F00561

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: **F00561**

LOCALITY

State: New York

General Locality: New York Harbor & Approaches

Sub-locality: SE Extension of Ambrose Channel

2008

CHIEF OF PARTY
CDR P. Tod Schattgen
NOAA

LIBRARY & ARCHIVES

DATE

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

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

F00561

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:	**New York**
General Locality:	**New York Harbor & Approaches**
Sub-Locality:	**SE Extension of Ambrose Channel**
Scale:	**1:10,000** Date of Survey: **5 September 2008**
Instructions Dated:	**28 May 2008, September 3 2008** Project Number: **OPR-B310-TJ-08**
Vessel:	**NOAA Ship *Thomas Jefferson***
Chief of Party:	**CDR P. Tod Schattgen**
Surveyed by:	***Thomas Jefferson* Personnel**
Soundings by:	**Reson 7125, Multibeam Echosounder**
Graphic record scaled by:	**N/A**
Graphic record checked by:	**N/A**
Protracted by:	**N/A** Automated Plot: **N/A**
Verification by:	
Soundings in:	**Meters at MLLW** ***Feet at MLLW***

Remarks:
1) All Times are in UTC.
2) This is a Navigable Area Hydrographic Survey.
3) Projection is NAD83, UTM Zone 18.
Red, bold italic notes in Descriptive Report were made during Branch processing.

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Descriptive Report to Accompany Hydrographic Survey

Project OPR-B310-TJ-08
New York Harbor & Approaches
SE Extension of Ambrose Channel
Scale 1:10,000
5 September, 2008
NOAA Ship ***Thomas Jefferson***

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-B310-TJ-08*, dated 28 ~~June~~ ***May*** 2008 and extension dated September 3, 2008*. The survey area includes the Ambrose Channel Precautionary Area and the former Ambrose Light Tower.

Northwest Corner	Northeast Corner	Southeast Corner	Southwest Corner
40°27'10.13"N 073°48'21.42" W	40°27'09.64" N 073°47'02.42" W	40°26'17.8" N 073°47'36.29" W	40°26'57.26" N 073°49'37.88" W

Data acquisition was conducted on 5 September, 2008.

The purpose of the project is to disprove the former Ambrose Light Tower and to provide accurate depths and object detection in the pilot area at the entrance to Ambrose Channel. Most of the survey data in the project area is pre-1982 and parts of the project area have not been surveyed since 1927.

Table 1. Hydrographic Survey Statistics

***NOAA Ship Thomas Jefferson,* Sheet H F00561**	
LNM Multibeam mainscheme only	64.1
LNM Side Scan Sonar mainscheme only	31.8
LNM Crosslines singlebeam and multibeam combined	1.7
LNM development lines non mainscheme	0
LNM shoreline/near shore investigations	0
Number of Bottom Samples	0
Number of items investigated that required additional time/effort in the field beyond the above survey	0
Total number of square nautical miles	1.5

Filed with original field records

Survey limits of F00561 are shown in the following chartlet:

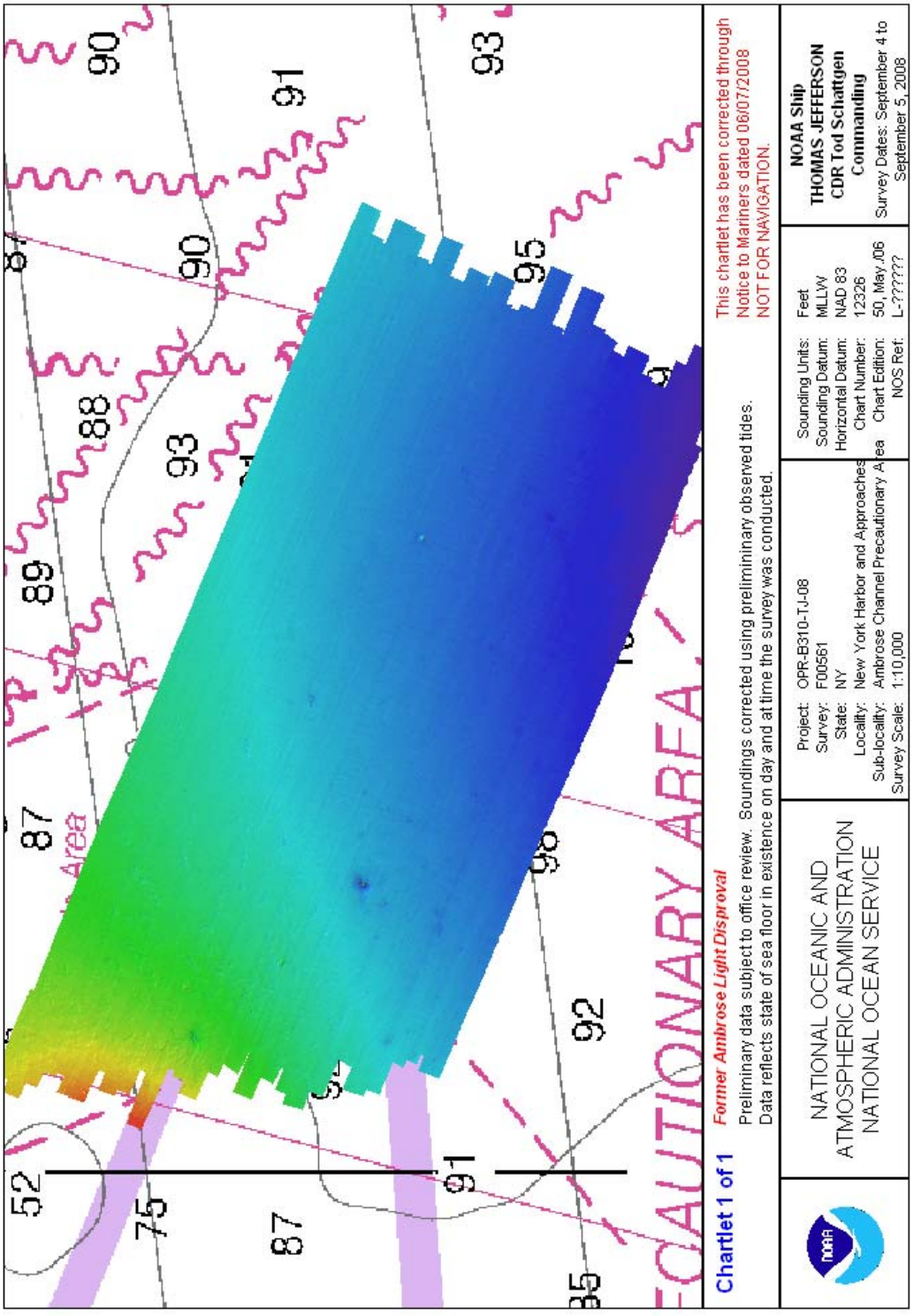


Figure 1: Survey limits

B. DATA ACQUISTION AND PROCESSING

Refer to ***Spring 2008 Thomas Jefferson Data Acquisition and Processing Report (DAPR)**** for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR are included in this descriptive report. ***Concur.***

B 1. EQUIPMENT AND VESSELS

Data were acquired by NOAA Ship Thomas Jefferson consisting of side-scan imagery, multibeam echosounder soundings, and sound velocity profiles from a velocimeter. All multibeam data acquired by the ship were collected using the Reson 7125 port side transducer in the single head mode. Vessel configurations, equipment operation and data acquisition and processing were consistent with specifications described in the DAPR*. ***Concur.***

B 2. QUALITY CONTROL

B 2.1 System Certification and Calibration

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

B.2.2 Object Detection Sonar Coverage

As per the Letter Instructions*, this survey was conducted using complete multibeam and 100% side scan coverage. ***Concur.***

Object detection side scan sonar coverage was proven by creation of 100% coverage mosaics, at 1 meter resolution. Partial 200% side scan sonar coverage was acquired and processed in excess of the required coverage stated in the Letter Instructions for OPR-B310-TJ-08*. ***Concur.***

Bathymetry coverage was proven by the creation of a Combined Uncertainty Bathymetric Estimator (CUBE) surface with 2 meter grid resolution, using IHO order I parameters, and calculated with deep parameters. ***Concur.***

B 2.3 Crosslines

MBES crosslines, acquired by S222, totaled 1.7 lineal nautical miles (LNM), which was 2.65% of all main scheme MBES data collected for this survey. Due to time constraints, less than the required 5% of crosslines were acquired. Analysis of the base surface Standard Deviation layer indicated no greater than a 15 cm systematic error in the survey. In addition to acquiring the data within 14 hour period and on a single platform, the cross line data compared well to the overall main scheme MB. ***Concur.***

Filed with original field records

B 2.4 Junctions and Prior Surveys

No junction data was provided to NOAA Ship *Thomas Jefferson* for comparison. However, adjacent survey H11916 (2008) was available for comparison and the overlapping bathymetry agreed within 5 cm of each other. ***Concur.***

B 2.5 Systematic Errors

An evaluation of the Standard Deviation layer of the BASE surface was performed for F00561. The results indicate areas of increased standard deviation that generally were produced from either rapid changes in sound speed profiles, insufficient attitude corrections, or rapid changes in depth values. The results of the evaluation are portrayed within a document named "F00561 Standard Deviation Report" that is located in Appendix 5* of this report. The high standard deviation areas reviewed were not incorporated or honored within the BASE CUBE grid with the exception of data points attributed as designated and thus were honored in the finalize depth grid. ***Concur.***

B 3. CORRECTIONS TO ECHO SOUNDING

HDCS sounding data were reduced to mean lower-low water (MLLW) using verified water levels from the primary station 8531680, Sandy Hook , NJ and the secondary station 8518750, The Battery, NY, and adjusted for Tidal Constituents and Residuals (TCARI) provided by CO-OPS as specified in the Letter Instructions* and illustrated in Figure 2. ***Concur.***

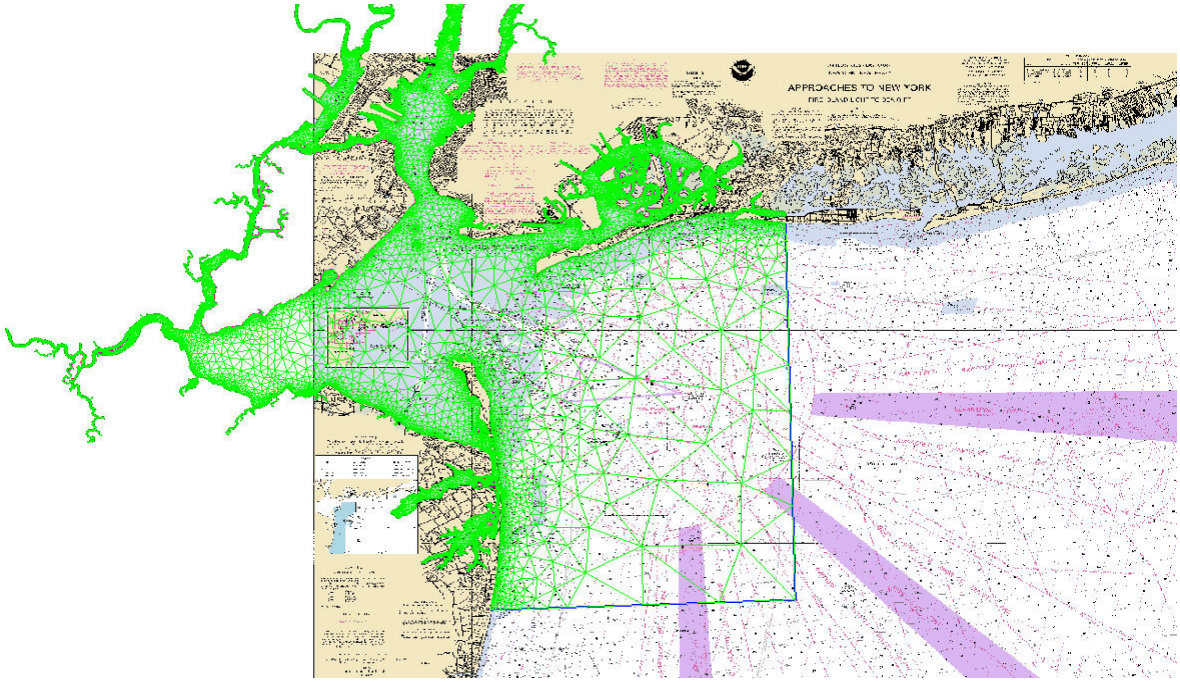


Figure 2: TCARI Tide Zoning

Filed with original field records

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

Sound velocity profiles were collected using the Moving Vessel Profiler (MVP), at 1 hour intervals through out the survey. No problems with the data were observed. The extended data point in each profile was modified to reflect the last acquired data point in the profile. See ***DAPR*** for descriptions all methods and instruments used for sound velocity correction. A table detailing all sound velocity casts is located in Separate II* of this Descriptive Report. ***Concur.***

B 4. DATA PROCESSING

B 4.1 Total Propagated Error

For the 2008 field season, Total Propagated Error (TPE) parameters for sound speed and tides are calculated separately for each project. The specific parameters applied to Sheet F00561 are as follows:

Table 2: TPE Parameters

Vessel	Tide Values		Sound Speed Values	
	Measured	Zoning	Measured	Surface
S222	0	0	1	0.2

These values were calculated for all MBES data immediately following CARIS Merge. ***Concur.***

B 4.2 BASE Surfaces and Mosaics

The following table describes all BASE Surfaces and Mosaics submitted as part of Survey F00561:

Name of Fieldsheet	*Resolution*	*Type*	*Purpose*
~~F00561~~ ***H00561***	2 meter	CUBE	Bathymetry
F00561_SSS_Mosaic	1 meter	SSS Mosaic	100% Coverage

This survey was processed using the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm. The CUBE configuration was set to "Deep" and IHO 1 for this entire survey. Refer to the 2008 Data Acquisition and Processing Report*, 2008 Field Procedures Manual, and CARIS HIPS/SIPS 6.1 manual for further discussion of CUBE parameters. ***Concur.***

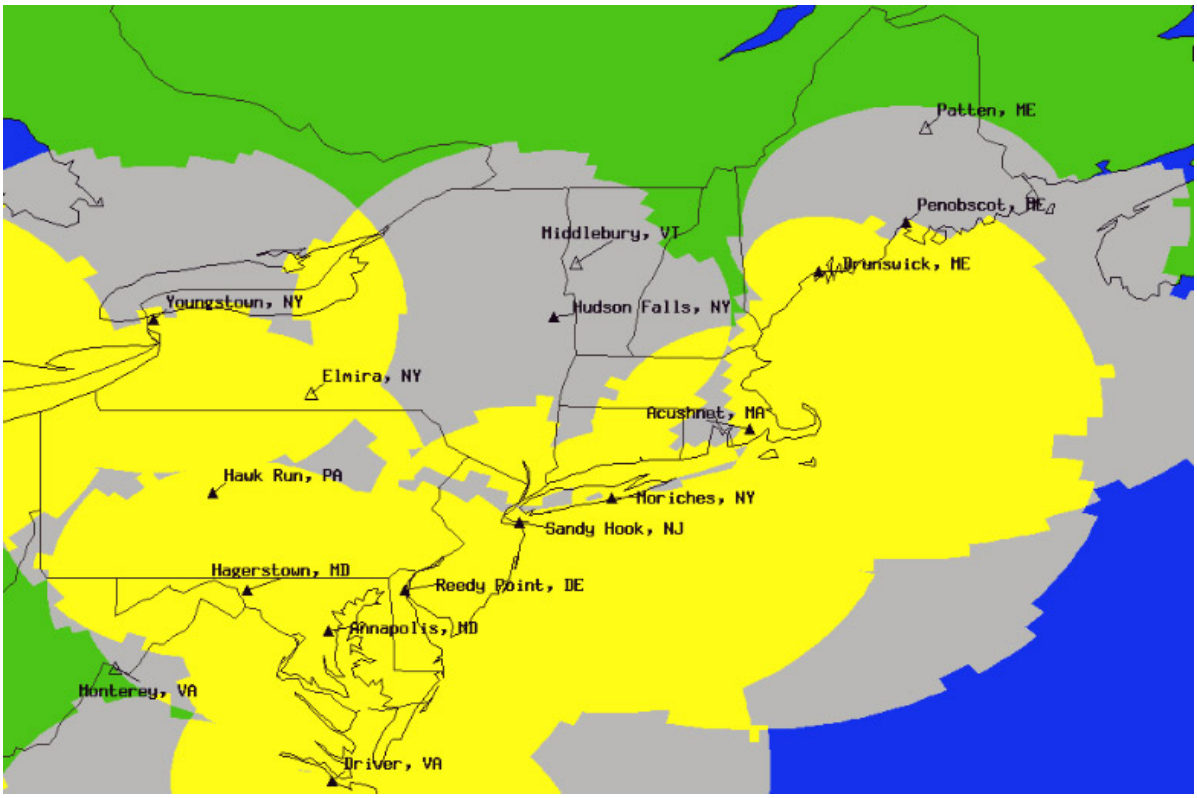
C. VERTICAL AND HORIZONTAL CONTROL

No Horizontal and Vertical Control Report (HVCR) was generated based upon guidance provided in Hydrographic Survey Divisions Field Procedures Manual, 2008, Section 5.3.2.3. No horizontal or vertical control stations were established by the field party for survey F00561. A summary of horizontal and vertical control for this survey follows. ***Concur.***

Filed with original field records

C 1.1 Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83), zone 18. Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacons at Sandy Hook, NJ (804, 286 kHz), and Moriches, NY (803, 293 kHz), were used during this survey. ***Concur.***



http://www.navcen.uscg.gov/dgps/coverage/EastCoast.htm

Figure 3. Horizontal Control DGPS beacons

C 1.2 Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) stations used for this survey are 8531680 (Sandy Hook, NJ) and 8518750 (The Battery, NY). Verified tides with approved TCARI constituents and residuals were applied to all sounding data on September 19th, 2008. ***Concur.***

A request for delivery of final approved (verified) tides for this survey was forwarded to N/OPS1 on September 3rd, 2008 in accordance with the FPM and project letter instructions (reference Appendix IV*). Approved (verified) water levels were downloaded from CO-OPS on September 19th, 2008, and applied with preliminary TCARI zoning which was accepted as final TCARI zoning. ***Concur.***
****Filed with original field records.***

D. RESULTS AND RECOMMENDATIONS

D.1 Chart Comparison

Survey F00561 was compared with chart 12326 (50th Ed.; May 2006, 1:80,000), chart 12300 (47th Ed.; May 2008, 1:400,000), chart 13003 (49th Ed.; Apr. 2007, 1:1,200,000) and ENC US4NY1AM. Chart comparisons were performed in CARIS Hips. ***Concur.***

D.1.1 Chart 12326 Comparison

Depths from charts 12326 generally agree with the current survey, with differences generally 2 feet or less. ***Concur.***

All of the following features discussed in this section of this report are described in detail within Appendix 2 of this report. Appendix 2*, F00561's Features contains remarks concerning survey results and final charting recommendations.

A charted 70' wreck in the vicinity of Latitude 40°27'12.156"N, Longitude 073°49'03.275"W was found to have a least depth of 68.7' at MLLW, corrected with approved tides and final tide zoning. The Hydrographer recommends charting present survey soundings in this location.
Concur with clarification. Classification is included in Appendix II and the Evaluation Report.

A charted 75' wreck in location Latitude 40°27'36.072"N, Longitude 073°49'29.643"W was found to have a least depth of 74.6' at MLLW, corrected with approved tides and final tide zoning. The Hydrographer recommends charting present survey soundings in this location.
Concur with clarification. Clarification is included in Appendix II.

A charted 86' wreck in location Latitude 40°27'18.559"N, Longitude 073°48'26.536"W was found to have a least depth of 85.6' at MLLW, corrected with approved tides and final tide zoning. The Hydrographer recommends charting present survey soundings in this location.
Concur with clarification. Clarification is included in Appendix II.

A former charted Tower in location 40˚ 26' 59.73" N, 73˚ 48' 00.11" W was confirmed to be removed, with a small pile of rubble remaining at a least depth of 91.5' at MLLW, corrected with approved tides and final tide zoning. The Hydrographer recommends charting present survey soundings in this location. The rubble is cartographically significant and in light of the tower removal and the planned channel extension, the Hydrographer recommends not charting the rubble. ***Concur.***

D.1.2 Chart 12300

A charted 12 fathom Wks agrees well the surveyed wreck at location 40˚ 27' 08.63" N, 73˚ 49' 04.02" W, which has a least depth of 11.45 fathoms at MLLW, corrected with approved tides and final tide zoning. The Hydrographer recommends charting present survey soundings in this location.
****Filed with original field records.***

D.1.3 ENC US4NY1AM

Soundings are generally comparable with charted depths, with differences in charted and survey soundings 50cm or less. No differences between the ENC US4NY1AM and the raster chart 12326 were observed in this survey. ***Concur***

D.2 Additional Results

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

A total of 3 AWOIS items were located within the limits of F00561. None of these were assigned nor specifically investigated during this survey. All three were located and least depths determined with complete multibeam coverage. All AWOIS items are described in Section D.1.1 and Appendix II* of this report. ***Concur.***

D.2.4 Shoreline

There is no shoreline within the sheet limits of survey F00561. ***Concur.***

D.2.5 Charted Features

The removal of a charted platform located in position 40° 26' 59.7" N, 073° 48' 00.1" W was confirmed during F00561 survey operations. See Feature Report (Appendix II*) for further information.

All other charted features and item investigations are described in detail in Appendix II* of this report. ***Concur.***

D.2.6 Charted Pipelines and Cables

Several charted cables transect the survey area. All of these cables are buried and are not visible in either side-scan imagery or multibeam digital terrain models. The Hydrographer has no recommendation on these pipelines and cables. ***Concur.***

D.2.7 Bridges, Ferry Routes, and Overhead Cables

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

D.3 Dangers to Navigation and Shoals

D 3.1 Dangers to Navigation

No dangers to navigation were found. ***Concur.***
Filed with original field records

D 3.2 Shoals

No evidence of shoaling was observed in F00561. ***Concur.***

D.4 Aids to Navigation

There is one charted Aids to Navigation (ATON) within the limits of F00561. ***Concur.***

All Aids to Navigation were found to be on station and serving their intended purpose. The Hydrographer has no recommendations regarding these ATONs. ***Concur, see Evaluation Report.***

D.5 Coast Pilot Information

The Hydrographer has no recommendations for changes or addenda to the Coast Pilot. ***Concur.***

D.6 Miscellaneous

Bottom Samples

Bottom samples were not collected for survey F00561. Bottom samples were collected in conjunction with the adjoining survey H11916, and agree well with currently charted bottom type.

D.8 Adequacy of Survey

This survey is considered complete and adequate to supersede charted depths within the common area as per requirements specified in the Project Letter Instructions*.

Summary and Recommendations for Additional Work

The primary purpose of this survey was the disproval of the Ambrose Light Tower and was completed as per HSD special instructions (see Appendix V*).

E. APPROVAL

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

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

Survey F00561 is adequate to supersede charted soundings in their common areas.

Listed below are supplemental reports submitted separately that contain additional information relevant to this survey:

Title	Date Sent	Office
Spring -Data Acquisition and Processing Report	May 2008	N/CS33
Horizontal and Vertical Control Report for OPR-B310-TJ-08	*n/a*	N/CS33
Tides and Water Levels Package for OPR-B310-TJ-08	*n/a*	N/OPS1
Coast Pilot Report for OPR-B310-TJ-08	*n/a*	N/CS26

Approved and Forwarded:

Jasper Schaer
I have reviewed this document
2008.10.02 18:00:20 -04'00'

LT Jasper D. Schaer, NOAA
Field Operations Officer

CDR P. Tod Schattgen, NOAA
Commanding Officer

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

Survey Manager:

Daniel Wright
2008.10.02 21:08:49 Z

Daniel Wright
Chief Survey Technician, NOAA

Appendix I

Dangers to Navigation

No Dangers to Navigation were found during survey F00561

Appendix II

Survey Features Report

Appendix 2: F00561 Features

Registry Number: F00561

State: New York

Locality: New York Harbor

Sub-locality: SE Extension of Ambrose Channel

Project Number: OPR-B310-TJ-08

Survey Date: 09/05/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12326	50th	05/01/2006	1:80,000 (12326_1)	USCG LNM: 12/04/2007 (04/01/2008) NGA NTM: 05/10/2003 (04/12/2008)
12300	47th	05/01/2008	1:400,000 (12300_1)	[L]NTM: ?
13006	34th	05/01/2007	1:675,000 (13006_1)	USCG LNM: 04/22/2008 (06/03/2008) CHS NTM: 08/31/2007 (04/25/2008) NGA NTM: 08/19/2006 (06/07/2008)
5161	13th	10/01/2003	1:1,058,400 (5161_1)	USCG LNM: 04/22/2008 (06/03/2008) NGA NTM: 05/24/2008 (06/07/2008)
13003	49th	04/01/2007	1:1,200,000 (13003_1)	USCG LNM: 05/06/2008 (06/03/2008) NGA NTM: 05/24/2008 (06/07/2008)
14500	27th	10/01/2002	1:1,500,000 (14500_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	91-ft Sounding 1978/95	Shoal	27.89 m	40° 26' 59.7" N	073° 48' 00.1" W	---
2.1	85-ft Wreck (AWOIS #1607-Dryland) 3857/256	Wreck	26.11 m	40° 27' 15.7" N	073° 48' 29.0" W	1607
2.2	68-ft Wreck (AWOIS #749 Relief Lightship) 1522/248	Wreck	20.94 m	40° 27' 08.6" N	073° 49' 04.0" W	749
2.3	74-ft Wreck (AWOIS # 1615 Sandy Hook) 5535/236	Wreck	22.75 m	40° 27' 33.3" N	073° 49' 30.8" W	1615

1 - New Features

1.1) 91-ft Sounding 1978/95

Survey Summary

Survey Position: 40° 26' 59.7" N, 073° 48' 00.1" W

Least Depth: 27.89 m (= 91.52 ft = 15.253 fm = 15 fm 1.52 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.004 m ; **TVU (TPEv)** ±0.236 m

Timestamp: 2008-249.11:51:48.054 (09/05/2008)

Survey Line: f00561 / tj_s222_reson7125_port / 2008-249 / 109_1147

Profile/Beam: 1978/95

Charts Affected: 12326_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Remains of Ambrose Light. Considered insignificant as a charted feature (ENC Group2 Object). Debris height rises 1.06m above the seafloor.

Feature Correlation

Address	Feature	Range	Azimuth	Status
f00561/tj_s222_reson7125_port/2008-249/109_1147	1978/95	0.00	000.0	Primary
f00561/tj_s222_klein5000_sss100/2008-249/109_1147	0002	7.41	195.8	Secondary (grouped)

Hydrographer Recommendations

Chart current survey depths within the common area.

Cartographically-Rounded Depth (Affected Charts):

91ft (12326_1)

15fm (12300_1, 13006_1, 13003_1)

28m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: INFORM - remains of Ambrose Light.

QUASOU - 1:depth known

SORDAT - 20080905

SORIND - US,US,Nsurf,F00561

TECSOU - 3:found by multi-beam

Office Notes

Concur.

Feature Images

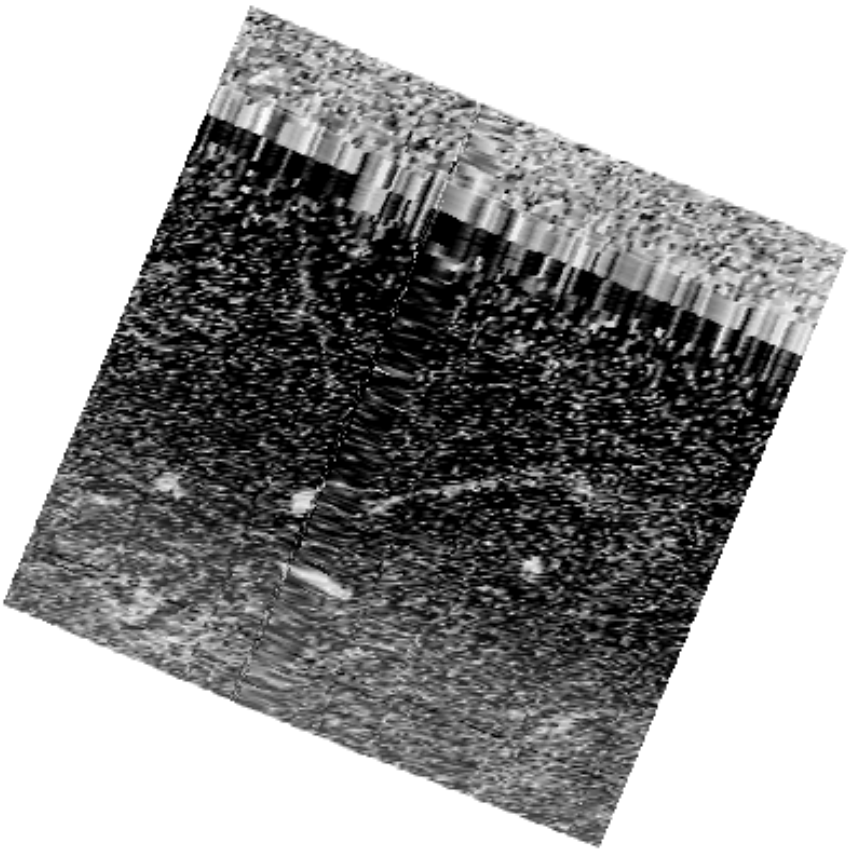


Figure 1.1.1

2 - AWOIS Features

2.1) 85-ft Wreck (AWOIS #1607-Dryland) 3857/256

Primary Feature for AWOIS Item #1607

Search Position:	40° 27' 15.6" N, 073° 48' 28.9" W
Historical Depth:	26.52 m
Search Radius:	50
Search Technique:	s2
Technique Notes:	[None]

History Notes:

NM47/66--DANGEROUS WRECK OF DREDGE DRYLAND, 62 FT. LONG. 22 FT. WIDE ì■REPORTED SUNK IN ABOUT 90 FT. COVERED ABOUT 55 FT. IN APPROX. POS. ì■LAT. 40-27-18N, LONG. 73-49-06W.■ CL1540/78--MAR, OPR-C622-RU/HE-78; ITEM 4; INVESTIGATION BEGAN 30 AUGUST ì■AND WAS COMPLETED ON 18 SEPTEMBER. EFFECTIVELY CLEARED TO MIN. OF ì■45.5 FT., (38.5 FT. ON A 40 FT. SHOAL), WITH NO HANGS ENCOUNTERED.■ FE221/78-79--OPR-C622-RU/HE; ITEM 4; REQUIRED CLEARANCE TO 45 FT. DUE TO ì■POSSIBLE HAZARDS ON BOTTOM. 1 MILE, RADIUS CIRCLE DRAGGED TO 45 FT. ì■EXCEPT TO 38 FT. ON 40 FT. SHOAL (SEE AWOIS NO.00752) NW OF AMBROSE LIGHT ì■TOWER. NO HANGS ENCOUNTERED. RECOMMENDED THAT CLEARED AREA BE CHARTED WITH ì■GREEN TINT WITH 45 FT. CLEARANCE NOTE WHERE APPROPRIATE.■ H10224/86-87--OPR-C121-WH-86-87; WRECK FOUND DURING MAIN SCHEME ì■HYDROGRAPHY AND SIDE SCAN SONAR OPERATION 850M EAST OF REPORTED ì■POSITION; SIX DIVES PERFORMED; 2-15 FT VISIBILITY; PNEUMATIC ì■DEPTH GAUGE LEAST DEPTH OF 86 FT TAKEN ON TOP OF A 20 FT LONG ì■DREDGE PIPE FLOAT FOUND 841.6M EAST OF AWOIS POSITION IN LAT ì■40-27-15.44N, LONG 73-48-30.44W (NAD27); WRECK SITE REVEALED ì■PIPES, FLOATS AND DREDGING EQUIPMENT; HYDROGRAPHER AND EVALUATOR ì■RECOMMENDED DELETING CHARTED SYMBOL AND CHARTING 86 WK AS SHOWN ON ì■PRESENT SURVEY. (UPDATED MSD 4/91)■■ S00003/03 -- S-B601-RU-02/03 HLS; Bathy development of wreck DRYLAND in Survey Position: 040° 27' 15.641" N, 73° 48' 28.900" W (NAD 83). Revise 86 Wk to 87 Wk.Updated 9/5/2006 JCM

Survey Summary

Survey Position:	40° 27' 15.7" N, 073° 48' 29.0" W
Least Depth:	26.11 m (= 85.65 ft = 14.275 fm = 14 fm 1.65 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.023 m ; **TVU (TPEv)** ±0.184 m
Timestamp:	2008-249.08:40:48.921 (09/05/2008)
Survey Line:	f00561 / tj_s222_reson7125_port / 2008-249 / 111_0834
Profile/Beam:	3857/256
Charts Affected:	12326_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS #1607 located. Feature is portrayed as 86-ft Wreck (sounding on wreck) on Chart 12326 in the vicinity of Latitude 40°27'18.559"N, Longitude 073°48'26.536"W. Wreck located by side scan sonar and multibeam with a

least depth of 26.11-m (85.65-ft).

Feature Correlation

Address	Feature	Range	Azimuth	Status
f00561/tj_s222_reson7125_port/2008-249/111_0834	3857/256	0.00	000.0	Primary
AWOIS_B310-TJ-08	AWOIS # 1607	2.13	298.1	Secondary (grouped)
f00561/tj_s222_klein5000_sss100/2008-249/111_0834	0001	8.28	121.6	Secondary (grouped)
f00561/tj_s222_klein5000_sss100/2008-249/110_1209	0002	9.45	065.6	Secondary (grouped)
f00561/tj_s222_klein5000_sss100/2008-249/110_1209	0003	36.42	091.5	Secondary (grouped)

Hydrographer Recommendations

Recommend to update chart with F00561 results. Delete charted 86-ft Wreck (sounding on wreck) portrayed in Latitude 40°27'18.559"N, Longitude 073°48'26.536"W. Append chart with 85-ft (26.11-m) Wreck located in Latitude 40°27'15.671"N, Longitude 073°48'28.980"W.

Cartographically-Rounded Depth (Affected Charts):

85ft (12326_1)

14fm (12300_1, 13006_1, 13003_1)

26m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 1:non-dangerous wreck

CONVIS - 2:not visual conspicuous

INFORM - AWOIS 1607.

OBJNAM - 85-ft Wreck Dryland AWOIS 1607

QUASOU - 6:least depth known

SORDAT - 20080905

SORIND - US,US,Nsurf,F00561

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

VALSOU - 26.106 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Remove charted 87ft sounding with text "Wk". Chart 85ft sounding with text "Wk" at latitude 40:27:15.671N, longitude 073:48:28.980W. Update AWOIS database for item #1607.

Feature Images

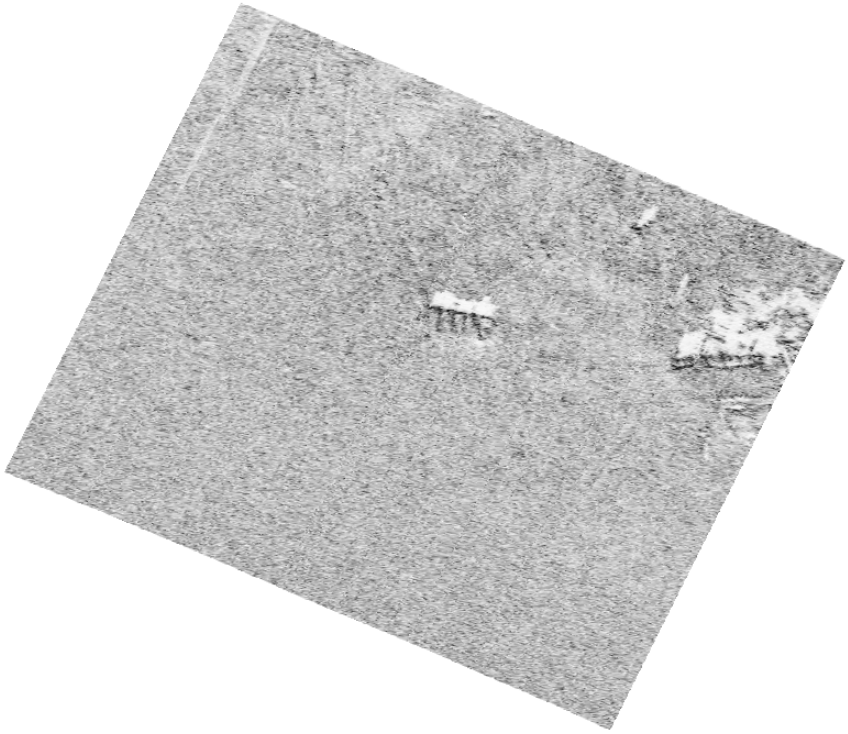


Figure 2.1.1

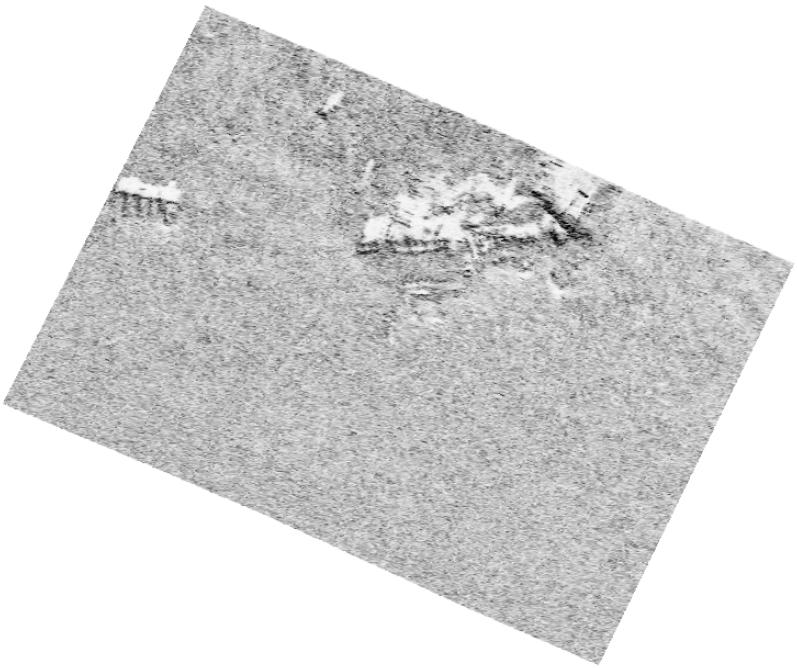


Figure 2.1.2

2.2) 68-ft Wreck (AWOIS #749 Relief Lightship) 1522/248

Primary Feature for AWOIS Item #749

Search Position:	40° 27' 08.6" N, 073° 49' 04.2" W
Historical Depth:	22.81 m
Search Radius:	50
Search Technique:	s2
Technique Notes:	[None]

History Notes:

NM24/60--AMBROSE LIGHTSHIP REPLACED BY RELIEF LIGHTSHIP (WAL-505) IN ì■APPROX. POS. LAT. 40-27-06N, LONG. 73-49-23W.■ NM29/60--AMBROSE RESUMED STATION, RELIEF HAVING BEEN RAMMED BY A SHIP AND ì■SUNK ON STATION. ■ NM46/62--RE. INVESTIGATION BELOW. SWEPT DEPTH OF 59 FT. EXISTS OVER WRECK ì■OF RELIEF LIGHTSHIP SUNK ON AMBROSE STATION IN 1960. NEW YORK HARBOR APPROACH ì■WRECK LIGHTED GONG BUOY WR DISCONTINUED. APPROX. POS. LAT. 40-27-12N, ì■LONG. 73-49-06W.■ CL1198/62--SPECIAL REPORT (BELOW) MADE INTO A CHART LETTER. LETTER ì■CONSISTS OF WAINWRIGHT AND HILGARD AREA AND DEPTH SHEET (10/18/62) AND ì■REPORT TEXT.■ H10224/86--OPR-C121-WH-86; WRECK DETECTED DURING MAIN SCHEME ì■HYDROGRAPHY; 4 DIVES PERFORMED TO CONFIRM IDENTITY, LOCATION AND ì■LEAST DEPTH; SITTING ALMOST UPRIGHT ON A SAND AND MUD BOTTOM; ì■FOR MOST PART STILL INTACT; ONE OF THE TWO ORIGINAL MASTS LAYING ì■ON DECK; SECOND MAST OR STACK NOT FOUND; VISIBILITY ESTIMATED AT ì■15 FT; PNEUMATIC DEPTH GAUGE LEAST DEPTH OF 70 FT IN LAT ì■40-27-08.21N, LONG 73-49-05.65W (NAD27); HYDROGRAPHER AND ì■EVALUATOR RECOMMENDED CHARTING 70 WK AS SHOWN ON PRESENT SURVEY. ì■(UPDATED MSD 4/91)■■ DESCRIPTION■ **** SPECIAL REPORT 23-62, USC WIRE DRAG INVESTIGATION, APPROACHES TO ì■NEW YORK AT REQUEST OF COMMANDER, 3RD CGD, 23 MAY, 1962. WRECK HUNG ON ì■SECOND DRAG. DIVERS LD IS 59.5 FT. TO TOP OF STACK (PREDICTED TIDES). ì■VESSEL SITTING ALMOST UPRIGHT IN THE MUD BOTTOM. BOTH MASTS BROKEN OFF ì■AND LAYING FLAT. NAVY DIVERS FROM NAVY AMMUNITION DEPOT, EARLE, REPORT ì■MASTS PULLED OFF BY A BUOY TENDER MOORED TO WRECK SOME TIME AGO. PRESENT ì■INVESTIGATION CONSIDERED COMPLETE.■ 195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, ì■CT. POLICE DEPARTMENT, TEL NO 203-622-8020; 9960-X 26903.5, ì■9960-Y 43695.9. (ENTERED MSM 6/90)■■ S00003/03 -- S-B601-RU-02/03 HLS; ■Survey Position: 40.45239448° N, 73.81783910° W■Least Depth: 22.81 m■Timestamp: 2003-153.20:45:53.186 (06/02/2003)■SWMB investigation of AWOIS 749 charted as 70 ft wreck. Lightship found at position charted, but 5 ft deeper.■Hydrographer Recommendations: Revise 70 Wk to 75 Wk■Updated 9/11/2006 JCM

Survey Summary

Survey Position:	40° 27' 08.6" N, 073° 49' 04.0" W
Least Depth:	20.94 m (= 68.69 ft = 11.448 fm = 11 fm 2.69 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.019 m ; **TVU (TPEv)** ±0.167 m
Timestamp:	2008-249.10:49:30.246 (09/05/2008)
Survey Line:	f00561 / tj_s222_reson7125_port / 2008-249 / 106_1046

Profile/Beam: 1522/248

Charts Affected: 12326_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS #749 Relief Lightship located. Feature is portrayed as 70-ft Wreck (sounding on wreck) on Chart 12326 in the vicinity of Latitude 40°27'12.156"N, Longitude 073°49'03.275"W. Wreck located by side scan sonar and multibeam with a least depth of 20.94-m (68.69-ft).

Feature Correlation

Address	Feature	Range	Azimuth	Status
f00561/tj_s222_reson7125_port/2008-249/106_1046	1522/248	0.00	000.0	Primary
AWOIS_B310-TJ-08	AWOIS # 749	4.69	087.4	Secondary (grouped)
f00561/tj_s222_klein5000_sss100/2008-249/105_0433	0001	8.29	047.7	Secondary (grouped)
f00561/tj_s222_klein5000_sss100/2008-249/106_1046	0001	17.41	240.6	Secondary (grouped)

Hydrographer Recommendations

Recommend to update chart with F00561 survey results. Delete charted 70-ft Wreck (sounding on wreck) portrayed in Latitude 40°27'12.156"N, Longitude 073°49'03.275"W. Append chart with 68-ft Wreck located in Latitude 40°27'08.625"N, Longitude 073°49'04.023"W.

Recommend updating AWOIS database for AWOIS #749.

Cartographically-Rounded Depth (Affected Charts):

68ft (12326_1)

11fm (12300_1, 13006_1, 13003_1)

20.9m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 1:non-dangerous wreck

INFORM - AWOIS item 749.

OBJNAM - 68-ft Wreck Relief Lightship AWOIS 749

QUASOU - 6:least depth known

SORDAT - 20080905

SORIND - US,US,Nsurf,F00561

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

VALSOU - 20.937 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Remove charted 75 ft sounding with text "Wk". Chart 68 ft sounding with text "Wk" at latitude 40:27:08.625N, longitude 073:49:04.023. Update AWOIS database for item #749.

Feature Images

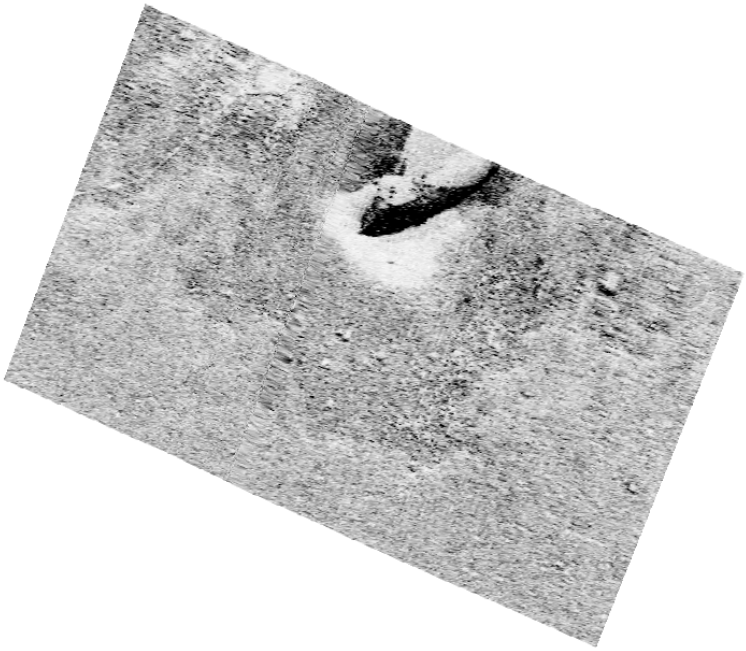


Figure 2.2.1

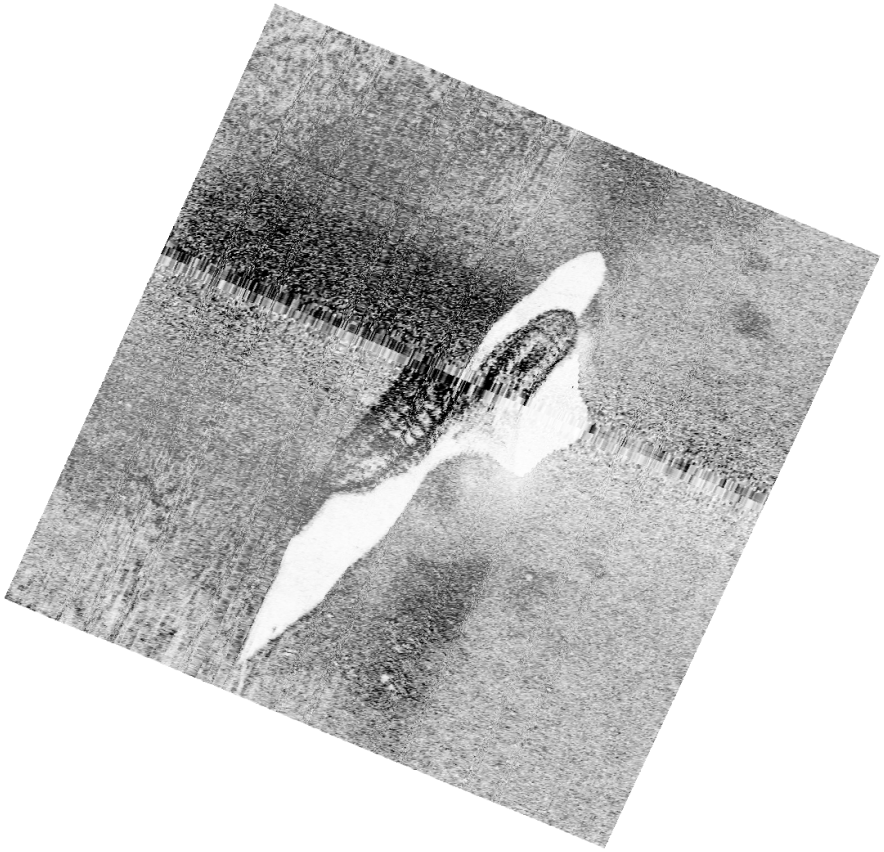


Figure 2.2.2

2.3) 74-ft Wreck (AWOIS # 1615 Sandy Hook) 5535/236

Primary Feature for AWOIS Item #1615

Search Position:	40° 27' 33.1" N, 073° 49' 30.9" W
Historical Depth:	22.86 m
Search Radius:	100
Search Technique:	s2
Technique Notes:	[None]

History Notes:

NM19/39--PILOT BOAT WRECK LIGHTED BELL BUOY, BLACK AND WHITE HB, INT QK FL ì■RED LIGHT ESTABLISHED ABOUT 950 YDS., 354 DEG. 30 SEC. FROM AMBROSE CHANNEL ì■LIGHTSHIP TO MARK A SUNKEN WRECK. 72 FT. OVER WRECK. BUOY MOORED EASTWARD ì■CLOSE TO WRECK IN 90 FT. ESTABLISHED 4/29/39.■ NM26/39--BUOY DISCONTINUED ON 6/14/39. WRECK OF PILOT BOAT LIES IN 85 FT. ì■WITH A LEAST DEPTH OF 52 FT. OVER THE MAST.■ FE101/51(F.E. NO. 10, 1951)--CS-326; ITEM 13 OF SUPPLEMENTAL INSTRUCTIONS ì■DATED 12 DEC. 1949; SPECIAL REPORT ON WRECK NO. 194, SANDY HOOK; WRECK ì■LOCATED IN LAT. 40-27-34N, LONG. 73-49-34W. ECHO SOUNDING OF 74.0 FT. ì■OBTAINED ON WRECK IN GENERAL DEPTH OF 84 FT. PIECE OF IRON PIPE GUARD ì■RAILING BROUGHT UP ON GROUND WIRE. HUNG AT AN EFFECTIVE DEPTH OF 70.0 FT. ì■CLEARED AN EFFECTIVE DEPTH OF 68.0 (PREDICTED TIDES).■ CL632/50--DATED 9/21/50; SPECIAL REPORT (ABOVE) MADE INTO CHART LETTER. ì■CHARTED AS WRECK CLEARED TO 69 FT. SUBSEQUENTLY REVISED TO WRECK CLEARED TO ì■68 FT. (AID PROOF 37, DATED 4/11/52).■ H10224/86--OPR-C121-WH-86; WRECK WAS LOCATED IN LAT ì■40-27-32.77N, LONG 73-49-32.45W (NAD27) WITH A PNEUMATIC DEPTH ì■GAUGE LEAST DEPTH OF 75 FT; DIVERS FOUND THE BOW DETACHED FROM ì■THE REST OF THE VESSEL AND LYING ON ITS SIDE, APPROXIMATELY 50 FT ì■AWAY, WITH THE GROUND TACKLE AND BALDT STYLE ANCHOR STILL INTACT; ì■THE STERN SECTION WAS MAINLY INTACT AND LAYING UPRIGHT ON THE ì■BOTTOM; OBSERVATIONS ON THIS SITE INDICATE THAT THIS IS THE WRECK ì■OF A METAL HULLED VESSEL THAT SANK AS A RESULT OF A COLLISION ì■WHICH SEVERED ITS BOW; LOCATION, AGE, AND GENERAL CONDITION OF ì■WRECK IS CONSISTENT WITH DESCRIPTION OF ASSIGNED ITEM; ì■EVALUATOR RECOMMENDED DELETING CHARTED SYMBOL AND ADDING 75 WK ì■AS SHOWN ON PRESENT SURVEY. (UPDATED MSD 4/91)■■ DESCRIPTION■ 24 NO.305; PATROL, 361 GT; SUNK 4/27/39; POS. ACCURACY WITHIN 1 MILE ì■WD CLEARED TO 68 FT. (SOURCE UNK.) ■ 27 NO.194; PILOT BOAT, 361 NT AT LAT.40-27-45N, LONG.73-49-30W. ■ 195 LORAN-C RATES HAVE BEEN PROVIDED BY MR. RICHARD TARACKA, GREENWICH, ì■CT. POLICE DEPT., TEL. NO. 203-622-8007; 9960-X 26908.3, 9960-Y 43700.4. ì■(ENTERED MSM 6/89)

Survey Summary

Survey Position:	40° 27' 33.3" N, 073° 49' 30.8" W
Least Depth:	22.75 m (= 74.63 ft = 12.438 fm = 12 fm 2.63 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.017 m ; **TVU (TPEv)** ±0.177 m
Timestamp:	2008-249.13:24:28.482 (09/05/2008)
Survey Line:	f00561 / tj_s222_reson7125_port / 2008-249 / 156_1313

Profile/Beam: 5535/236

Charts Affected: 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS Item #1615 located. Feature is portrayed as 75-ft Wreck (sounding on wreck) on Chart 12326 in the vicinity of Latitude 40°27'36.072"N, Longitude 073°49'29.643"W. Wreck located by side scan sonar and multibeam with a least depth of 22.75-m (74.63-ft).

Feature Correlation

Address	Feature	Range	Azimuth	Status
f00561/tj_s222_reson7125_port/2008-249/156_1313	5535/236	0.00	000.0	Primary
f00561/tj_s222_klein5000_sss100/2008-249/110_1209	0001	1.62	332.2	Secondary (grouped)
AWOIS_B310-TJ-08	AWOIS # 1615	4.78	028.2	Secondary (grouped)
f00561/tj_s222_klein5000_sss100/2008-249/109_1148	0002	48.54	044.4	Secondary (grouped)

Hydrographer Recommendations

Recommend to update chart with F00561 survey results. Delete charted 75-ft Wreck (sounding on wreck) portrayed in Latitude 40°27'36.072"N, Longitude 073°49'29.643"W. Append chart with 74-ft (22.75m) Wreck located in Latitude 40°27'33.285"N, Longitude 073°49'30.833"W.

Recommend updating AWOIS database for AWOIS #1615.

Cartographically-Rounded Depth (Affected Charts):

74ft (12326_1)

12fm (12300_1, 13006_1, 13003_1, 14500_1)

23m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 1:non-dangerous wreck

INFORM - AWOIS item 1615.

OBJNAM - 74-ft Wreck Sandy Hook AWOIS 1615

QUASOU - 6:least depth known

SORDAT - 20080905

SORIND - US,US,Nsurf,F00561

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

VALSOU - 22.746 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Remove charted 76ft sounding with text "Wk". Chart 74ft sounding with text "Wk" at latitude 40:27:33.285N, longitude 073:49:30.833W. Update AWOIS database for item #1615 to 74ft wreck at latitude 40:27:33.28N, longitude 073:49:30.833W.

Feature Images

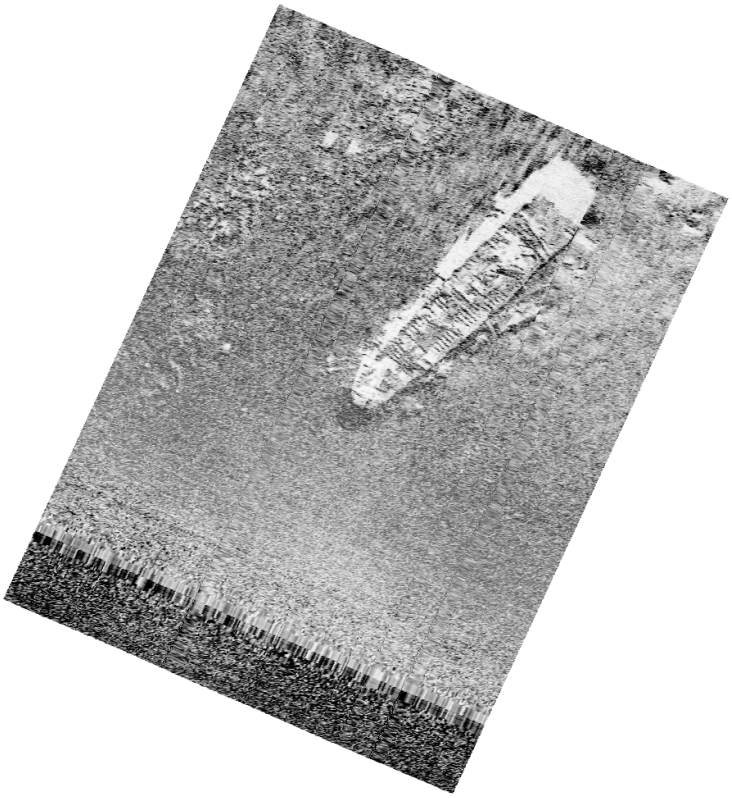


Figure 2.3.1

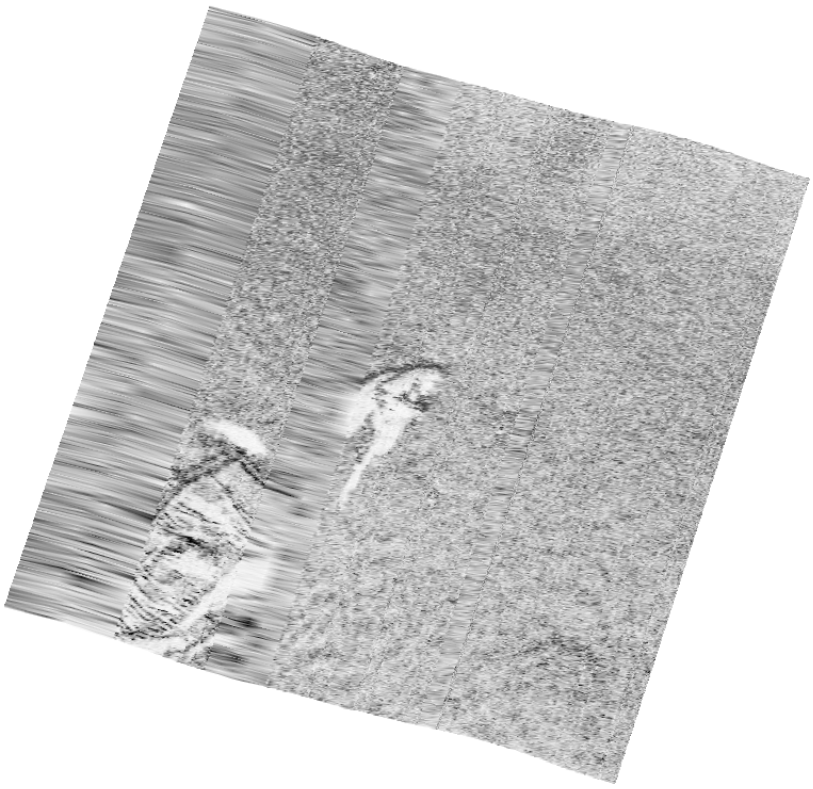
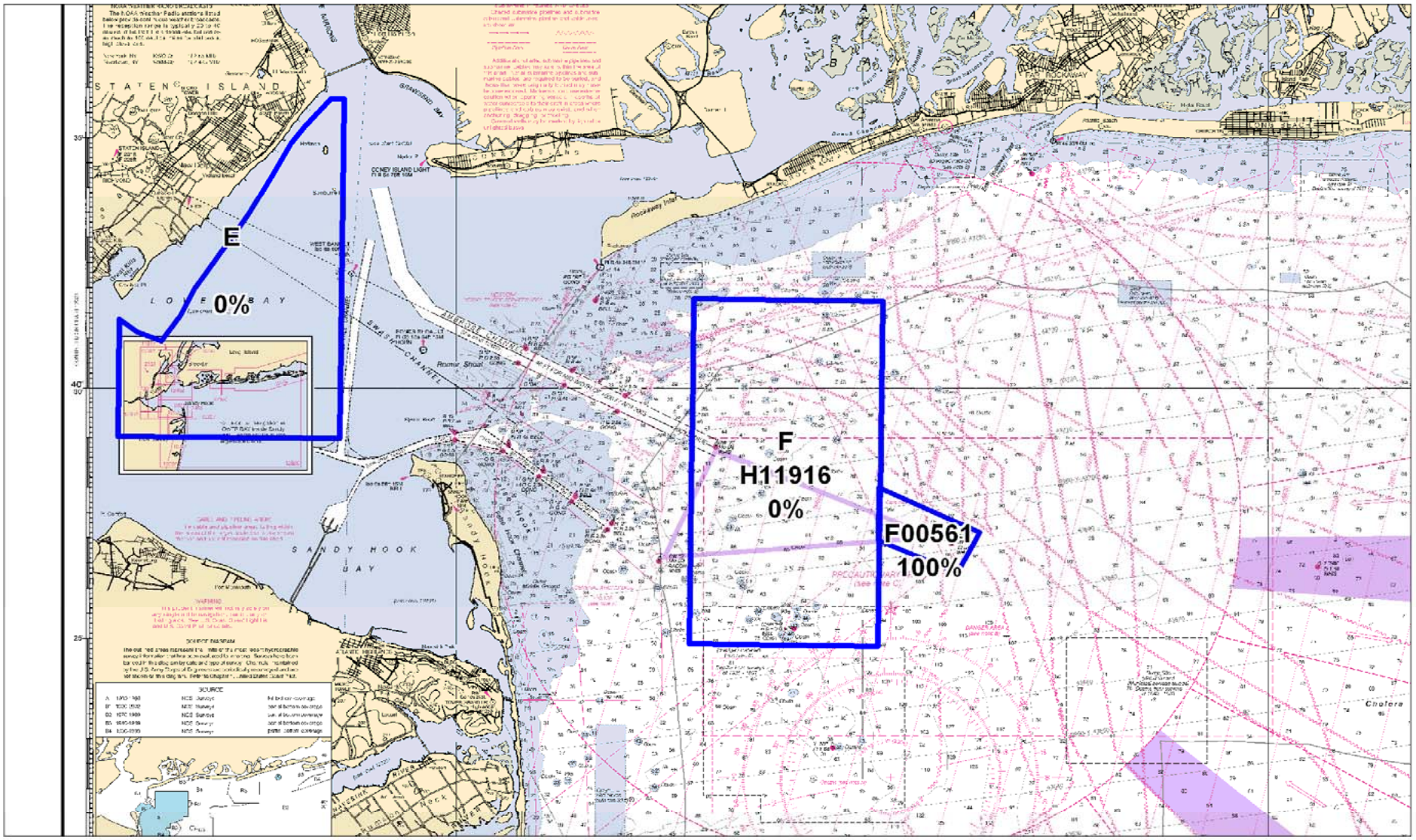


Figure 2.3.2

Appendix III

Progress Sketch



Project	Sheet_Letter	H_num	HQ_Est_SNM	CumlPercCompPrevM	CumlPercCompCurMon	SNM_CompCurMon	CumSNMcomp
B310-TJ-08	E		17	0	0	0	0
B310-TJ-08		F00561	2	0	100	2	2
B310-TJ-08	F	H11916	24	0	0	0	0

Progress Sketch OPR-B310-TJ-08
September 2008

Appendix IV

Tides and Water Levels

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

September 06, 2008

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

FROM: CDR P. Tod Schattgen, NOAA Ship THOMAS JEFFERSON (MOA-TJ)

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final TCARI grid
3. Six Minute Water Level data (Co-ops web site)

Transmit data to the following:

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

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

Project No.:	OPR-B310-TJ-08
Registry No.:	F00561
State:	New York
Locality:	Approaches to New York Harbor
Sublocality:	Ambrose Light

Attachments containing:

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

cc: N/CS33

Year_DOY	Min Time	Max Time
2008_249	04:05:15	17:45:39

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : September 10, 2008

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B310-TJ-2008
HYDROGRAPHIC SHEET: F00561

LOCALITY: Ambrose Light, Approaches to New York Harbor, NY
TIME PERIOD: September 5, 2008

TIDE STATION USED: 851-8750 The Battery
Lat.40° 42.0′ N Long. 74° 0.9' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.443 meters

TIDE STATION USED: 853-1680 Sandy Hook
Lat. 40° 28.0' N Long. 74° 0.6' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.492 meters

REMARKS: RECOMMENDED ZONING

Please use the TCARI grid "B310TJ2008-TCARI-rev.tc" submitted with the project instructions OPR-B310-TJ-2008-rev as the final grid for project F00561, during the time period on September 5, 2008.

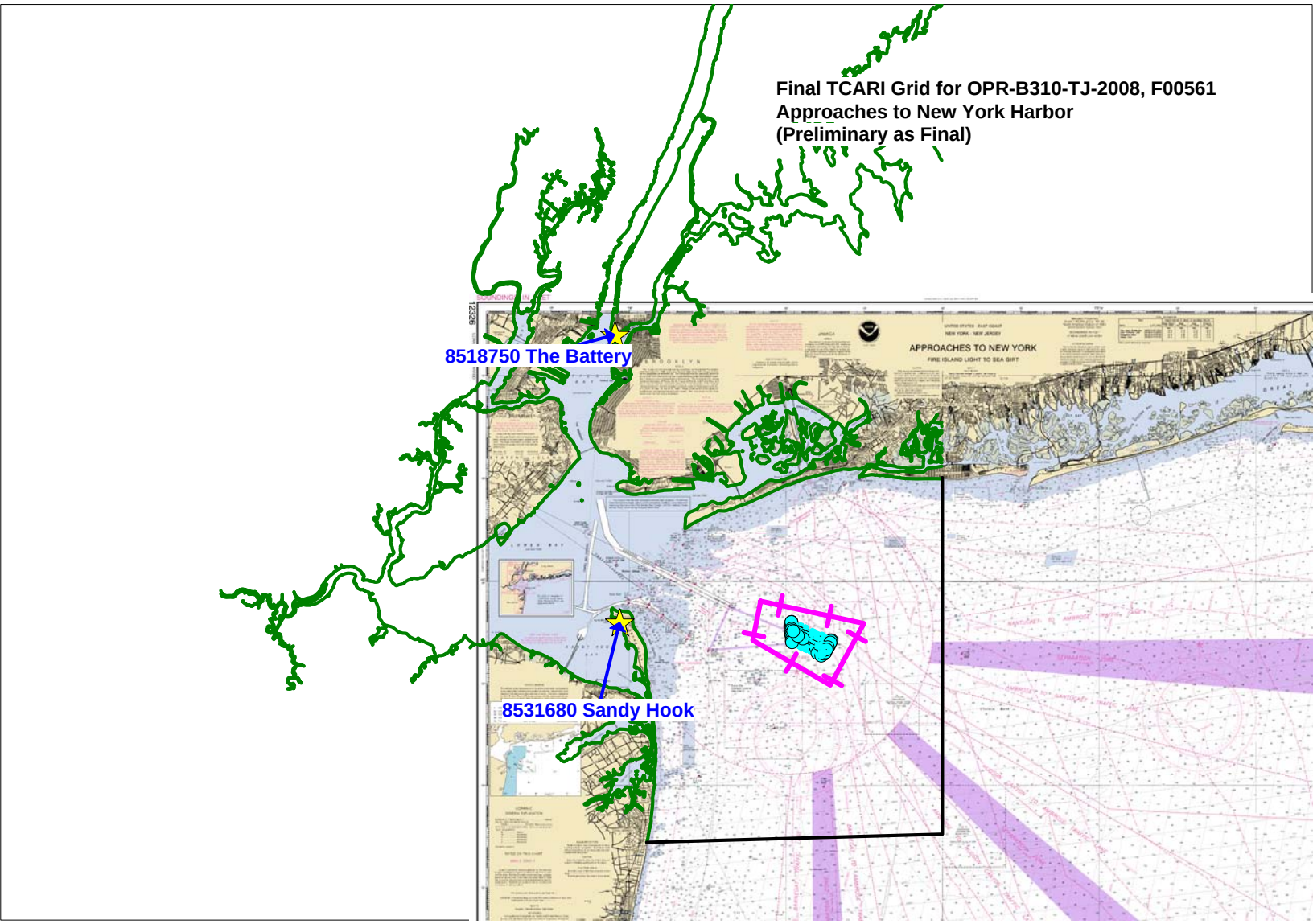
Refer to attachments for zoning information.

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

Peter J. Stone

Digitally signed by Peter J. Stone
DN: cn=Peter J. Stone, o=CO-OPS, ou=NOAA/NOS, email=peter.stone@noaa.gov, c=US
Date: 2008.09.16 13:10:41 -04'00'

CHIEF, OCEANOGRAPHIC DIVISION


Final TCARI Grid for OPR-B310-TJ-2008, F00561
Approaches to New York Harbor
(Preliminary as Final)
8518750 The Battery
8531680 Sandy Hook
APPROACHES TO NEW YORK
FIRE ISLAND LIGHT TO SEA GIRT

Appendix V

Supplemental Survey Records & Correspondence

Subject: Re: extension
From: Jeremy McHugh <Jeremy.McHugh@noaa.gov>
Date: Wed, 03 Sep 2008 14:14:24 -0400
To: jasper schaer <jasper.schaer@noaa.gov>
CC: Tod Schattgen <Tod.Schattgen@noaa.gov>, Daniel Wright <Daniel.Wright@noaa.gov>, James M Crocker <James.M.Crocker@noaa.gov>, Matt Wingate <matt.wingate@noaa.gov>

Hi Jasper,
Here you go:

Survey Number	F00561		
Project Number	OPR-B310-TJ-08		
Survey Type	F		
Locality	New York Harbor		
Sub Locality	SE Extension of Ambrose Channel		
State	New York,		
Scale	10000		
Sheet			
Max/North Latitude *(DDMMSS.S)*	402802.0	Min/South Latitude *(DDMMSS.S)*	402616.0
Max/West Longitude *(DDDMMSS.S)*	0734838.0	Min/East Longitude *(DDDMMSS.S)*	0734706.0
Affected Charts	12300 12326 13003 13006 5161		
ESNM	2		
Field Unit	NOAA SHIP THOMAS JEFFERSON		
Processing Center	AHB		
Comments			

jasper schaer wrote:

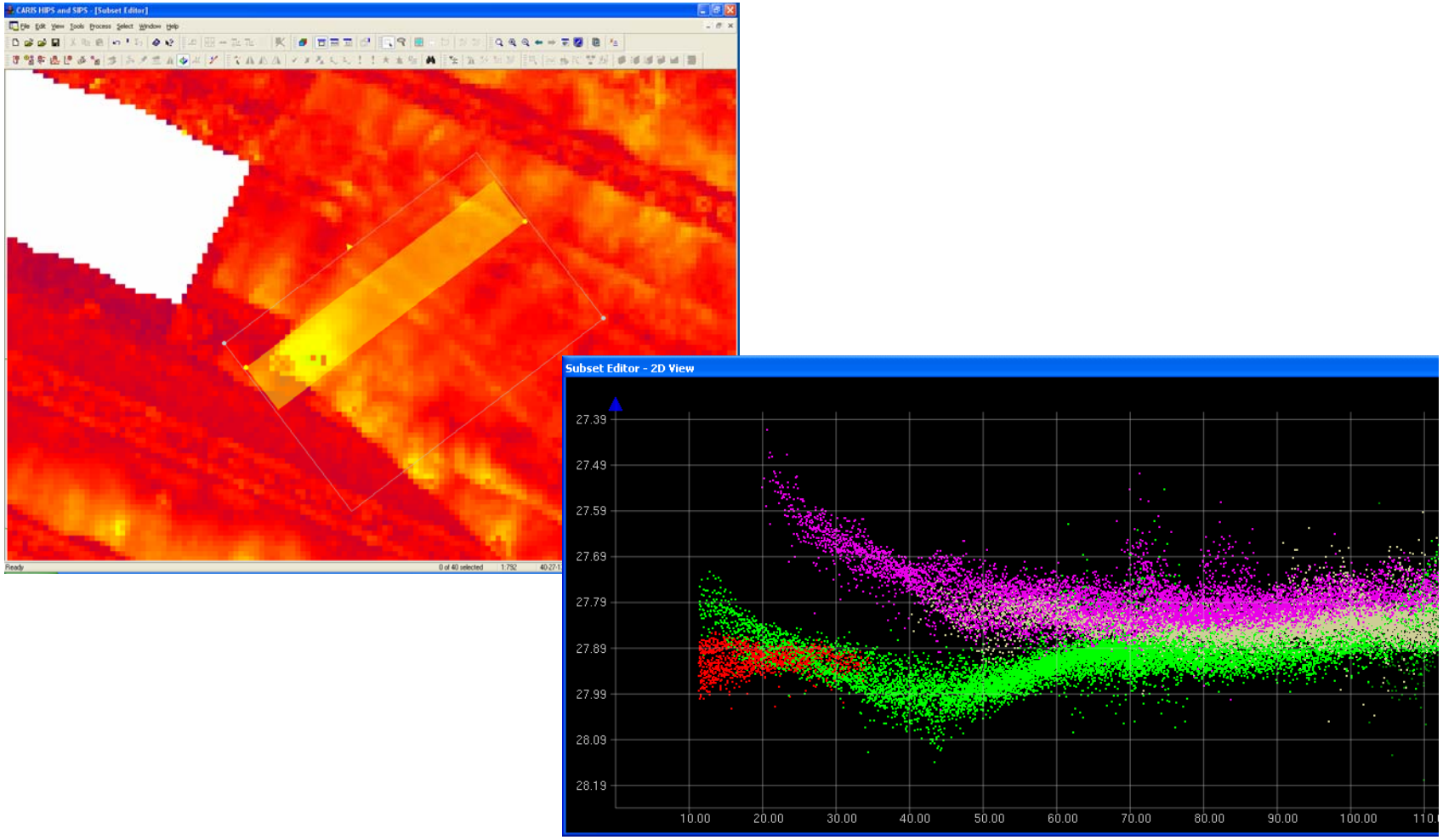
> Jeremy-
>
> Can I get a registry for this B310 extention?
>
> -js

--
Jeremy McHugh, Physical Scientist
NOAA's Office of Coast Survey
301-713-2702 x117

F00561

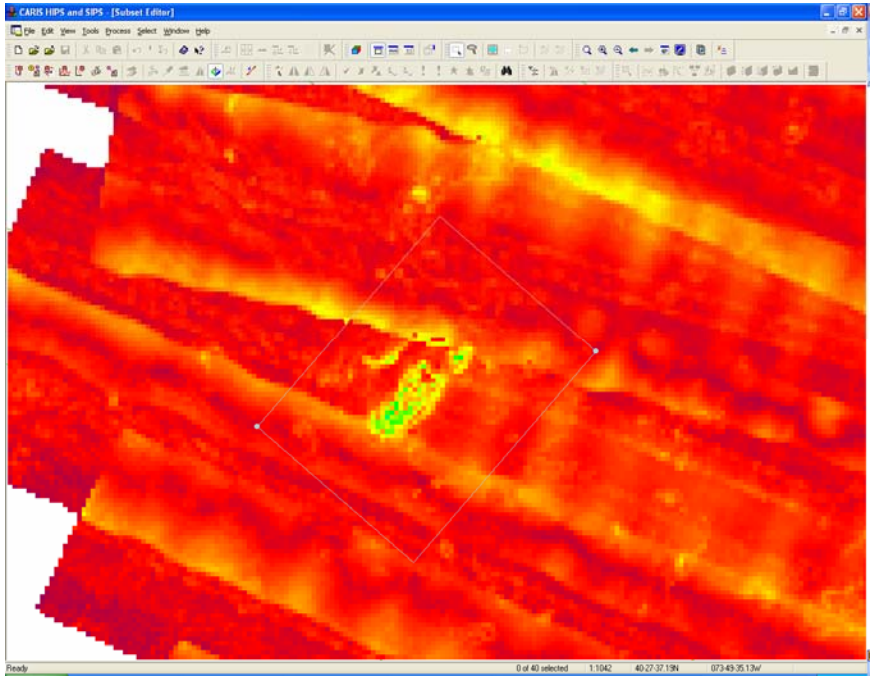
Standard Deviation Report

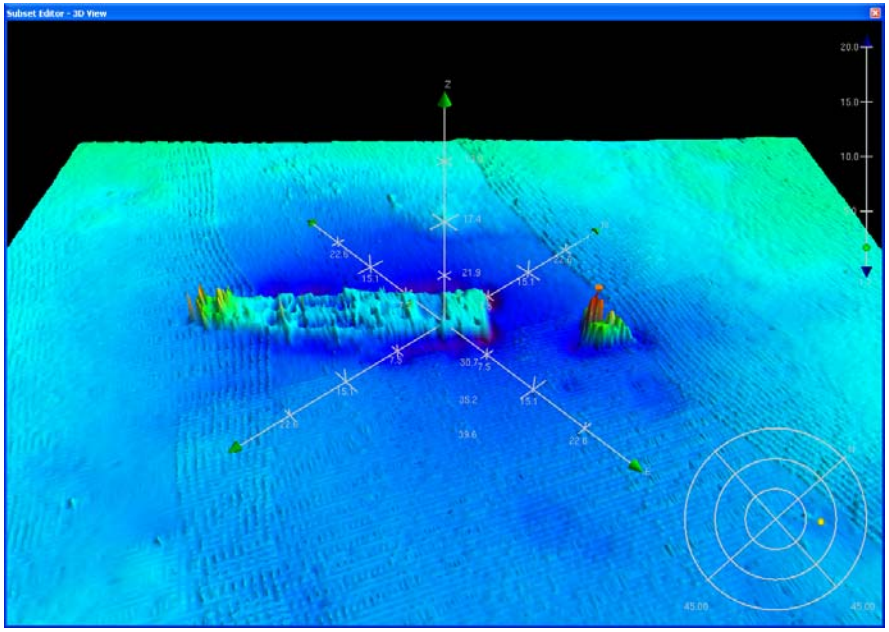
Unknown error to approximately 0.3m between overlapping lines.



Lon (dms)	Lat (dms)	Std_dev (m)
073-49-34.96W	40-27-10.19N	0.03

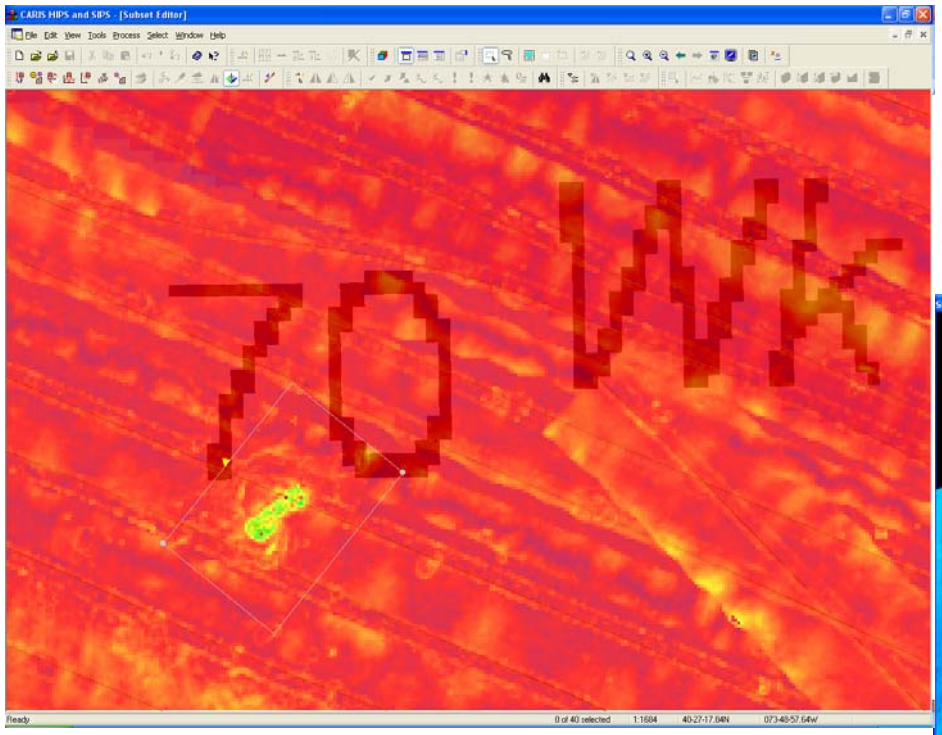
Charted 75 ft Wreck, Maximum Std Deviation to 0.23m (to 1.72 with Designated Sounding).

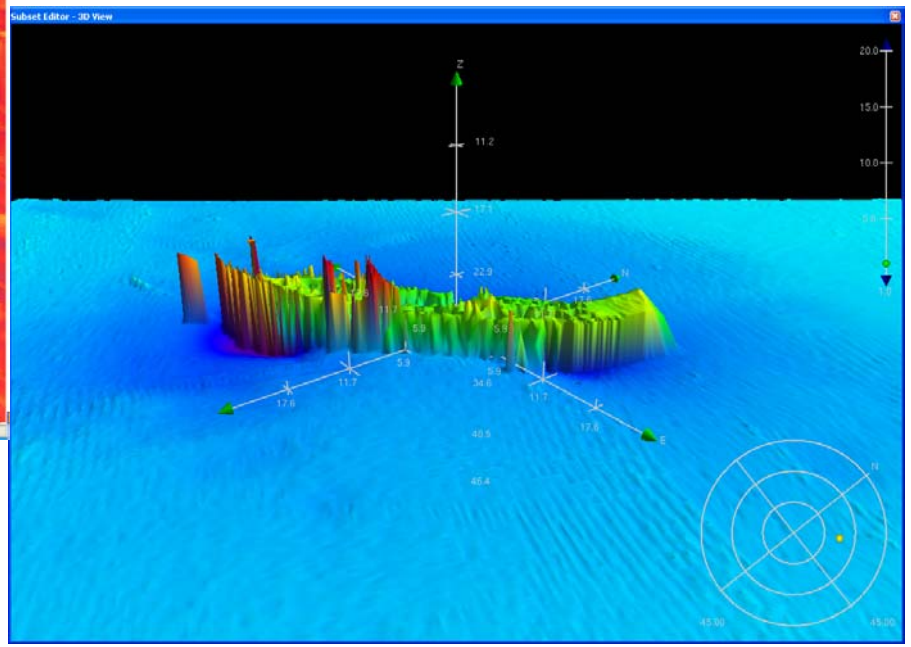




Lon (dms)	Lat (dms)	Std_dev (m)
073-49-32.11W	40-27-32.47N	0.23

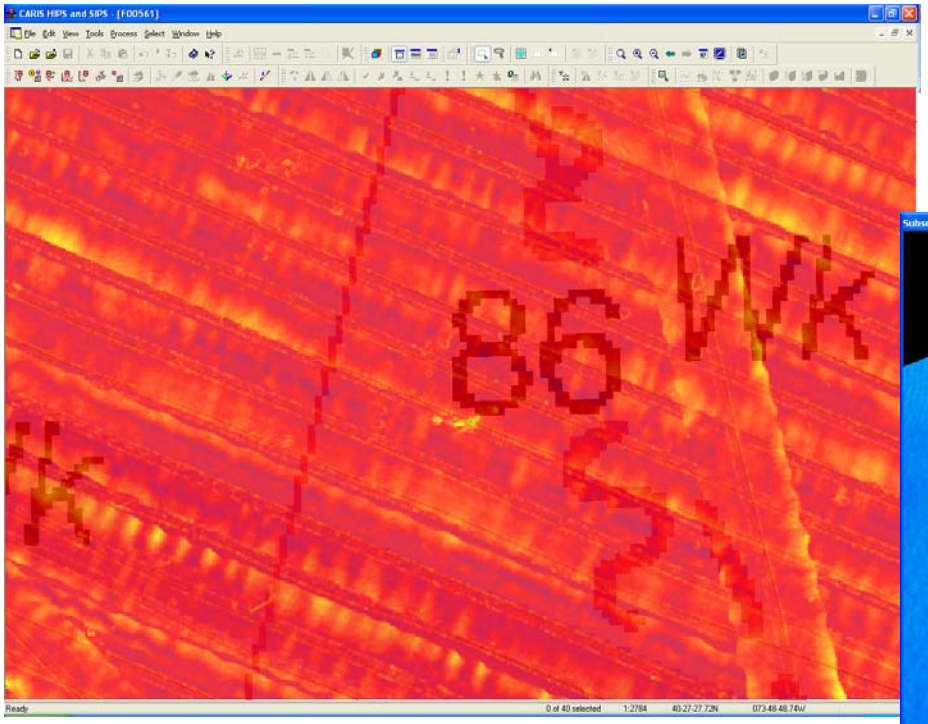
Charted 70 ft Wreck, Maximum Std Deviation to 0.22m (to 2.25m with Designated Sounding).

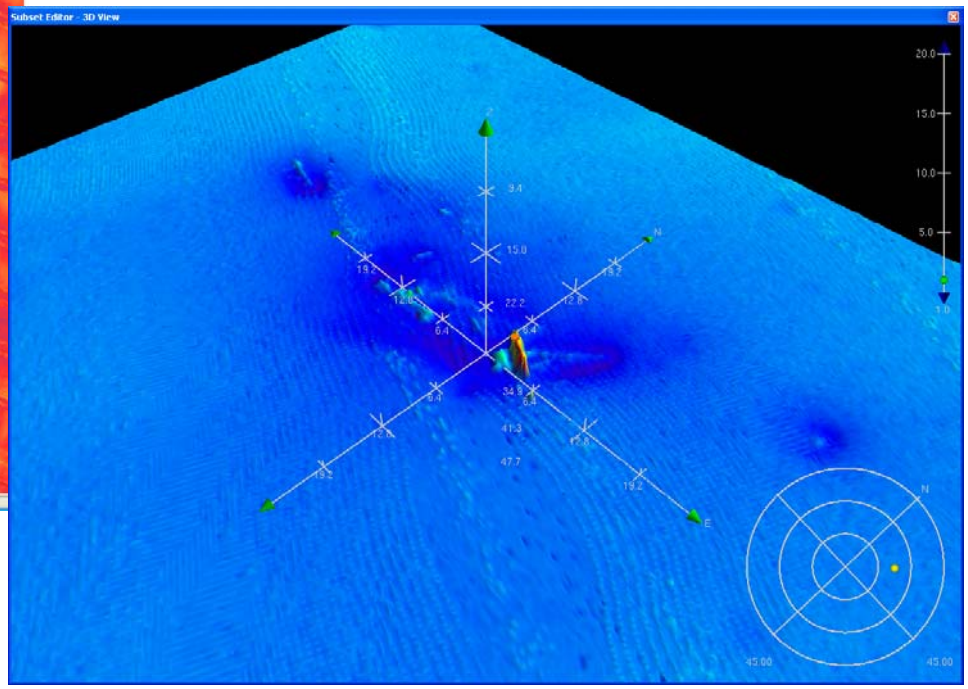




Lon (dms)	Lat (dms)	Std_dev (m)
073-49-32.11W	40-27-32.47N	0.23

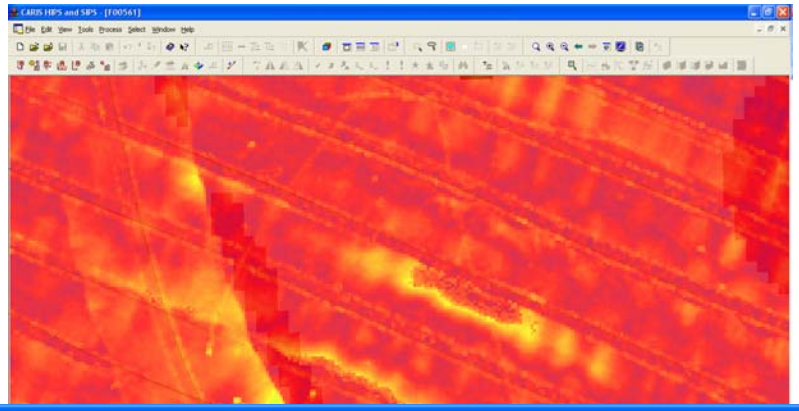
Charted 86 ft Wreck, Maximum Std Deviation to 0.21m (to 2.04m with Designated Sounding).

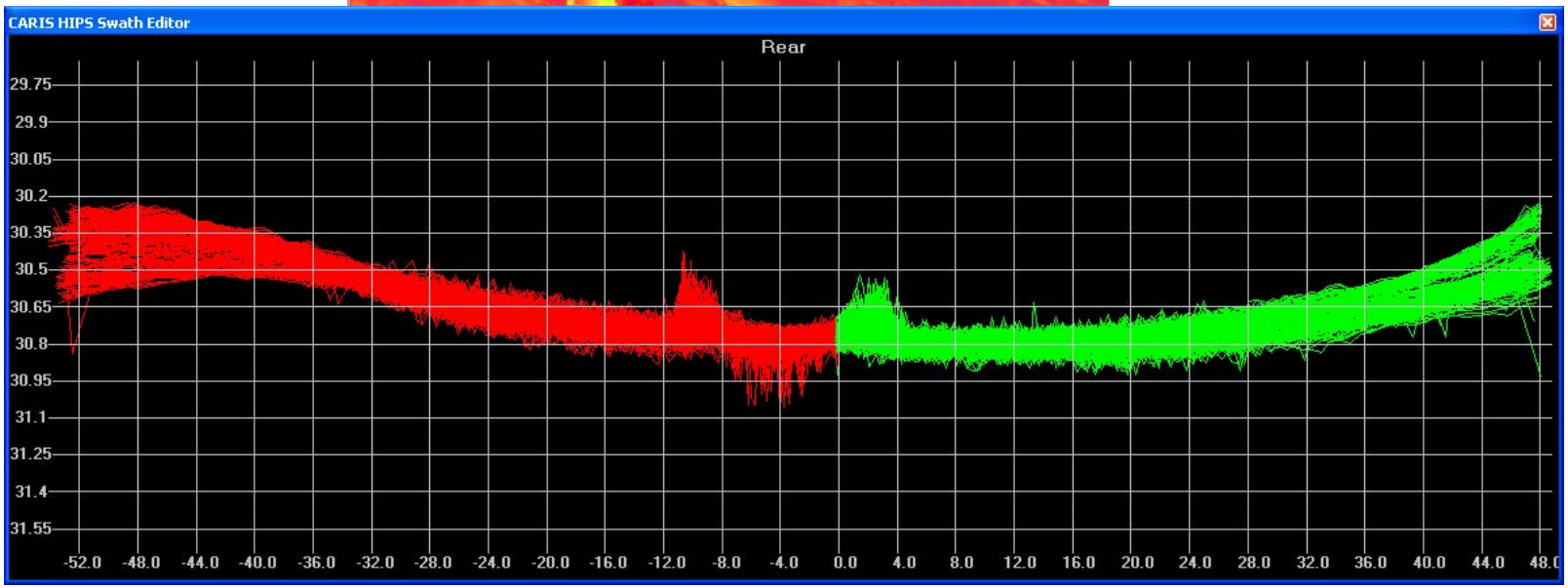




Lon (dms)	Lat (dms)	Std_dev (m)
073-49-32.11W	40-27-32.47N	0.23

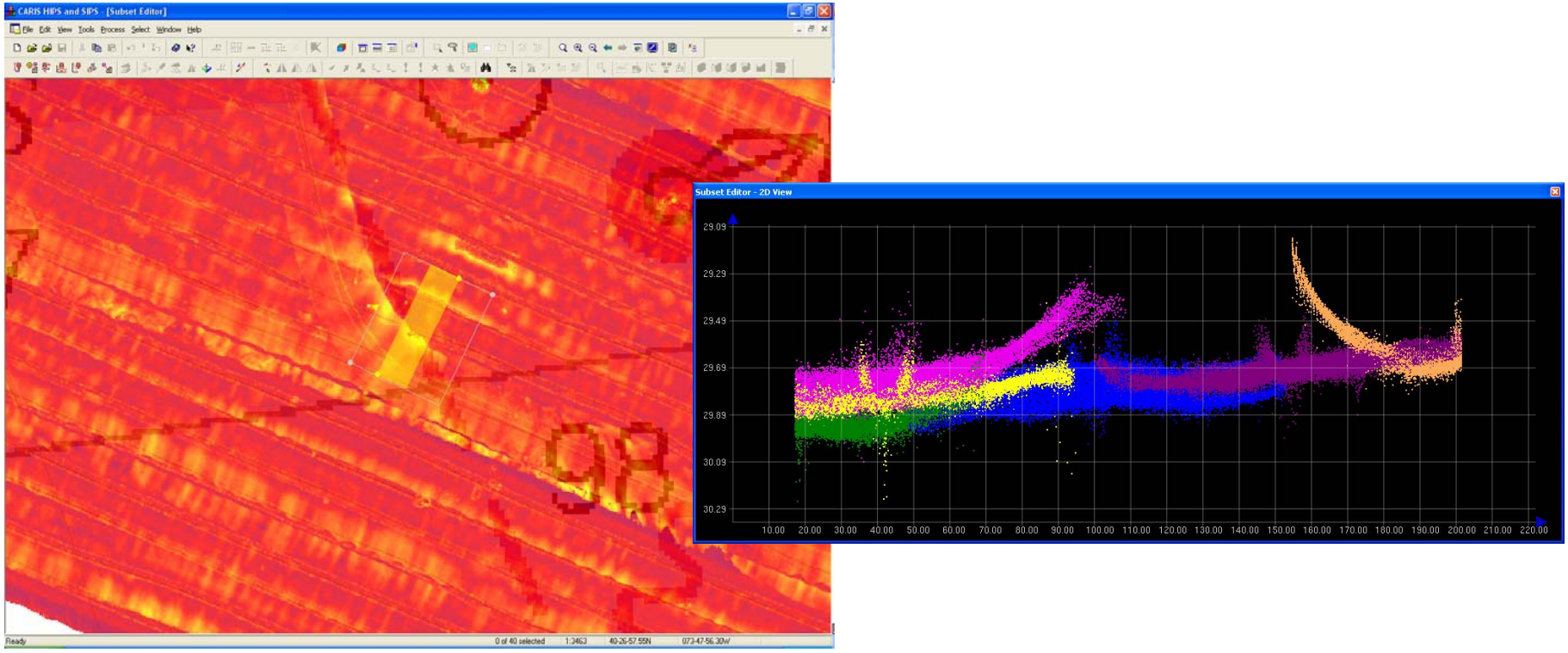
Temporary sound speed change, Line 15_1418, Std Dev to 0.14m.





Lon (dms)	Lat (dms)	Std_dev (m)
073-49-32.11W	40-27-32.47N	0.23

Unknown error to 0.16m Std Dev, between overlapping lines.



Lon (dms)	Lat (dms)	Std_dev (m)
073-48-04.76W	40-26-47.73N	0.16

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to ACCOMPANY
SURVEY F00561 (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 DATA PROCESSING

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

HSTP PYDRO version 8.7 r
CARIS HIPS/SIPS version 6.1 SP2 HF 1
CARIS Bathy Manager version 2.1 HF 1-9
DKART INSPECTOR, version 5.0 Build 732 SP1
CARIS HOM version 3.3 HF 1-8
CARIS S57 Composer version 2.0

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 2m grid, this was then used to create a product surface grid with resolution 2m. The survey scale soundings were extracted from the 2m product surface. The selected sounding set is approximately 10 to 20 times the number of charted depths at the largest scale chart available scale of 1:80,000. The chart scale selected soundings are a subset of the survey scale selected soundings and sounding spacing is representative to the appropriate largest scale cart in the area. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

Depth curves were created from a 10m product surface grid. The 10m grid resolution product surface model was generated at a scale of 1:10,000, generalization radius of 100m with no defocusing. The depth curves are forwarded to MCD for reference only. The curves were utilized during chart scale sounding selection and quality assurances efforts at AHB. The depth curves are incorporated into the S57 ENC_CS.000 deliverable.

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 (WRECKS, SBDARE), meta objects (M_COVR, M_QUAL), depth areas (DEPARE), contours (DEPCNT), and

cartographic Blue Notes ($CSYMB). The individual SAHOB files were inserted into one BASE Editor feature layer and exported to S57 format in order to create the H-Cell deliverable.

The computed H-Cell was exported as a File (ENC.000) in S-57 format with all metric units. The metric equivalent ENC.000 file was then converted to NOAA chart scale units (ENC_CS.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 F00561 CARIS H-Cell final deliverables include the following products:

US400561_CS.000	1:80,000 Scale	F00561 H-Cell with Chart Scale Selected Soundings
US400561_SS.000	1:10,000 Scale	F00561 Selected Soundings (Survey Scale)
F00561_BlueNotes.txt		F00561 Cartographic Notes text file
F00561_Outline_gml.gml		Survey Outline

B.22. Junctions

No contemporary surveys exist for junctioning.

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 F00561. 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 18. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

12326(50th Edition, May./06)
Corrected through NM 05/13/2006
Corrected through LNM 05/09/2006
Scale 1:80,000

ENC Comparison **US4NY1AM**

Approaches to New York Fire Island Light to Sea Grit
Edition12
Application Date 2008-10-27
Issue Date 2008-10-29
Chart 12326

US2EC03M

Approaches to New York Nantucket Shoals to Five Fathom Bank
Edition 17
Application Date 2008-10-29
Issue Date 2008-10-29
Chart 12300

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 exceptions are noted:

a. Raster Chart 12326 was issued in between the field acquisition and submittal to AHB. Therefore, there are a few discrepancies between the new chart and when the comparisons were run. The field discussed a 70 ft sounding at a location of a wreck, on the revised chart (Issue date 2008-10-29) it is a 75ft sounding with text "Wk". The ENCs still depict a 70ft wreck. Based on survey data of F00561, the 75ft sounding with text "Wk" should be updated to reflect the 68 ft wreck. Another discrepancy regards the safe water mark. The field noted that it was on station and serving its intended purpose, with the most recent issue of 12326, the buoy is no longer charted. Refer final charting disposition to Marine Chart Division.

b. The field unit was directed to obtain bottom samples in the Letter Instructions, as dated 28 May 2008, as bottom samples were not obtained, all charted sea bed characteristic (SBDARE) objects will be retained as charted. The spatial and feature attributes of the SBDARE point features were carried forward from the ENCs (US4NY1AM)

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.

Version 1.0

This Document is for Office Process use only and is intended to supplement, not supersede or replace, information/recommendations in the Descriptive or Evaluation Reports

AHB PRE-COMPILATION PROCESS

REGISTRY No.	F00561
PROJECT No.	OPR-B310-TJ-08
FIELD UNIT	NOAA *THOMAS JEFFERSON*
PRE-COMPILER	Bridget Williams
LARGEST SCALE CHART	12326, 50th Ed. 20060501
CHART SCALE	1: 80,000
SURVEY SCALE	1: 10,000
DATE OF SURVEY	9 September 2008
CONTENT REVIEW DATE	November 12, 2008

Components	File Names
Product Surface	PS_F00561_10k_100mrad_2mres.hns
Shifted Surface	PS_F00561_10k_100mrad_10mres_Shifted.hns
Contour Layer	F00561_Contours.hob
Survey Scale Soundings	F00561_SS_Soundings.hob
Chart Scale Soundings	F00561_CS_Soundings.hob
ENC Retain Soundings	N/A
Feature Layer	F00561_Features.hob
Meta-Objects Layer	F00561_MetaObjects.hob
Blue Notes	F00561_BlueNotes.hob F00561_BlueNotes.txt

SPECIFICATIONS:

I. COMBINED SURFACE:
   a. File name: F00561_AHB_2m_CUBE_Deep_Final
   b. Resolution: 2m
   c. Final Grid Location: T:\SAR\F00561_B310-TJ\AHB_F00561\E-SAR Final Products\GRIDS

II. PRODUCT SURFACE (SOUNDINGS):
   a. Scale: 1:10000
   b. Radius: 100m
   c. Resolution: 2m

   d. Depth
      i. Minimum: 20.937m
      ii. Maximum: 31.223m

   PRODUCT SURFACE (CONTOURS):
   a. Scale: 1:10000
   b. Radius: 100m
   c. Resolution: 10m

III. SHIFTED SURFACE:
   Single Shift Value: -.229 *[-0.229m (feet), (≤ 10 fathoms)]*
   [-1.372m (fathoms), (> 10 fathoms)]

IV. CONTOUR LAYER:

a. Use a Depth List: F00561_NOAA_depth_curves_list.txt
Depth List:
18.288
27.432
36.576

b. Output Options:
i. Create contour lines:
1. Line Object: DEPCNT
2. Value Attribute: VALDCO

V. SOUNDING SELECTION:

a. Selection Criteria:
i. Radius
ii. Shoal biased
iii. Use Single-Defined Radius: 72 distance on ground (m)
iv. Filter: Generalized !=1

VI. FEATURES:

a. Brought in from Survey
Total No. 3

b. Brought in from ENC
ENC:US4NY1AM
Total No. 2

VII. META-OBJECTS:

a. M_COVR attributes

Acronym	Value
SORDAT	20080905
CATCOV	1
SORIND	US,US,survy,F00561

b. M_QUAL attributes

Acronym	Value
CATZOC	A2
INFORM	F00561, OPR-B310-TJ-08, Thomas Jefferson
POSACC	10
SORDAT	20080905
SORIND	US,US,survy,F00561
SUREND	20080905
SURSTA	20080905
TECSOU	2, 3

c. DEPARE attributes

Acronym	Value
DRVALV 1	20.000
DRVALV2	32.000
SORDAT	20080905
SORIND	US,US,nsurf,F00561

VIII. EXPORT SURVEY LIMITS TO GML

a. FILE NAME: F00561_Outline.gml.gml
F00561_Outline.xsd

IX. NOTES:

In the time between the Survey was acquired and submitted to AHB for processing, Chart 12326 had a more recent issue date, 2008-10-25. Changes noted in the area of F00561 survey limits were that a previously charted 70ft Wk became 75ft. Another area is at the Ambrose Light Tower remains. The previous RNC 12326 has a charted Safe water mark; which survey F00561 found to be on station and surveying its intended purpose. A BlueNote was added to the F00561_BlueNotes.hob file regarding this feature, the position was taken from US2EC03M. The BlueNote states, "Safe water mark is currently not on the RNC 12326 (ed. 50, 20060501) and is still on the ENC US2EC03M. Survey F00561 found buoy to be on station, 20050905. Refer final charting disposition to Marine Chart Division." Affected ENC's in this area do not reflect the changes of the new issue of Chart 12326.

Sounding attribution:

TECSOU: 3- found by multibeam
QUASOU: 1- depth known
SORIND: US,US,nsurf,F00561
SORDAT: 20080905
INFORM: F00561

BlueNote Attribution:

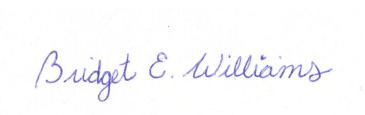
SORIND: US,US,survy,F00561
SORDAT 20080905
INFORM: *specific to each BlueNote*
NINFOM: US400561.000, Chart 12326, 50th Ed., 20060501

APPROVAL SHEET
F00561

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 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.



Bridget E. Williams
2008.11.12 14:45:50
-05'00'

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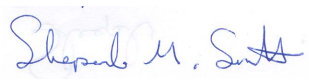
Bridget Williams
Hydrographic Intern
Atlantic Hydrographic Branch



Shepard Smith
for Ed Owens
2008.11.14 16:32:35 -05'00'

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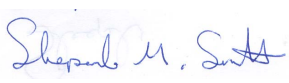
Edward A. Owens
Physical Scientist
Atlantic Hydrographic Branch

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
I am approving this
document
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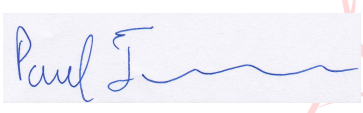
Shepard Smith
Commander, NOAA
Chief, Atlantic Hydrographic Branch



Paul Turner
I have reviewed this
document
AWOIS and Surf Check
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