL # 30375 FL G "1"****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 33° 52' 40.1" N, 078° 00' 06.6" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-339.10:59:17.000 (12/05/2007)  
**GP Dataset:** 2007 339 300series.mdb  
**GP No.:** 2  
**Charts Affected:** 11534\_1, 11537\_1, 11536\_1, 11520\_1, 11009\_1

**Remarks:**

Baldhead Isl Marine Jetty LT 1 Fl G 2.5s

Trimble High Accuracy position obtained of this LT during ATON action request in project Instruction Letter.

30375 BALD HEAD ISLAND MARINE JETTY LIGHT 1 33 52 42 N 78 00 06 W Fl G 2.5s 12 On concrete wall.  
 Private aid.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
2007 339 300series.mdb	2	0.00	000.0	Primary

**Hydrographer Recommendations**

Add to charts.

**S-57 Data**

**Geo object 1:** Beacon, lateral (BCNLAT)  
**Attributes:** BCNSHP - 5:pile beacon  
 CATLAM - 1:port-hand lateral mark  
 COLOUR - 4:green  
 COLPAT - 4:squared  
 CONRAD - 1:radar conspicuous  
 HEIGHT - 4.35 m

INFORM - USCG LL # 30375 FL G "1"  
VERDAT - 3:Mean sea level

**Geo object 2:** Light (LIGHTS)

**Attributes:** COLOUR - 4:green  
HEIGHT - 4.35 m  
INFORM - USCG LL # 30375 FL G "1"  
LITCHR - 2:flashing  
SIGPER - 2.5 s  
VERDAT - 3:Mean sea level

## Office Notes

Concur with clarification - defer to MCD for charting recommendation.

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/USCG LL30375.png does not exist.]

**APPENDIX II**  
**SURVEY FEATURES REPORT**

# F-00548 DR Report

**Registry Number:** F00548  
**State:** North Carolina  
**Locality:** Wilmington  
**Sub-locality:** Wilmington to Southport  
**Project Number:** OPR-G309-NRT2-07  
**Survey Dates:** 11/06/2007 - 12/12/2007

This report was generated by PYDRO 7.3.0{r2239} after final review of data sets obtained during this survey.

## Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11537	37th	12/01/2006	1:40,000 (11537_1)	USCG LNM: 04/01/2008 (06/03/2008) NGA NTM: 06/21/1997 (06/07/2008)
11537	37th	12/01/2006	1:40,000 (11537_2)	USCG LNM: 04/01/2008 (06/03/2008) NGA NTM: 02/23/2002 (06/07/2008)
11534	34th	08/01/2006	1:40,000 (11534_1)	[L]NTM: ?
11539	18th	07/14/2001	1:80,000 (11539_1)	[L]NTM: ?
11536	18th	05/01/2005	1:80,000 (11536_1)	[L]NTM: ?
11520	42nd	09/01/2005	1:432,720 (11520_1)	[L]NTM: ?
11009	37th	07/01/2004	1:1,200,000 (11009_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	327/1 LD= 8ft @ mllw	Rock	2.45 m	34° 10' 48.2" N	077° 57' 42.0" W	---
2.1	North dol	Dolphin	-4.77 m	34° 13' 07.0" N	077° 57' 10.8" W	---
2.2	mooring bit	Dolphin	-1.75 m	34° 13' 01.5" N	077° 57' 11.4" W	---
2.3	mooring dol	Dolphin	-3.74 m	34° 13' 03.5" N	077° 57' 10.6" W	---
2.4	mooring dol	Dolphin	-3.73 m	34° 13' 07.4" N	077° 57' 09.6" W	---
2.5	mooring bit	Dolphin	-1.73 m	34° 13' 09.7" N	077° 57' 09.7" W	---
2.6	412/1 LD= 46ft @ mllw	Sounding	14.08 m	34° 10' 57.9" N	077° 57' 28.5" W	---
2.7	466/1 LD= 44ft @ mllw	Sounding	13.40 m	34° 10' 42.5" N	077° 57' 27.2" W	---

2.8	400/1 LD= 43ft @ mllw	Sounding	13.28 m	34° 10' 37.6" N	077° 57' 27.6" W	---
3.1	sss contact on Awois# 14066 subm wrk	Wreck	[None]	34° 13' 44.8" N	077° 57' 10.8" W	14068
3.2	681/1 LD=41ft @ mllw Awois# 14063	Obstruction	12.68 m	34° 11' 39.1" N	077° 57' 26.4" W	14063
3.3	536/1 LD=14ft @ mllw Awois# 14061	Wreck	4.34 m	34° 01' 17.5" N	077° 56' 13.8" W	14061
3.4	999/1 LD= 13ft @ mllw Awois# 14062	Obstruction	4.17 m	34° 01' 44.3" N	077° 56' 12.3" W	14062
4.1	605/1 LD =22ft @ mllw in area of Awois# 14067	Wreck	6.78 m	34° 13' 28.0" N	077° 57' 15.4" W	14067
4.2	438/1 LD= 40ft @ mllw Awois# 14066	Sounding	12.12 m	34° 13' 19.4" N	077° 57' 15.1" W	14066
4.3	878/1 LD=18ft @ mllw Awois# 14065	Wreck	5.67 m	34° 13' 13.9" N	077° 57' 19.8" W	14065
4.4	1497/1 LD=33ft @ mllw Awois# 14064	Sounding	9.99 m	34° 12' 37.0" N	077° 57' 32.2" W	14064
4.5	669/1 LD=42ft @ mllw, near charted pile	Sounding	12.93 m	34° 11' 26.9" N	077° 57' 21.7" W	---
4.6	USCG LL # 39840	GP	[None]	34° 03' 04.0" N	077° 55' 28.5" W	---
4.7	USCG LL # 30380 FL R "2"	GP	[None]	33° 52' 39.4" N	078° 00' 07.3" W	---
4.8	USCG LL # 30375 FL G "1"	GP	[None]	33° 52' 40.1" N	078° 00' 06.6" W	---

# **1 - Charted Features**

**1.1) Profile/Beam - 327/1 from f00548 / nrt2\_1210\_sb / 2007-337 / 064\_1410****Survey Summary**

**Survey Position:** 34° 10' 48.2" N, 077° 57' 42.0" W  
**Least Depth:** 2.45 m (= 8.03 ft = 1.339 fm = 1 fm 2.03 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-337.14:10:57.542 (12/03/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-337 / 064\_1410  
**Profile/Beam:** 327/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

SSS operations verified charted rock. Development over area obtained LD= 8ft @ mllw. This is a peak depth on a large area rise.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-337/064_1410	327/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106175700	0001	10.18	115.7	Secondary
ChartGPs - Digitized	1	24.72	268.8	Secondary (grouped)

**Hydrographer Recommendations**

Retain RK

**Cartographically-Rounded Depth (Affected Charts):**

8ft (11537\_2, 11539\_1)

1 ¼fm (11520\_1, 11009\_1)

**S-57 Data**

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 6:least depth known  
 SORDAT - 20071212  
 SORIND - US,US,nsurf,FOO548  
 TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VALSOU - 2.449 m

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur with clarification. Chart submerged rock least depth known 8 feet at latitude 34.18004238 and longitude -077.96167356.

### Feature Images

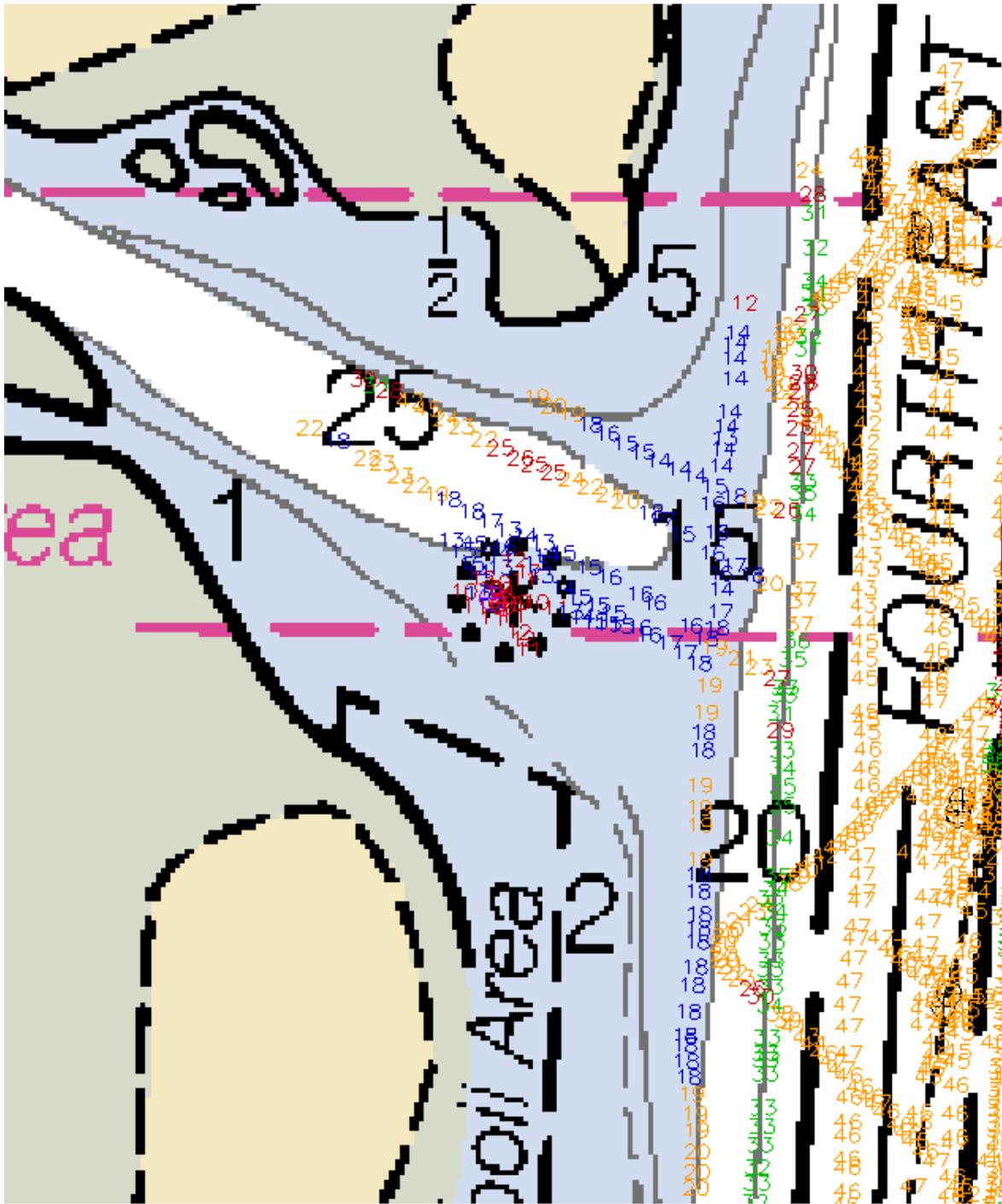


Figure 1.1.1

## **2 - New Features**

## 2.1) Profile/Beam - 1/1 from f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef

### Survey Summary

**Survey Position:** 34° 13' 07.0" N, 077° 57' 10.8" W  
**Least Depth:** -4.77 m (= -15.65 ft = -2.609 fm = -2 fm 3.65 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.16:01:41.000 (11/06/2007)  
**DP Dataset:** f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef  
**Profile/Beam:** 1/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

CEF 43 attached by catwalk to bulk liquid transfer pier.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_dpnonechosounder/2007-310/dn310 dps tgts nc0503 cef	1/1	0.00	000.0	Primary

### Hydrographer Recommendations

Remove all currently charted dols in this area and chart new positioned dols.

#### Cartographically-Rounded Depth (Affected Charts):

-16ft (11537\_2, 11539\_1)

-2 ½fm (11520\_1, 11009\_1)

### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)

**Attributes:** CATMOR - 1:dolphin

CONRAD - 1:radar conspicuous

HEIGHT - 4.77 m

SORDAT - 20071212

SORIND - US,US,survy,FOO548

STATUS - 1:permanent

VERDAT - 12:Mean lower low water

WATLEV - 2:always dry

## Office Notes

QUA: GPSmode=2, SVs=8, HDOP=1.20

Concur with field unit assessment - update position of dols at latitude 34.21862266 and longitude -077.95301136.

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto  
chartlets/tmp8eemwz.ac.png does not exist.]

## 2.2) Profile/Beam - 2/1 from f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef

### Survey Summary

**Survey Position:** 34° 13' 01.5" N, 077° 57' 11.4" W  
**Least Depth:** -1.75 m (= -5.73 ft = -0.955 fm = 0 fm 0.27 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.16:08:03.000 (11/06/2007)  
**DP Dataset:** f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef  
**Profile/Beam:** 2/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

CEF 44

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_dpnonechosounder/2007-310/dn310 dps tgts nc0503 cef	2/1	0.00	000.0	Primary

### Hydrographer Recommendations

Remove all currently charted dols in this area and chart new positioned dols.

#### Cartographically-Rounded Depth (Affected Charts):

-6ft (11537\_2, 11539\_1)

1fm (11520\_1, 11009\_1)

### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)

**Attributes:** BOYSHP - 2:can (cylindrical)

CATMOR - 1:dolphin

COLOUR - 2:black

CONRAD - 2:not radar conspicuous

HEIGHT - 1.75 m

SORDAT - 20071212

SORIND - US,US,survey,FOO548

STATUS - 1:permanent

VERDAT - 12:Mean lower low water

WATLEV - 2:always dry

## Office Notes

QUA: GPSmode=2, SVs=9, HDOP=1.00

Concur with field unit assessment - update position of dols at latitude 34.21709648 and longitude -077.95315912.

[Image file E:/Caris/Hips/HDCA\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto  
chartlets/tmpmiqwcf.ac.png does not exist.]

## 2.3) Profile/Beam - 3/1 from f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef

### Survey Summary

**Survey Position:** 34° 13' 03.5" N, 077° 57' 10.6" W  
**Least Depth:** -3.74 m (= -12.26 ft = -2.043 fm = -2 fm 0.26 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.16:10:48.000 (11/06/2007)  
**DP Dataset:** f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef  
**Profile/Beam:** 3/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

CEF 44

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_dpnonechosounder/2007-310/dn310 dps tgts nc0503 cef	3/1	0.00	000.0	Primary

### Hydrographer Recommendations

Remove all currently charted dols in this area and chart new positioned dols.

#### Cartographically-Rounded Depth (Affected Charts):

-13ft (11537\_2, 11539\_1)

-2fm (11520\_1, 11009\_1)

### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)

**Attributes:** CATMOR - 1:dolphin

CONRAD - 1:radar conspicuous

HEIGHT - 3.74 m

SORDAT - 20071212

SORIND - US,US,survy,FOO548

STATUS - 1:permanent

VERDAT - 12:Mean lower low water

WATLEV - 2:always dry

## Office Notes

QUA: GPSmode=2, SVs=9, HDOP=1.00

Concur with field unit assessment. Update position of dols at latitude 34.21764216 and longitude -077.95294890.

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/tmpgfai50.ac.png does not exist.]

## 2.4) Profile/Beam - 4/1 from f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef

### Survey Summary

**Survey Position:** 34° 13' 07.4" N, 077° 57' 09.6" W  
**Least Depth:** -3.73 m (= -12.24 ft = -2.040 fm = -2 fm 0.24 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.16:12:21.000 (11/06/2007)  
**DP Dataset:** f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef  
**Profile/Beam:** 4/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

CEF 43

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_dpnonechosounder/2007-310/dn310 dps tgts nc0503 cef	4/1	0.00	000.0	Primary

### Hydrographer Recommendations

Remove all currently charted dols in this area and chart new positioned dols.

#### Cartographically-Rounded Depth (Affected Charts):

-12ft (11537\_2, 11539\_1)

-2fm (11520\_1, 11009\_1)

### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)

**Attributes:** CATMOR - 1:dolphin

CONRAD - 1:radar conspicuous

HEIGHT - 3.73 m

SORDAT - 20071212

SORIND - US,US,survy,FOO548

STATUS - 1:permanent

VERDAT - 12:Mean lower low water

WATLEV - 2:always dry

## Office Notes

QUA: GPSmode=2, SVs=9, HDOP=1.00

Concur with field unit assessment - update position of dols at latitude 34.21873107 and longitude -077.95265303.

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/tmpvpr8pu.ac.png does not exist.]

## 2.5) Profile/Beam - 5/1 from f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef

### Survey Summary

**Survey Position:** 34° 13' 09.7" N, 077° 57' 09.7" W  
**Least Depth:** -1.73 m (= -5.66 ft = -0.943 fm = 0 fm 0.34 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.16:13:40.000 (11/06/2007)  
**DP Dataset:** f00548 / nrt2\_1210\_dpnonechosounder / 2007-310 / dn310 dps tgts nc0503 cef  
**Profile/Beam:** 5/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

CEF 43

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_dpnonechosounder/2007-310/dn310 dps tgts nc0503 cef	5/1	0.00	000.0	Primary

### Hydrographer Recommendations

Remove all currently charted dols in this area and chart new positioned dols.

#### Cartographically-Rounded Depth (Affected Charts):

-6ft (11537\_2, 11539\_1)

1fm (11520\_1, 11009\_1)

### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)

**Attributes:** BOYSHP - 2:can (cylindrical)

CATMOR - 1:dolphin

COLOUR - 2:black

CONRAD - 2:not radar conspicuous

HEIGHT - 1.73 m

SORDAT - 20071212

SORIND - US,US,survey,FOO548  
STATUS - 1:permanent  
VERDAT - 12:Mean lower low water  
WATLEV - 2:always dry

## Office Notes

QUA: GPSmode=2, SVs=9, HDOP=1.00

Concur with field unit assessment - update position of dols at latitude 34.21936952 and longitude -077.95268506.

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto  
chartlets/tmpv56qo7.ac.png does not exist.]

## 2.6) Profile/Beam - 412/1 from f00548 / nrt2\_1210\_sb / 2007-337 / 034\_1442

### Survey Summary

**Survey Position:** 34° 10' 57.9" N, 077° 57' 28.5" W  
**Least Depth:** 14.08 m (= 46.20 ft = 7.701 fm = 7 fm 4.20 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-337.14:42:43.668 (12/03/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-337 / 034\_1442  
**Profile/Beam:** 412/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

SSS contact developed, finding non-significant Rk below project depth. No further action is warranted.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-337/034_1442	412/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106182200	0001	3.99	225.4	Secondary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106181200	0001	11.92	185.8	Secondary

### Hydrographer Recommendations

None

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
 QUASOU - 1:depth known  
 TECSOU - 1,2:found by echo-sounder,found by side scan sonar  
 VALSOU - 14.083 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

## Office Notes

Concur with field unit assessment - least depth of rock is within controlling depth of channel. No action necessary.

## 2.7) Profile/Beam - 466/1 from f00548 / nrt2\_1210\_sb / 2007-337 / 050\_1430

### Survey Summary

**Survey Position:** 34° 10' 42.5" N, 077° 57' 27.2" W  
**Least Depth:** 13.40 m (= 43.95 ft = 7.325 fm = 7 fm 1.95 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-337.14:30:53.373 (12/03/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-337 / 050\_1430  
**Profile/Beam:** 466/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

Development over sss identified Rk found non-significant rk below project depth. No further action warranted.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-337/050_1430	466/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106182200	0002	2.74	356.4	Secondary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106183100	0001	10.28	197.2	Secondary

### Hydrographer Recommendations

None

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
 INFORM - RK  
 QUASOU - 1:depth known  
 TECSOU - 1,2:found by echo-sounder,found by side scan sonar  
 VALSOU - 13.396 m  
 VERDAT - 12:Mean lower low water

## Office Notes

Rock is visible in SB but does not pose DtoN as its least depth is within the controlling depth of the channel. No action necessary.

## 2.8) Profile/Beam - 400/1 from f00548 / nrt2\_1210\_sb / 2007-337 / 054\_1428

### Survey Summary

**Survey Position:** 34° 10' 37.6" N, 077° 57' 27.6" W  
**Least Depth:** 13.28 m (= 43.56 ft = 7.259 fm = 7 fm 1.56 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-337.14:28:49.201 (12/03/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-337 / 054\_1428  
**Profile/Beam:** 400/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

VBES development over sss contact found non-significant rise lying below project depth. No further action is warranted.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-337/054_1428	400/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106183100	0002	1.93	292.0	Secondary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106182200	0003	11.64	013.1	Secondary

### Hydrographer Recommendations

None.

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
 INFORM - Ridge Non-Significant  
 QUASOU - 1:depth known  
 TECSOU - 1,2:found by echo-sounder,found by side scan sonar  
 VALSOU - 13.276 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

## Office Notes

Concur with field unit assessment - least depth is within the controlling depth of the channel. No action necessary.

## **3 - AWOIS Features**

### 3.1) Contact/Point - 0003/1 from f00548 / nrt2\_1210\_klein3000hf\_100sss / 2007-310 / sss071106150200

#### Primary Feature for AWOIS Item #14068

**Search Position:** 34° 13' 44.9" N, 077° 57' 10.2" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** VS, DI, S2, ES  
**Technique Notes:** [None]

#### History Notes:

\*\*\*\*UNKNOWN SOURCE-- A VISIBLE WRECK WAS CHARTED AT 34°13'44.89" - 077°57'10.24", SOMETIME BETWEEN 1969 - 1972. (ENTERED CEH 9/2007)■■■OPR-G309-NRT2-07, F00548,2007: 200% sss identified the remains off the reported subm wrk, lieing alongshore, in non-navigable water. Although the remains can be identified as subm ribs, they are deamed to pose no danger to navigation, and are likewise insignificat for charting purposes. This entire western shorline is littered with wreck remains, and the foul limit currently charted should be extended South to the bridge (US74/76).■■■Remove the charted wreck, and extend the foul limit line south to the bridge (US 74/76) RWR

#### Survey Summary

**Survey Position:** 34° 13' 44.8" N, 077° 57' 10.8" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-333.03:44:18 (11/29/2007)  
**Survey Line:** f00548 / nrt2\_1210\_klein3000hf\_100sss / 2007-310 / sss071106150200  
**Contact/Point:** 0003/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

Awois 14068 Non-Dangerous subm wrk along shore. 200% sss identified the remains off the reported subm wrk, lieing alongshore, in non-navigable water. Although the remains can be identified as subm ribs, they are deamed to pose no danger to navigation, and are likewise insignificat for charting purposes. This entire western shorline is littered with wreck remains, and the foul limit currently charted should be extended South to the bridge (US74/76).

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106150200	0003	0.00	000.0	Primary

f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106150600	0001	11.80	213.0	Secondary
AWOIS	AWOIS # 14068	13.79	260.4	Secondary

## Hydrographer Recommendations

Remove the charted wreck, and extend the foul limit line south to the bridge (US 74/76)

### S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
 CONVIS - 2:not visual conspicuous  
 INFORM - Remove Charted Vis Wreck. Chart submerged wreck.  
 SORDAT - 20071212  
 SORIND - US,US,survey,F00548  
 TECSOU - 2:found by side scan sonar  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

### Office Notes

Concur with clarification - extend foul limit. Delete charted visible WK ED, chart submerged WK in same position.

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/tmp9mrics.ac.png does not exist.]

**3.2) Profile/Beam - 681/1 from f00548 / nrt2\_1210\_sb / 2007-337 / 010\_1526**

**Primary Feature for AWOIS Item #14063**

**Search Position:** 34° 11' 39.3" N, 077° 57' 26.9" W  
**Historical Depth:** [None]  
**Search Radius:** 60  
**Search Technique:** S2, ES, DI,  
**Technique Notes:** [None]

**History Notes:**

\*\*\*UNKNOWN SOURCE-- A SUBMERGED PILE WAS CHARTED AT 34°11'39.30" - 077°57'26.87", SOMETIME BETWEEN 1969 - 1972. (ENTERED CEH 9/2007)■■■OPR-G309-NRT2-07, F00548,2007: Small contact noted by 200% sss coverage, deemed Non-Significant in nature, and flat on bottom. Lager height relief natural feature lie within the area. This item should be removed as it poses no danger.■■■Recommend Removal. RWR

**Survey Summary**

**Survey Position:** 34° 11' 39.1" N, 077° 57' 26.4" W  
**Least Depth:** 12.68 m (= 41.59 ft = 6.931 fm = 6 fm 5.59 ft)  
**TPU (±1.96σ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-337.15:27:16.023 (12/03/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-337 / 010\_1526  
**Profile/Beam:** 681/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

Small contact noted by 200% sss coverage, deemed Non-Significant in nature, and flat on bottom. Lager height relief natural feature lie within the area. This item should be removed as it poses no danger.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-337/010_1526	681/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106170100	0001	2.79	169.4	Secondary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106165900	0002	5.67	343.2	Secondary
AWOIS	AWOIS # 14063	15.29	119.5	Secondary

## Hydrographer Recommendations

Recommend Removal

### Cartographically-Rounded Depth (Affected Charts):

41ft (11537\_2, 11539\_1)

6 ¾fm (11520\_1, 11009\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
INFORM - Awois #14063.  
QUASOU - 6:least depth known  
SORDAT - 20071212  
SORIND - US,US,nsurf,FOO548  
TECSOU - 1,2:found by echo-sounder,found by side scan sonar  
VALSOU - 12.676 m  
WATLEV - 3:always under water/submerged

### Office Notes

Do not concur. Feature noted in SSS, and verified bathymetrically in SB. Recommend to retain charted feature.

### Feature Images

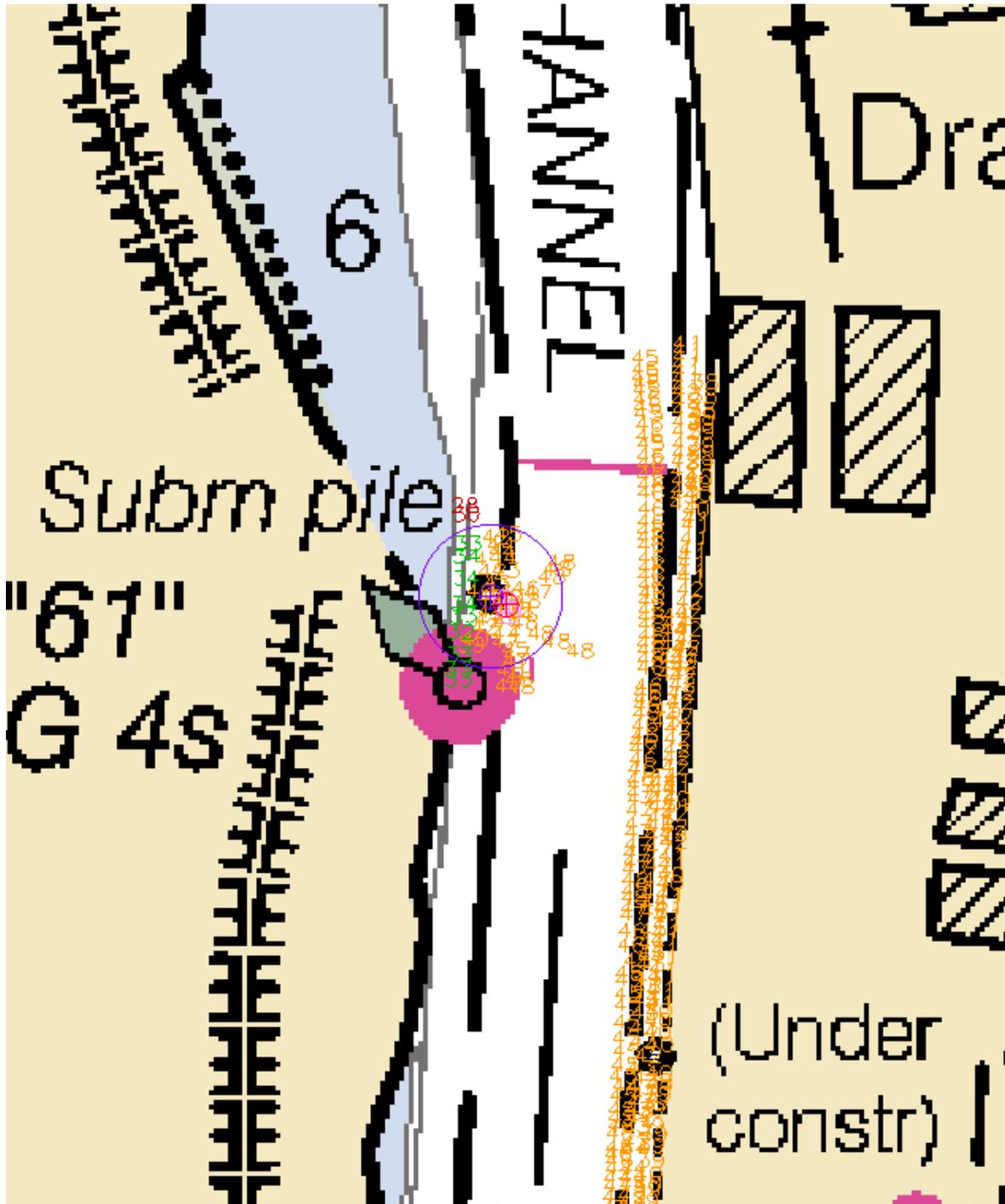


Figure 3.2.1

### 3.3) Profile/Beam - 536/1 from f00548 / nrt2\_1210\_sb / 2007-346 / 064\_1630

#### Primary Feature for AWOIS Item #14061

**Search Position:** 34° 01' 14.0" N, 077° 56' 13.4" W  
**Historical Depth:** [None]  
**Search Radius:** 100  
**Search Technique:** S2, ES, DI, SD  
**Technique Notes:** [None]

#### History Notes:

\*\*\*UNKNOWN SOURCE-- A SUBMERGED DANGEROUS WRECK WAS CHARTED AT 34°01'13.96" - 077°56'13.43", BEFORE 1969. (ENTERED CEH 9/2007)■■■OPR-G309-NRT2-07, F00548,2007: 200% sss OPS conducted for Awois# 14061. Located a buried WRK debris to the N of the charted and reported position. This is Non-Dangerous wrk debris having no significant DTON qualities.■■■Recommend adjust charted position, and or remove charted feature all together.RWR

#### Survey Summary

**Survey Position:** 34° 01' 17.5" N, 077° 56' 13.8" W  
**Least Depth:** 4.34 m (= 14.23 ft = 2.372 fm = 2 fm 2.23 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-346.16:31:27.828 (12/12/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-346 / 064\_1630  
**Profile/Beam:** 536/1  
**Charts Affected:** 11534\_1, 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

200% sss OPS conducted for Awois# 14061. Located aburied WK debris to the N of the charted and reported position. This is Non-Dangerous wrk debris having no significant DTON qualities.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-346/064_1630	536/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_100sss/2007-346/sss071212161500	0001	2.38	086.9	Secondary
f00548/nrt2_1210_klein3000hf_200sss/2007-346/sss071212161800	0001	5.31	050.3	Secondary
f00548/nrt2_1210_klein3000hf_200sss/2007-346/sss071212162800	0001	13.17	158.6	Secondary
AWOIS	AWOIS # 14061	110.21	355.7	Secondary (grouped)

## Hydrographer Recommendations

Adjust charted position, and or remove charted feature all together.

### Cartographically-Rounded Depth (Affected Charts):

14ft (11534\_1, 11537\_2, 11539\_1)

2 ¼fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
CONVIS - 2:not visual conspicuous  
INFORM - Awois# 14061.  
SORDAT - 20071212  
SORIND - US.US,nsurf,FOO548  
TECSOU - 1,2:found by echo-sounder,found by side scan sonar  
VALSOU - 4.338 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Do not concur. Retain charted WK due to SSS verification, at latitude 34.02153177 and longitude -077.93715280.

### 3.4) Profile/Beam - 999/1 from f00548 / nrt2\_1210\_sb / 2007-346 / 061\_1644

#### Primary Feature for AWOIS Item #14062

**Search Position:** 34° 01' 42.6" N, 077° 56' 10.9" W  
**Historical Depth:** [None]  
**Search Radius:** 100  
**Search Technique:** S2, ES, DI, SD  
**Technique Notes:** [None]

#### History Notes:

LMN 37/81-- ADDED SUBMERGED OBSTRUCTION AT 34/01/42 - 77/56/12 NAD27. (ENTERED CEH 09/2007)■■■OPR-G309-NRT2-07, F00548,2007: 200% sss OPS conducted for Awois# 14062. Small obstn was located on ICW channel edge consisting of a cluster of piles, most likely from a previous ATON, partially buried, and with no hazardous relief off the bottom. No DTON is posed by this feature.■■■Recommend Revise position or remove from the charts.RWR

#### Survey Summary

**Survey Position:** 34° 01' 44.3" N, 077° 56' 12.3" W  
**Least Depth:** 4.17 m (= 13.67 ft = 2.279 fm = 2 fm 1.67 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-346.16:45:28.772 (12/12/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-346 / 061\_1644  
**Profile/Beam:** 999/1  
**Charts Affected:** 11534\_1, 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

200% sss OPS conducted for Awois# 14062. Small obstn was located on ICW channel edge consisting of a cluster of piles, most likely from a previous ATON, partially buried, and with no hazardous relief off the bottom. No DTON is posed by this feature.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-346/061_1644	999/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_200sss/2007-346/sss071212164700	0001	5.35	117.4	Secondary
f00548/nrt2_1210_klein3000hf_100sss/2007-346/sss071212164300	0001	6.30	173.7	Secondary
AWOIS	AWOIS # 14062	61.82	327.4	Secondary

## Hydrographer Recommendations

Revise position or remove from the charts.

### Cartographically-Rounded Depth (Affected Charts):

13ft (11534\_1, 11537\_2, 11539\_1)

2 ¼fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
CONDTN - 2:ruined  
INFORM - Awois# 14062.  
QUASOU - 1:depth known  
SORDAT - 20071212  
SORIND - US,US,nsurf,F00548  
TECSOU - 1,2:found by echo-sounder,found by side scan sonar  
VALSOU - 4.168 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur with clarification. Remove charted obstruction and text "Obstn PA" based upon the scale of the largest scale chart and it is not navigationally significant. Recommend update AWOIS database position to latitude 34.02897318 and longitude -077.93673626.

## **4 - Dangers to Navigation**

**4.1) Profile/Beam - 605/1 from f00548 / nrt2\_1210\_sb / 2007-310 / 005\_1513****DANGER TO NAVIGATION****Primary Feature for AWOIS Item #14067**

**Search Position:** 34° 13' 30.6" N, 077° 57' 17.0" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** VS, S2, ES, DI  
**Technique Notes:** [None]

**History Notes:**

L1693/74-- USPS; ADDED VISIBLE WRECK TO CHART AT 34/13/30.61 - 077/57/16.98, NAD 83. BUT THE CHART POSITION IS 34/13/28.52 - 077/57/15.88. (ENTERED CEH 9/2007).■■■OPR-G309-NRT2-07 F00548,2007: 200% sss operation were conducted in this area. The area in question is an active tug and barge operational wharf. No signs of a vis, or subm wreck were indintified. SSS imagery should bottom to shore underneath moored barges.■■■Recommend Removal of the charted Vis Wrk from the charts.RWR

**Survey Summary**

**Survey Position:** 34° 13' 28.0" N, 077° 57' 15.4" W  
**Least Depth:** 6.78 m (= 22.25 ft = 3.708 fm = 3 fm 4.25 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.15:14:37.976 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 005\_1513  
**Profile/Beam:** 605/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

200% sss operation were conducted in this area. The area in question is an active tug and barge operational wharf. No signs of a vis, or subm wreck were indintified. SSS imagery showed bottom to shore underneath moored barges. Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/005_1513	605/1	0.00	000.0	Primary
AWOIS	AWOIS # 14067	89.82	154.1	Secondary (grouped)

## Hydrographer Recommendations

Recommend Removal of the charted Vis Wrk from the charts.

### Cartographically-Rounded Depth (Affected Charts):

22ft (11537\_2, 11539\_1)

3 ¾fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
CONVIS - 2:not visual conspicuous  
INFORM - Awois 14067.  
SORDAT - 20071212  
SORIND - US,US,nsurf,FOO548  
TECSOU - 13:swept by side-scan sonar  
VALSOU - 6.782 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur with field unit assessment - remove Vis WK from charts.

Feature has already been removed from continual update raster chart, as of 11 APR 2008.

### Feature Images

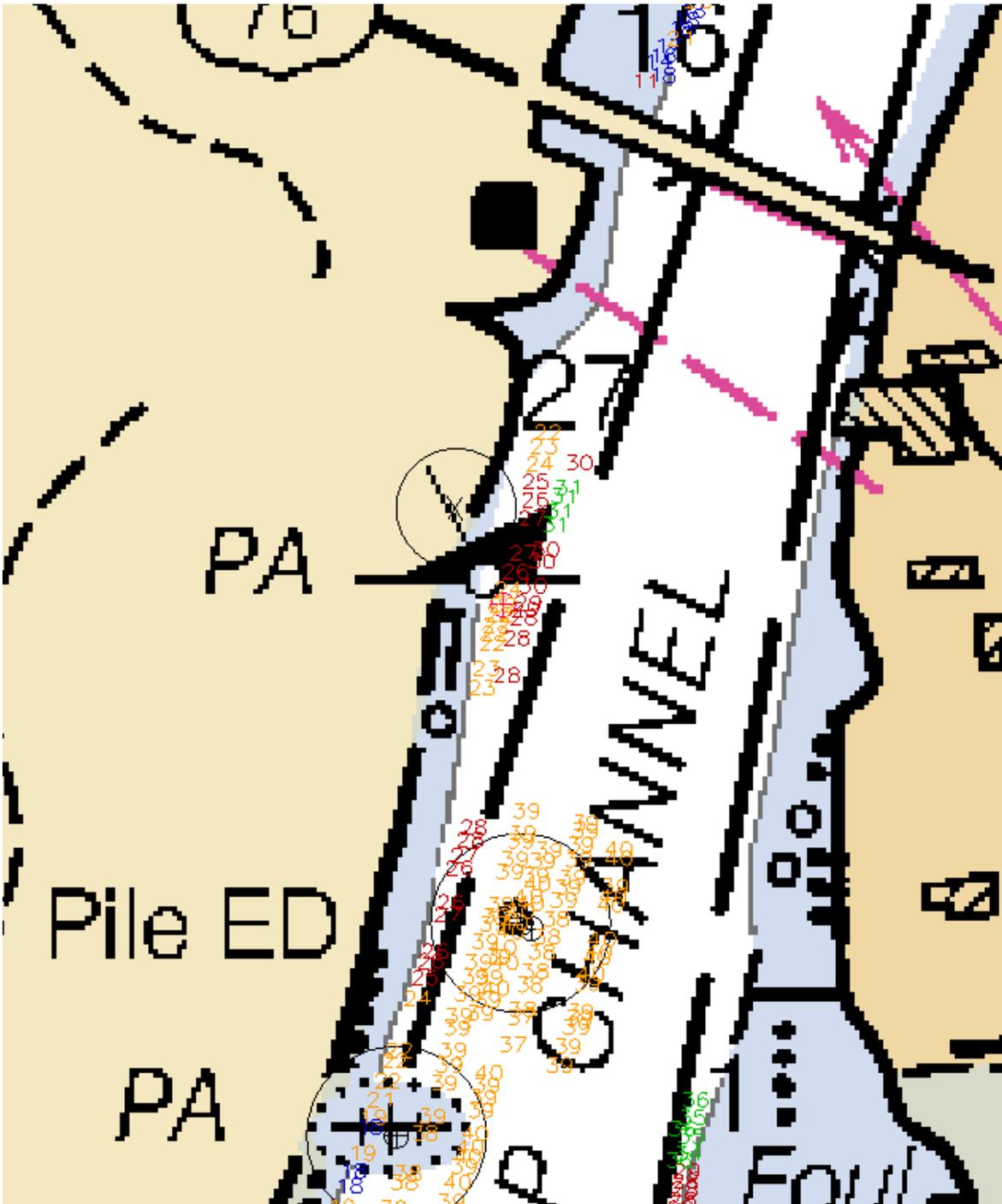


Figure 4.1.1

**4.2) Profile/Beam - 438/1 from f00548 / nrt2\_1210\_sb / 2007-310 / 008\_1530****DANGER TO NAVIGATION****Primary Feature for AWOIS Item #14066**

**Search Position:** 34° 13' 19.4" N, 077° 57' 14.9" W  
**Historical Depth:** [None]  
**Search Radius:** 75  
**Search Technique:** VS, ES, S2, DI,  
**Technique Notes:** [None]

**History Notes:**

L1693/74- USPS; A VISIBLE PILE WAS ADDED AT 34/13.4 - 77/57.2 NAD27, CONVERT TO NAD83 IS 34/13/24.61 - 77/57/10.96. BUT THE CHART LOCATION ON THE CHART IS 34/13/19.42 - 77/57/14.87. THE OBSTRUCTION IS LABELED PA FOR APPROXIMATE POSITION. THIS WAS ADDED TO THE CHART SOMETIME BETWEEN 1974 - 1976. (ENTERED CEH 9/2007).■■■OPR-G309-NRT2-07 F00548,2007: 200% sss identified very small contact of a pile FOB. This item is deemed insignificant for charting.■■■■Recommend Removal.RWR

**Survey Summary**

**Survey Position:** 34° 13' 19.4" N, 077° 57' 15.1" W  
**Least Depth:** 12.12 m (= 39.76 ft = 6.627 fm = 6 fm 3.76 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.15:30:53.660 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 008\_1530  
**Profile/Beam:** 438/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

200% sss identified very small contact of a pile FOB. This item is deemed insignificant for charting.

Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/008_1530	438/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106152100	0001	4.38	190.8	Secondary

AWOIS	AWOIS # 14066	4.71	276.1	Secondary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106152400	0003	14.62	290.9	Secondary

## Hydrographer Recommendations

Recommend Removal.

### Cartographically-Rounded Depth (Affected Charts):

40ft (11537\_2, 11539\_1)

6 ½fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Pile (PILPNT)

**Attributes:** CATPLE - 3:post

CONDTN - 2:ruined

CONVIS - 2:not visual conspicuous

INFORM - Awois# 14066 Recommend Removal

## Office Notes

Concur with clarification. Feature is deeper than controlling depth - remove charted pile from chart.

Feature has already been removed from continual update raster chart, as of 11 APR 2008.

### Feature Images

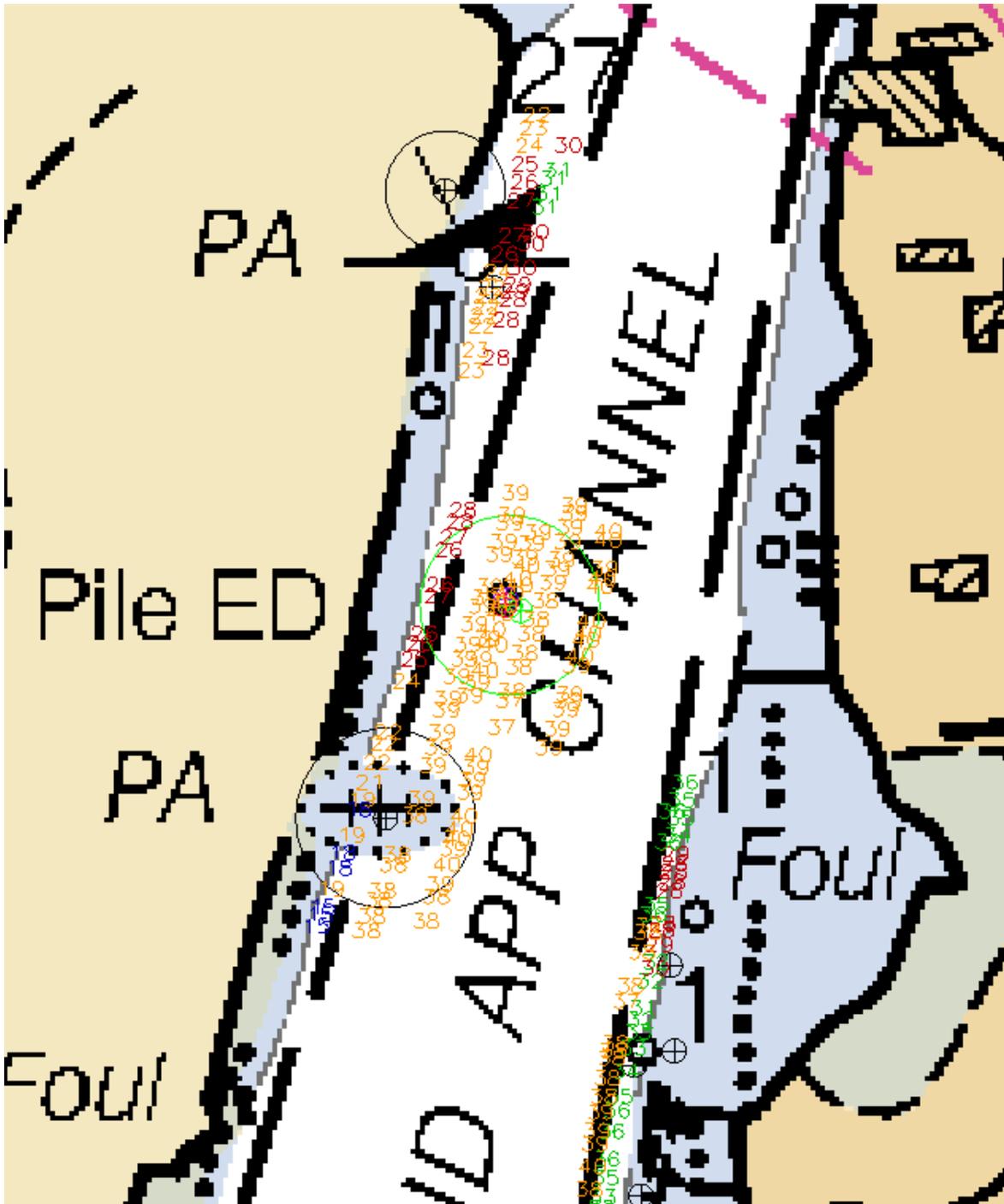


Figure 4.2.1

**4.3) Profile/Beam - 878/1 from f00548 / nrt2\_1210\_sb / 2007-310 / 012\_1538****DANGER TO NAVIGATION****Primary Feature for AWOIS Item #14065**

**Search Position:** 34° 13' 13.7" N, 077° 57' 18.9" W  
**Historical Depth:** [None]  
**Search Radius:** 75  
**Search Technique:** S2, ES, DI, SD  
**Technique Notes:** [None]

**History Notes:**

\*\*\*\*UNKNOWN SOURCE-- A SUBMERGED DANGEROUS WRECK WAS CHARTED AT 34°13'13.68" - 077°57'18.92", SOMETIME BETWEEN 1976 - 1978. (ENTERED CEH 9/2007)■■■OPR-G309-NRT2-07 F00548,2007: 200% sss was conducted in the search area, with no indication of the charted subm wreck identified.■■■ Recommend Removal of charted subm Wrk.■■■■Recommend Removal.RWR

**Survey Summary**

**Survey Position:** 34° 13' 13.9" N, 077° 57' 19.8" W  
**Least Depth:** 5.67 m (= 18.59 ft = 3.099 fm = 3 fm 0.59 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.15:39:43.227 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 012\_1538  
**Profile/Beam:** 878/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

200% sss was conducted in the search area, with no indication of the charted subm wreck identified. Recommend Removal of charted subm Wrk.

Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/012_1538	878/1	0.00	000.0	Primary
AWOIS	AWOIS # 14065	23.55	288.9	Secondary

## Hydrographer Recommendations

Remove Charted subm Wrk.

### Cartographically-Rounded Depth (Affected Charts):

18ft (11537\_2, 11539\_1)

3fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
CONVIS - 2:not visual conspicuous  
INFORM - Awois#14065.  
SORDAT - 20071212  
SORIND - US,US,nsurf,F00548  
TECSOU - 13:swept by side-scan sonar  
VALSOU - 5.667 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur with clarification. Feature has already been removed from continual update raster chart, as of 11 APR 2008. Concur with removal based upon the scale of the largest scale chart and the distance between the channel limits and shore. Additionally, it is not navigationally significant.

### Feature Images

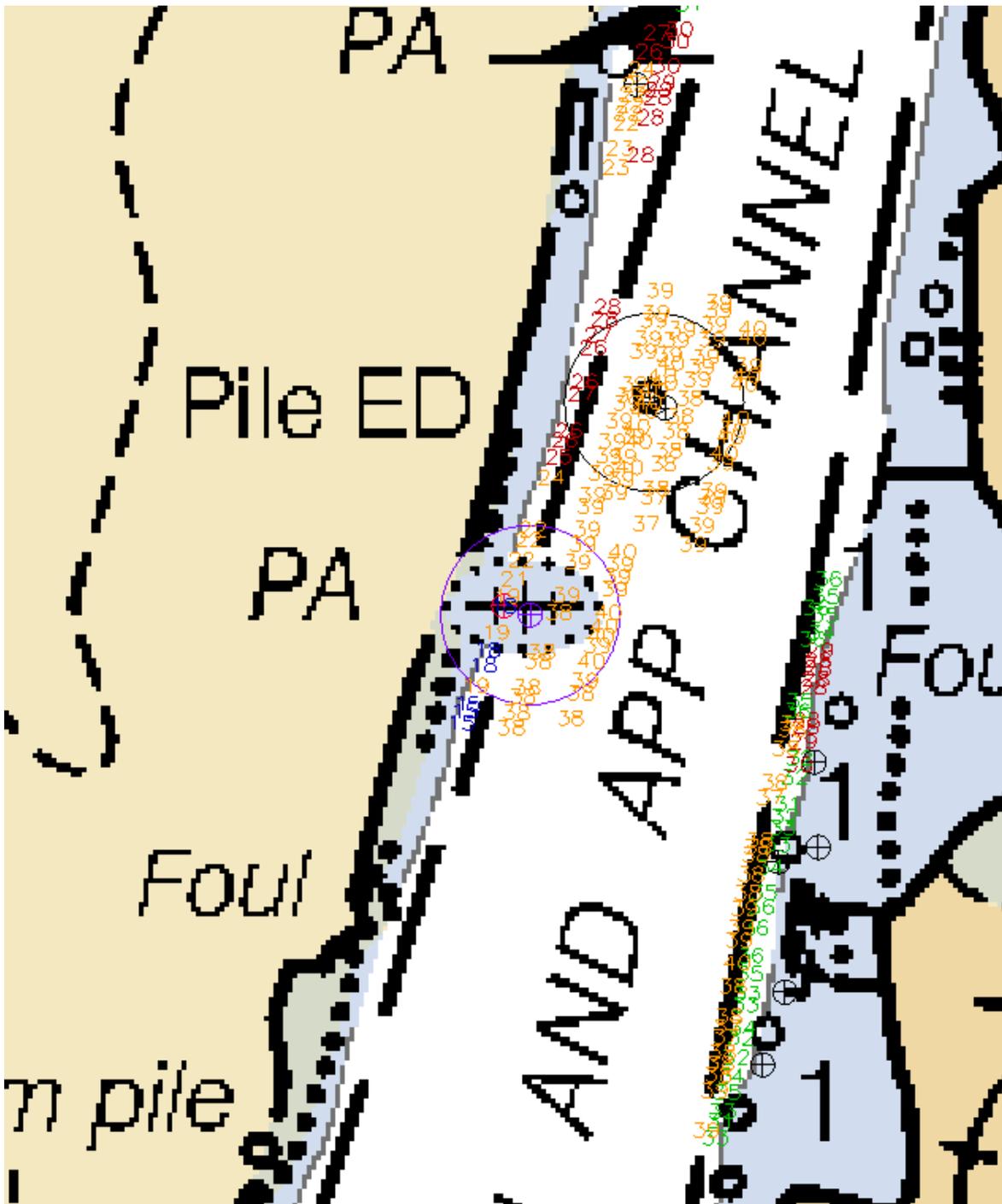


Figure 4.3.1

#### 4.4) Profile/Beam - 1497/1 from f00548 / nrt2\_1210\_sb / 2007-310 / 015\_1632

### DANGER TO NAVIGATION

#### Primary Feature for AWOIS Item #14064

**Search Position:** 34° 12' 37.0" N, 077° 57' 31.9" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** VS, DI, S2, ES  
**Technique Notes:** [None]

#### History Notes:

\*\*\*\*UNKNOWN SOURCE-- A VISIBLE LOG IS WAS CHARTED AT 34°12'36.95" - 077°57'31.87", IN THE CHANNEL, SOMETIME BETWEEN 1978- 1981. (ENTERED CEH 9/2007)■■■OPR-G309-NRT2-07 F00548,2007 : 200% sss was conducted in the search area, with no indication of the charted pile identified.■■■Recommend Removal.RWR

### Survey Summary

**Survey Position:** 34° 12' 37.0" N, 077° 57' 32.2" W  
**Least Depth:** 9.99 m (= 32.76 ft = 5.460 fm = 5 fm 2.76 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.16:34:27.264 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 015\_1632  
**Profile/Beam:** 1497/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

#### Remarks:

200% sss was conducted in the search area, with no indication of the charted pile identified.  
 Issued Anti-DTON.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/015_1632	1497/1	0.00	000.0	Primary
AWOIS	AWOIS # 14064	8.90	282.5	Secondary

## Hydrographer Recommendations

Recommend Removal.

### Cartographically-Rounded Depth (Affected Charts):

33ft (11537\_2, 11539\_1)

5 ½fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
CONVIS - 2:not visual conspicuous  
INFORM - Awois #14064, Recommend Removal

## Office Notes

Concur with field unit assessment - remove charted pile.

Feature has already been removed from continual update raster chart, as of 11 APR 2008.



**4.5) Profile/Beam - 669/1 from f00548 / nrt2\_1210\_sb / 2007-310 / 018\_1720****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 34° 11' 26.9" N, 077° 57' 21.7" W  
**Least Depth:** 12.93 m (= 42.41 ft = 7.069 fm = 7 fm 0.41 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-310.17:20:53.545 (11/06/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-310 / 018\_1720  
**Profile/Beam:** 669/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

Subm pile FOB. This Item lies against the wharf face and poses no DTON as it is lying flat with no relief.  
 Issued Anti-DTON.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-310/018_1720	669/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106171700	0002	9.80	271.0	Secondary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106172000	0001	10.65	289.1	Secondary

**Hydrographer Recommendations**

Recommend Removal from the Charts.

**Cartographically-Rounded Depth (Affected Charts):**

42ft (11537\_2, 11539\_1)

7fm (11520\_1, 11009\_1)

**S-57 Data**

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined

CONVIS - 2: not visual conspicuous

INFORM - Recommend Removal

### **Office Notes**

Concur with field unit assessment - remove subm pile.

Feature has already been removed from continual update raster chart, as of 11 APR 2008.

### Feature Images

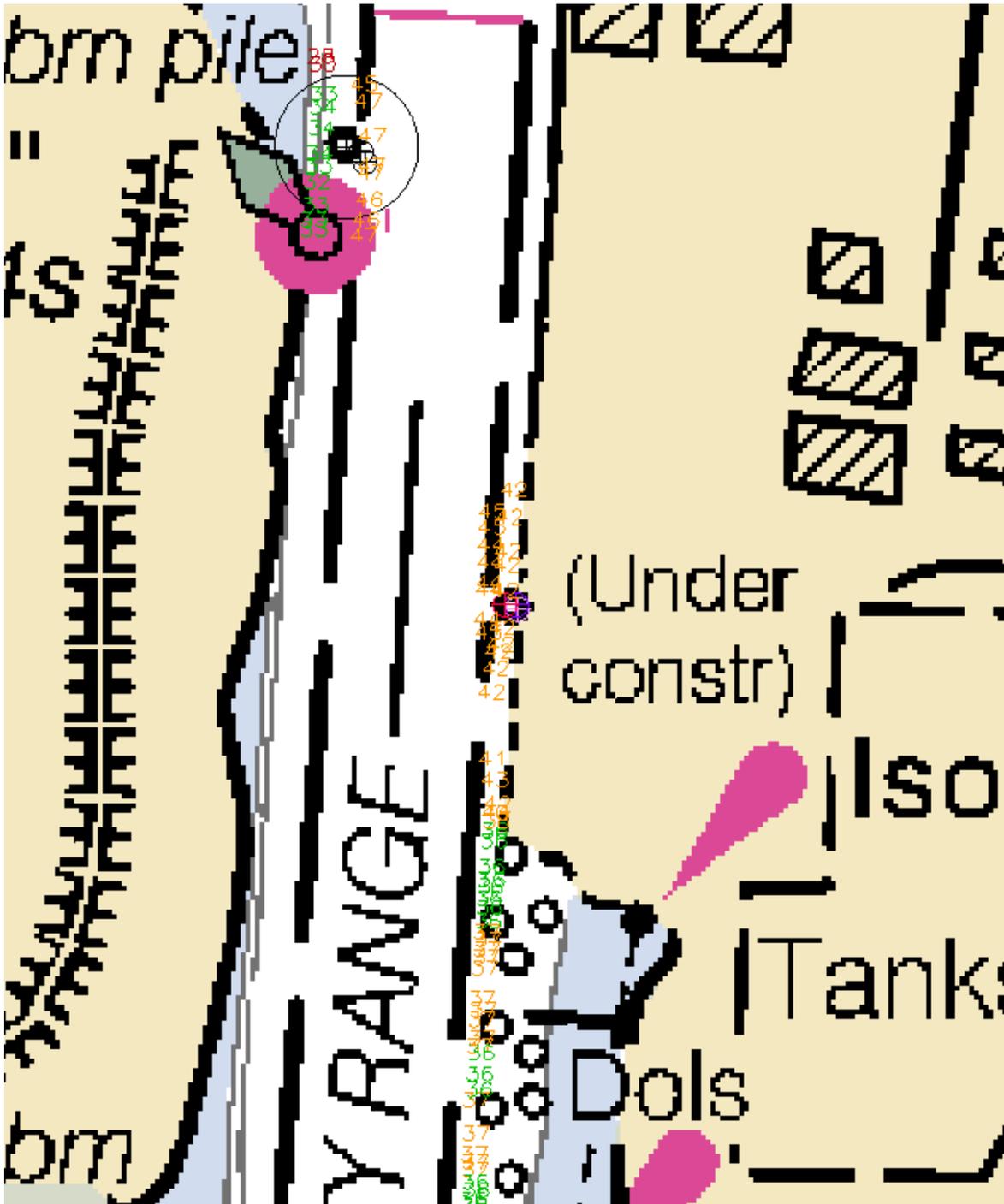
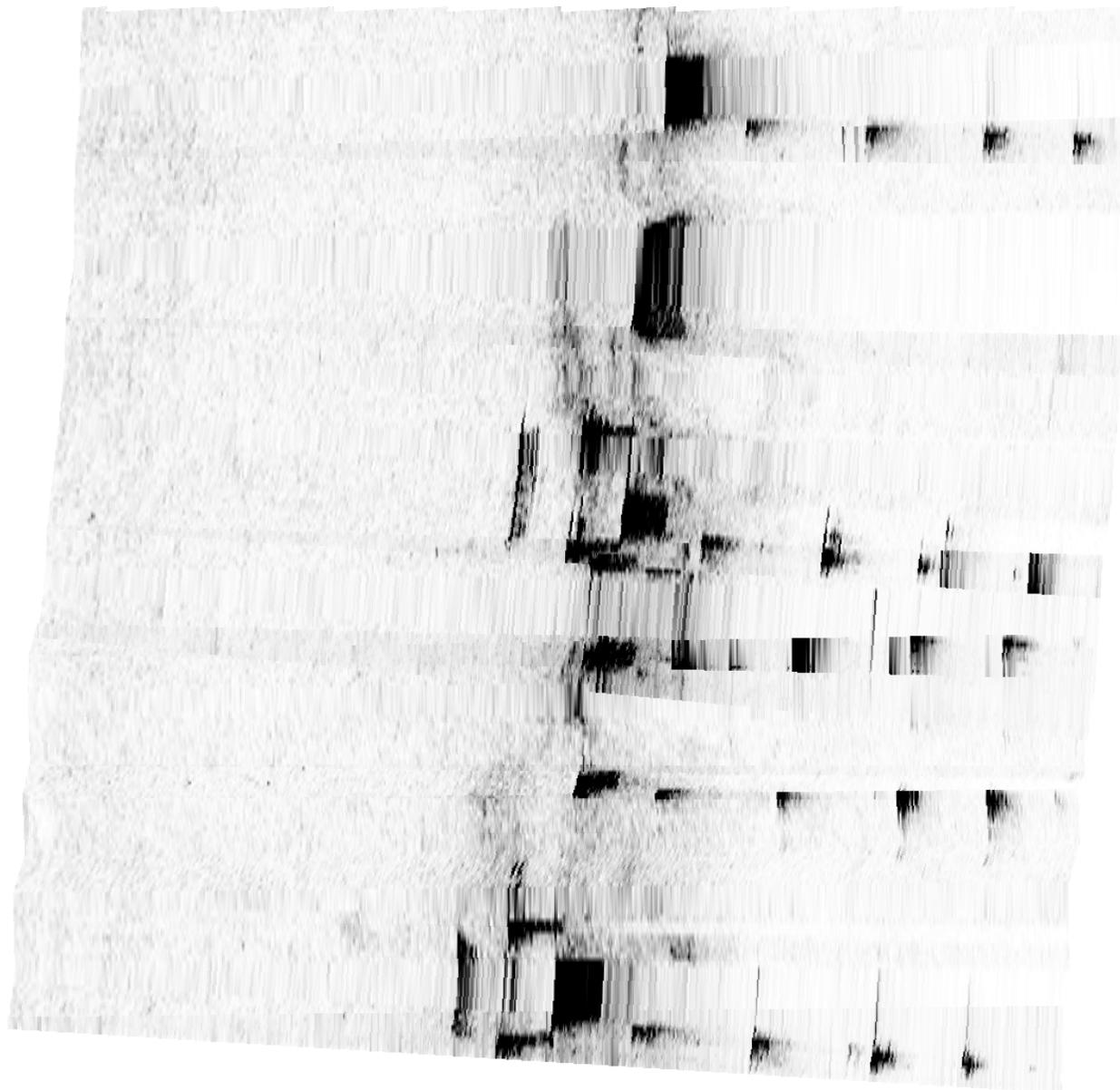


Figure 4.5.1



*Figure 4.5.2*

**4.6) GP No. - 2 from 2007 340.mdb****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 34° 03' 04.0" N, 077° 55' 28.5" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-340.09:50:33.000 (12/06/2007)  
**GP Dataset:** 2007 340.mdb  
**GP No.:** 2  
**Charts Affected:** 11534\_1, 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

Q R

Trimble High Accuracy position obtained of this LT during ATON action request in project Instruction Letter.

39840 SNOWS CUT RANGE FRONT LIGHT B 34 03 19 N 77 55 23 W Q R 20 KWR-I on multi-pile structure.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
2007 340.mdb	2	0.00	000.0	Primary

**Hydrographer Recommendations**

Modify position

**S-57 Data**

**Geo object 1:** Beacon, safe water (BCNSAW)  
**Attributes:** BCNSHP - 3:beacon tower  
 COLOUR - 1,11:white,orange  
 COLPAT - 2,6:vertical stripes,border stripes  
 CONRAD - 1:radar conspicuous  
 HEIGHT - 6.38 m  
 INFORM - USCG LL # 39840

VERDAT - 3:Mean sea level

**Geo object 2:** Light (LIGHTS)

**Attributes:** CATLIT - 1,12:directional function,front  
COLOUR - 3:red  
HEIGHT - 6.38 m  
INFORM - USCG LL # 39840  
LITCHR - 4:quick-flashing  
VERDAT - 3:Mean sea level

### Office Notes

**Concur with clarification - defer to MCD for charting recommendation.**

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/Photos/Ranges Lights/Snows Cut FNT RNG LT B.JPG does not exist.]

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/USCG LL39840.png does not exist.]

**4.7) GP No. - 1 from 2007 339 300series.mdb****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 33° 52' 39.4" N, 078° 00' 07.3" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-339.10:46:17.000 (12/05/2007)  
**GP Dataset:** 2007 339 300series.mdb  
**GP No.:** 1  
**Charts Affected:** 11534\_1, 11537\_1, 11536\_1, 11520\_1, 11009\_1

**Remarks:**

Baldhead Isl Marine Jetty LT 2 Fl R 2.5s

Trimble High Accuracy position obtained of this LT during ATON action request in project Instruction Letter.

30380 BALD HEAD ISLAND MARINE JETTY LIGHT 2 33 52 36 N 78 00 12 W Fl R 2.5s 12 On concrete wall.  
Private aid.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
2007 339 300series.mdb	1	0.00	000.0	Primary

**Hydrographer Recommendations**

Add to charts.

**S-57 Data**

**Geo object 1:** Beacon, lateral (BCNLAT)  
**Attributes:** BCNSHP - 5:pile beacon  
 CATLAM - 2:starboard-hand lateral mark  
 COLOUR - 3:red  
 CONRAD - 1:radar conspicuous  
 HEIGHT - 4.61 m  
 INFORM - USCG LL # 30380 FL R "2"

VERDAT - 3:Mean sea level

**Geo object 2:** Light (LIGHTS)

**Attributes:** COLOUR - 3:red

HEIGHT - 4.61 m

INFORM - USCG LL # 30380 FL R "2"

LITCHR - 2:flashing

SIGPER - 2.5 s

VERDAT - 3:Mean sea level

## Office Notes

**Concur with clarification - defer to MCD for charting recommendation.**

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/Photos/Ranges Lights/Baldhead Island Channel LTS inbound.JPG does not exist.]

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/Photos/Ranges Lights/Baldhead Island Channel LTS outbound.JPG does not exist.]

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/USCG LL30380.png does not exist.]

**4.8) GP No. - 2 from 2007 339 300series.mdb****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 33° 52' 40.1" N, 078° 00' 06.6" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-339.10:59:17.000 (12/05/2007)  
**GP Dataset:** 2007 339 300series.mdb  
**GP No.:** 2  
**Charts Affected:** 11534\_1, 11537\_1, 11536\_1, 11520\_1, 11009\_1

**Remarks:**

Baldhead Isl Marine Jetty LT 1 Fl G 2.5s

Trimble High Accuracy position obtained of this LT during ATON action request in project Instruction Letter.

30375 BALD HEAD ISLAND MARINE JETTY LIGHT 1 33 52 42 N 78 00 06 W Fl G 2.5s 12 On concrete wall.  
 Private aid.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
2007 339 300series.mdb	2	0.00	000.0	Primary

**Hydrographer Recommendations**

Add to charts.

**S-57 Data**

**Geo object 1:** Beacon, lateral (BCNLAT)  
**Attributes:** BCNSHP - 5:pole beacon  
 CATLAM - 1:port-hand lateral mark  
 COLOUR - 4:green  
 COLPAT - 4:squared  
 CONRAD - 1:radar conspicuous  
 HEIGHT - 4.35 m

INFORM - USCG LL # 30375 FL G "1"

VERDAT - 3:Mean sea level

**Geo object 2:** Light (LIGHTS)

**Attributes:** COLOUR - 4:green

HEIGHT - 4.35 m

INFORM - USCG LL # 30375 FL G "1"

LITCHR - 2:flashing

SIGPER - 2.5 s

VERDAT - 3:Mean sea level

## Office Notes

Concur with clarification - defer to MCD for charting recommendation.

[Image file E:/Caris/Hips/HDCS\_DATA/OPR-G309-NRT2-07/F00548/PSS/F00548 auto chartlets/USCG LL30375.png does not exist.]

APPENDIX III  
FINAL PROGRESS SKETCH AND SURVEY



APPENDIX IV  
TIDES AND WATER LEVELS



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



APPENDIX V  
SUPPLEMENTAL SURVEY AND  
CORRESPONDENCE

From	<a href="mailto:Bridget.Williams@noaa.gov">&lt;Bridget.Williams@noaa.gov&gt;</a>
Sent	Thursday, August 7, 2008 3:14 pm
To	<a href="mailto:Briana.Welton@noaa.gov">Briana.Welton@noaa.gov</a>
Cc	
Bcc	
Subject	FOO548 Feature Inquiry
Attachments	<a href="#">Feature_inquiry.pdf</a> 97K

Bri,

During the compilation of survey FOO548, an NRT 2 survey in Cape Fear River Wilmington, North Carolina 2007, we found a questionable feature and would like any further information you may have or may be able to obtain. The feature is a submerged pile at latitude 34°11'39.1"N and longitude 77°57'26.4"W with a least depth of 12.68 meters. Based on the raster chart 11537 edition 37 12/01/2006, this feature is on the outside west boundary of the Fourth East Jetty Range Channel. Based on the ENC US5NC12M edition 18 05/2005, this feature is 11 meters inside the same channel. Fourth East Jetty Range has a tabulated depth of 43.8 feet in the left outside quarter. We are interested in knowing if the Army Corps of Engineers has dredged the East Jetty Range Channel since December 12, 2007 or if they have a recent survey record of this area. Attached is a file which contains the Pydro information about the feature.

AHB would rather pass this information to the USACE through you in lieu of submitting a Subm Pile within the maintained limits of the channel. If AHB submits the feature, then the USACE removes the feature, the Subm Pile may not come off the chart as easy as it gets applied.

Thanks,  
Bridget

**Registry Number:** F00548  
**State:** North Carolina  
**Locality:** Wilmington  
**Sub-locality:** Wilmington to Southport  
**Project Number:** OPR-G309-NRT2-07  
**Survey Date:** 12/03/2007

### Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11537	37th	12/01/2006	1:40,000 (11537_2)	USCG LNM: 04/01/2008 (06/03/2008) NGA NTM: 02/23/2002 (06/07/2008)
11539	18th	07/14/2001	1:80,000 (11539_1)	[L]NTM: ?
11520	42nd	09/01/2005	1:432,720 (11520_1)	[L]NTM: ?
11009	37th	07/01/2004	1:1,200,000 (11009_1)	[L]NTM: ?

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

### Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Obstruction	12.68 m	34° 11' 39.1" N	077° 57' 26.4" W	14063

## **1 - Item Data**

**1.1) Profile/Beam - 681/1 from f00548 / nrt2\_1210\_sb / 2007-337 / 010\_1526**

**Primary Feature for AWOIS Item #14063**

**Search Position:** 34° 11' 39.3" N, 077° 57' 26.9" W  
**Historical Depth:** [None]  
**Search Radius:** 60  
**Search Technique:** S2, ES, DI,  
**Technique Notes:** [None]

**History Notes:**

\*\*\*UNKNOWN SOURCE-- A SUBMERGED PILE WAS CHARTED AT 34°11'39.30" - 077°57'26.87", SOMETIME BETWEEN 1969 - 1972. (ENTERED CEH 9/2007)■■■OPR-G309-NRT2-07, F00548,2007: Small contact noted by 200% sss coverage, deemed Non-Significant in nature, and flat on bottom. Lager height relief natural feature lie within the area. This item should be removed as it poses no danger.■■■Recommend Removal. RWR

**Survey Summary**

**Survey Position:** 34° 11' 39.1" N, 077° 57' 26.4" W  
**Least Depth:** 12.68 m (= 41.59 ft = 6.931 fm = 6 fm 5.59 ft)  
**TPU (±1.96σ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2007-337.15:27:16.023 (12/03/2007)  
**Survey Line:** f00548 / nrt2\_1210\_sb / 2007-337 / 010\_1526  
**Profile/Beam:** 681/1  
**Charts Affected:** 11537\_2, 11539\_1, 11520\_1, 11009\_1

**Remarks:**

Small contact noted by 200% sss coverage, deemed Non-Significant in nature, and flat on bottom. Lager height relief natural feature lie within the area. This item should be removed as it poses no danger.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
f00548/nrt2_1210_sb/2007-337/010_1526	681/1	0.00	000.0	Primary
f00548/nrt2_1210_klein3000hf_200sss/2007-310/sss071106170100	0001	2.79	169.4	Secondary
f00548/nrt2_1210_klein3000hf_100sss/2007-310/sss071106165900	0002	5.67	343.2	Secondary
AWOIS	AWOIS # 14063	15.29	119.5	Secondary

## Hydrographer Recommendations

Recommend Removal

### Cartographically-Rounded Depth (Affected Charts):

41ft (11537\_2, 11539\_1)

6 ¾fm (11520\_1, 11009\_1)

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
INFORM - Awois #14063.  
QUASOU - 6:least depth known  
SORDAT - 20071212  
SORIND - US,US,nsurf,FOO548  
TECSOU - 1,2:found by echo-sounder,found by side scan sonar  
VALSOU - 12.676 m  
WATLEV - 3:always under water/submerged

### Feature Images

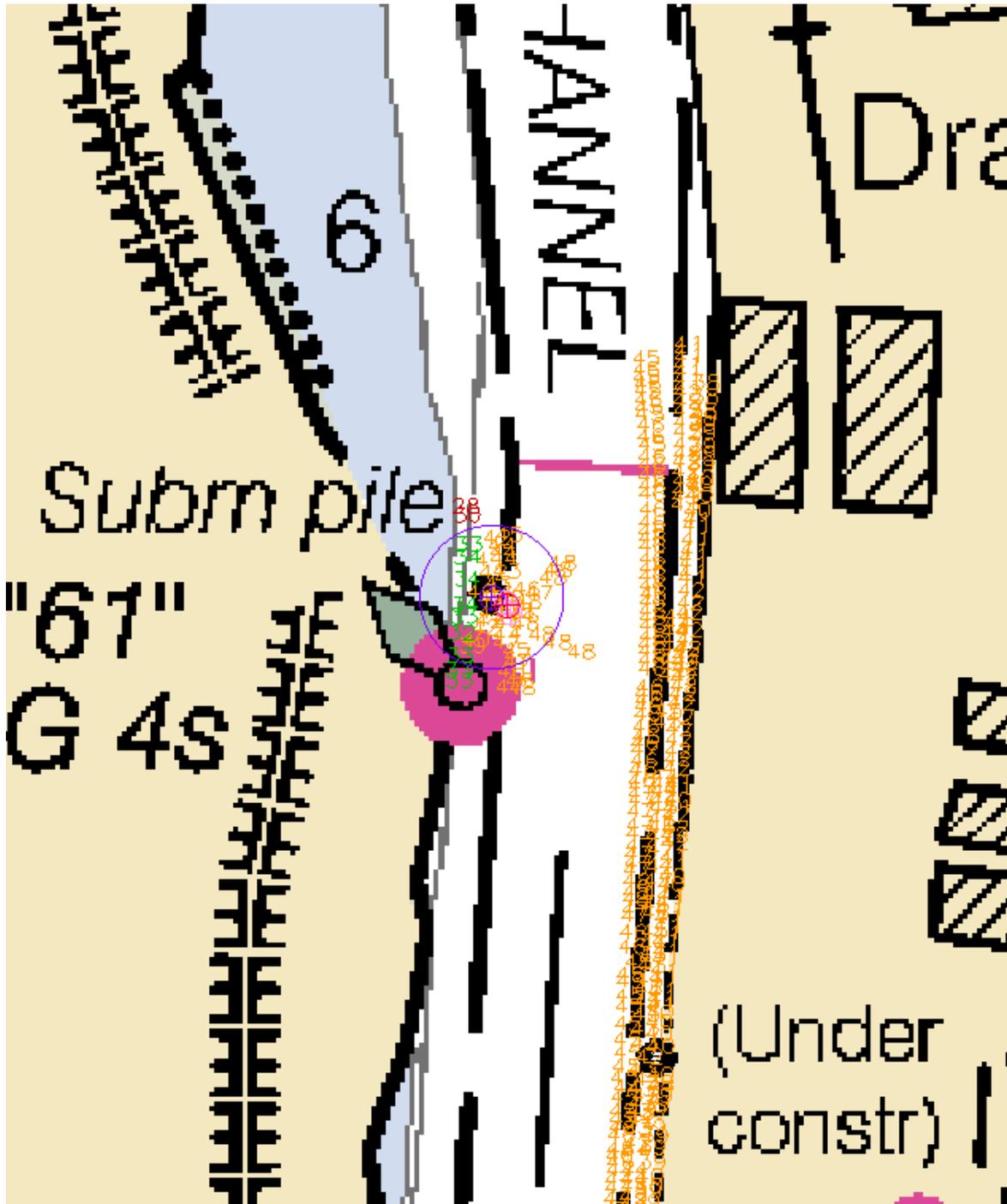
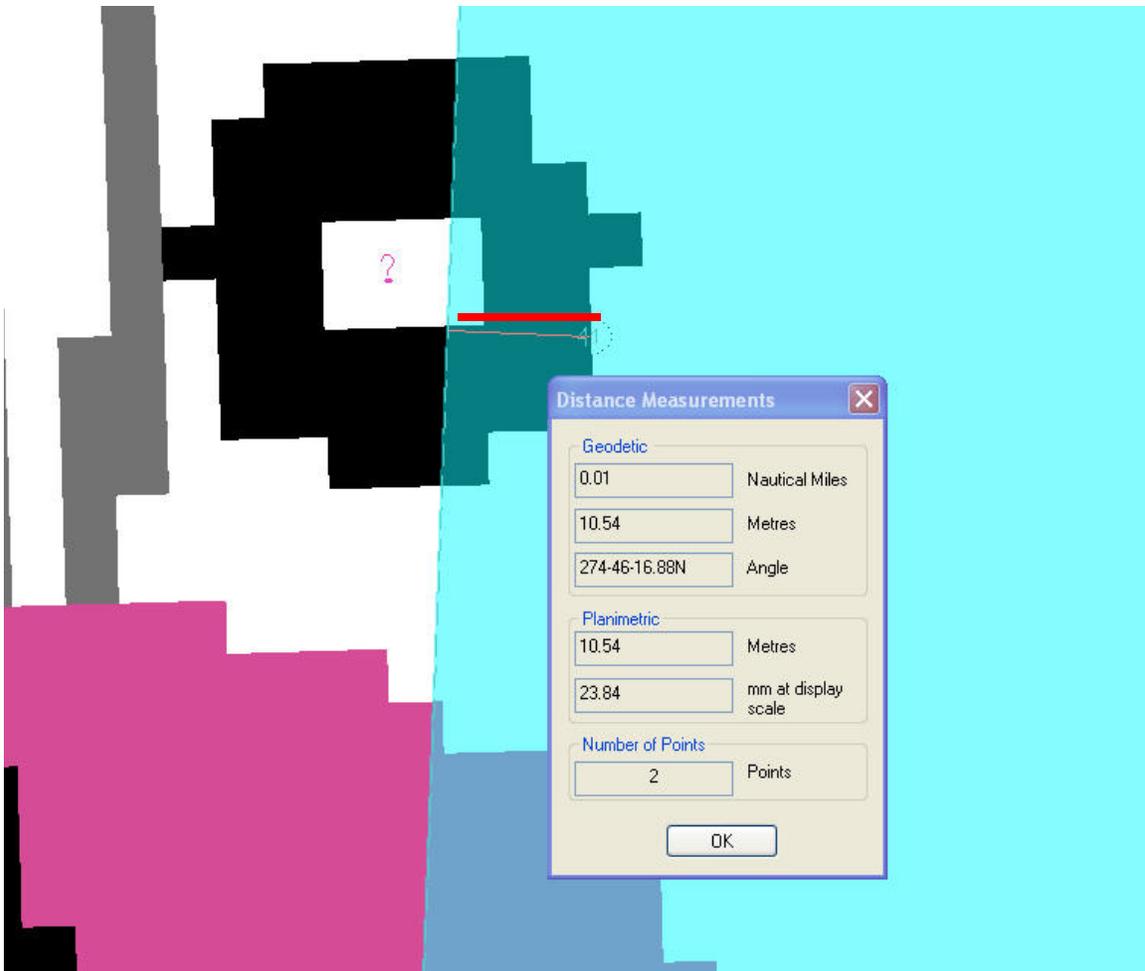


Figure 1.1.1



**E. APPROVAL SHEET**

**OPR-G309-NRT2-07**

**Wilmington, NC**

**Survey Registry No. F00548**

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 by:**

**David B. Elliott - Team Leader  
Navigation Response Team 2**

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## AHB PRE-COMPILATION PROCESS

REGISTRY No.	FOO548
PROJECT No.	OPR_G309_NRT2_07
FIELD UNIT	NRT-2
PRE-COMPILER	CAITLIN JOHNSON
LARGEST SCALE CHART	#11537, edition 37, 20061201
CHART SCALE	1: 40,000
SURVEY SCALE	1: 10,000
DATE OF SURVEY	November 6, 2007 – December 12, 2007
CONTENT REVIEW DATE	August 7, 2008

Components	File Names
<i>Product Surface</i>	NA
<i>Shifted Surface</i>	NA
<i>Contour Layer</i>	NA
<i>Survey Scale Soundings</i>	FOO548_SS_Soundings.hob
<i>Chart Scale Soundings</i>	FOO548_CS_Soundings.hob
<i>ENC Retain Soundings</i>	NA
<i>Feature Layer</i>	FOO548_Features.hob
<i>Meta-Objects Layer</i>	FOO548_MetaObjects.hob
<i>Blue Notes</i>	FOO548_BlueNotes.hob

### SPECIFICATIONS:

- I. COMBINED SURFACE:
  - a. Final Fieldsheet Location: H:\Compilation\F00548\_G309-NRT2\F00548\AHB\_F00548\E-SAR Final Products\GRIDS
- II. PRODUCT SURFACE (SOUNDINGS):
  - a. Depth
    - i. Minimum: **-4.771m**
    - ii. Maximum: **15.178m**
- III. SHIFTED SURFACE:
 

Single Shift Value: NA [-0.229m (feet), ( $\leq 10$  fathoms)]  
[-1.372m (fathoms), ( $> 10$  fathoms)]
- IV. CONTOUR LAYER:
- V. SOUNDING SELECTION:
  - a. Selection Criteria:
    - i. Radius
    - ii. Shoal biased
    - iii. Use Single-Defined Radius: 23.1 distance on ground (m)
- VI. FEATURES:
  - a. Brought in from Survey  
Total No. 12
  - b. Brought in from ENC  
ENC: US5NC12M

Version 1.0

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VII. META-OBJECTS:

a. M\_COVR attributes

Acronym	Value
INFORM	FOO548
SORDAT	20071212
CATCOV	Coverage available.
SORIND	US,US,survy,FOO548

b. M\_QUAL attributes

Acronym	Value
CATZOC	B
INFORM	FOO548, OPR-G309-NRT2-07, NRT2
POSACC	10
SORDAT	20071212
SORIND	US,US,survy,FOO548
SUREND	20071212
SURSTA	20071106
TECSOU	Found by echo-sounder, swept by side scan sonar.

c. DEPARE attributes

Acronym	Value
DRVALV 1	4.9 feet
DRVALV2	49 feet
SORDAT	20071212
SORIND	US,US,nsurf,FOO548
INFORM	FOO548

VIII. NOTES:

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*Version 1.0*

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Figure 1: Dolphins on Cape Fear River, NC. Satellite images used to verify the side scan imagery from survey F00548.

**ATLANTIC HYDROGRAPHIC BRANCH  
EVALUATION REPORT to Accompany  
Survey FOO548 (2007)**

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.

**B. DATA ACQUISITION AND PROCESSING**

**B.1 EQUIPMENT**

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

HSTP PYDRO version 8.6 r2361  
CARIS HIPS/SIPS version 6.1 SP1 HF 1-6  
CARIS Bathy Manager version 2.1 HF 1-8  
DKART INSPECTOR, version 5.0 Build 732 SP1  
CARIS HOM version 3.3 HF 1-8  
CARIS S57 Composer version 1.0 HF 1

**B.2. QUALITY CONTROL**

**B.2.1. H-Cell**

The AHB source depth grid for the survey's nautical chart update product entailed the office generated 2m grids. The survey scale selected soundings were extracted from the 2m grid. 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 (MORFAC, WRECKS, OBSTRN, UWTROC), Meta objects (M\_COVR, M\_QUAL, DEPRE), 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 FOO548 CARIS H-Cell final deliverables include the following products:

US500548_CU.000	1:40,000 Scale	FOO548 H-Cell with Chart Scale Selected Soundings
US500548_SS.000	1:10,000 Scale	FOO548 Selected Soundings (Survey Scale)
US500548_BlueNotes.000	1:40,000 Scale	FOO548 Cartographic Notes and Depth Curves

### **B.2.2. Junctions**

Registry Number	Year	Field Unit or Contractor	Scale
H11411	2006	Thomas Jefferson	1:20,000
H11413	2007	Thomas Jefferson	1:20,000
H11722	2007	Thomas Jefferson	1:20,000

## **C. VERTICAL AND HORIZONTAL CONTROL**

Final vertical correction processing was completed by the field unit with no additional correction required by Atlantic Hydrographic Branch. The field unit applied verified water levels in conjunction with the preliminary tidal zoning which was accepted and approved by N/OPSI CO-OPS as the final zoning for FOO548. Sounding datum is Mean Lower Low Water (MLLW). Vertical datum is Mean High Water (MHW)

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 17. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements.

## **D. RESULTS AND RECOMMENDATIONS**

### **D.1 CHART COMPARISON**

11537 (37th Edition, DEC/06)  
 Corrected through NM 12/09/2006  
 Corrected through LNM 11/28/2006  
 Scale 1:40,000

### **ENC Comparison**

US5NC12M  
 Cape Fear River  
 Edition 22  
 Update Application Date 2008-07-03  
 Issue Date 2008-07-03  
 References: Chart 11537

### **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.

## **D.2. ADDITIONAL RESULTS**

### **D.2.1 Aids to Navigation**

All AToNs addressed and positioned in the DR, AHB recommends deferring the charting recommendation of these aids to the Marine Chart Division, Nautical Data Branch.

## **D.3. MISCELLANEOUS**

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. 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.4. 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.

**APPROVAL SHEET**  
**FOO548**

**Initial Approvals:**

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

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**Caitlin Johnson**  
Hydrographic Intern  
Atlantic Hydrographic Branch

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**Bridget Williams**  
Hydrographic Intern  
Atlantic Hydrographic Branch

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**Edward A. Owens**  
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