

H11710

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: **H11710**

LOCALITY

State: New York

General Locality: New York Harbor and Approaches, NY

Sub-locality: Rockaway Beach: Rockaway Pt. to Silver Pt.

2009

CHIEF OF PARTY
CDR Shepard M. Smith
NOAA

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DATE

HYDROGRAPHIC TITLE SHEET

H11710

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 and Approaches, NY**

Sub-Locality: **Rockaway Beach: Rockaway Pt. to Silver Pt.**

Scale: **1:10,000** Date of Survey: **26 October 2009 to 9 November 2009**

Instructions Dated: **22 July 2009** Project Number: **OPR-B310-TJ-09**

Revised instruction dated : **2 November 2009**

Vessel: **NOAA Ship *Thomas Jefferson***

Chief of Party: **CDR Shepard M. Smith**

Surveyed by: ***Thomas Jefferson* Personnel**

Soundings by: **Reson 8125 multibeam echosounder and 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: **Feet at MLLW**

Remarks:

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

The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts. All separates are filed with the hydrographic data. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via <http://www.ngdc.noaa.gov/>.

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**Descriptive Report to Accompany Hydrographic Survey
H11710**

Project OPR-B310-TJ-09
 New York Harbor and Approaches, NY
 Rockaway Beach: Rockaway Pt. to Silver Pt.
 Scale 1:10,000
 26 October – 9 November 2009
NOAA Ship *Thomas Jefferson*

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Project Instructions OPR-B310-TJ-09, dated 22 July 2009.

Revised project instructions are dated 2 November 2009. Changes were made to revise the survey priorities of near shore bathymetry.

Northern Limit	Southern Limit	Western Limit	Eastern Limit
40° 35' 18.92" N 073° 45' 16.27" W	40° 31' 44.32" N 073° 47' 03.83" W	40° 33' 30.33" N 073° 49' 33.68" W	40° 33' 43.58" N 073° 44' 29.89" W

Data acquisition was conducted from 26 October 2009 – 9 November 2009

The purpose of this project is to provide accurate depths and object detection in the approaches to New York Harbor to support safe and efficient marine transportation in the region.

	Linear Nautical Miles
Single beam mainscheme only	354.31
Multibeam mainscheme only	N/A
Side Scan Sonar mainscheme only	297.01
Developments	69.97
Crosslines	27.18
Shoreline/nearshore investigations	0
Number of bottom samples	13
Number of AWOIS items investigated	24

Table 1: Hydrographic Survey Statistics

Survey limits of H11710 (Figure 1) are shown on the following page.

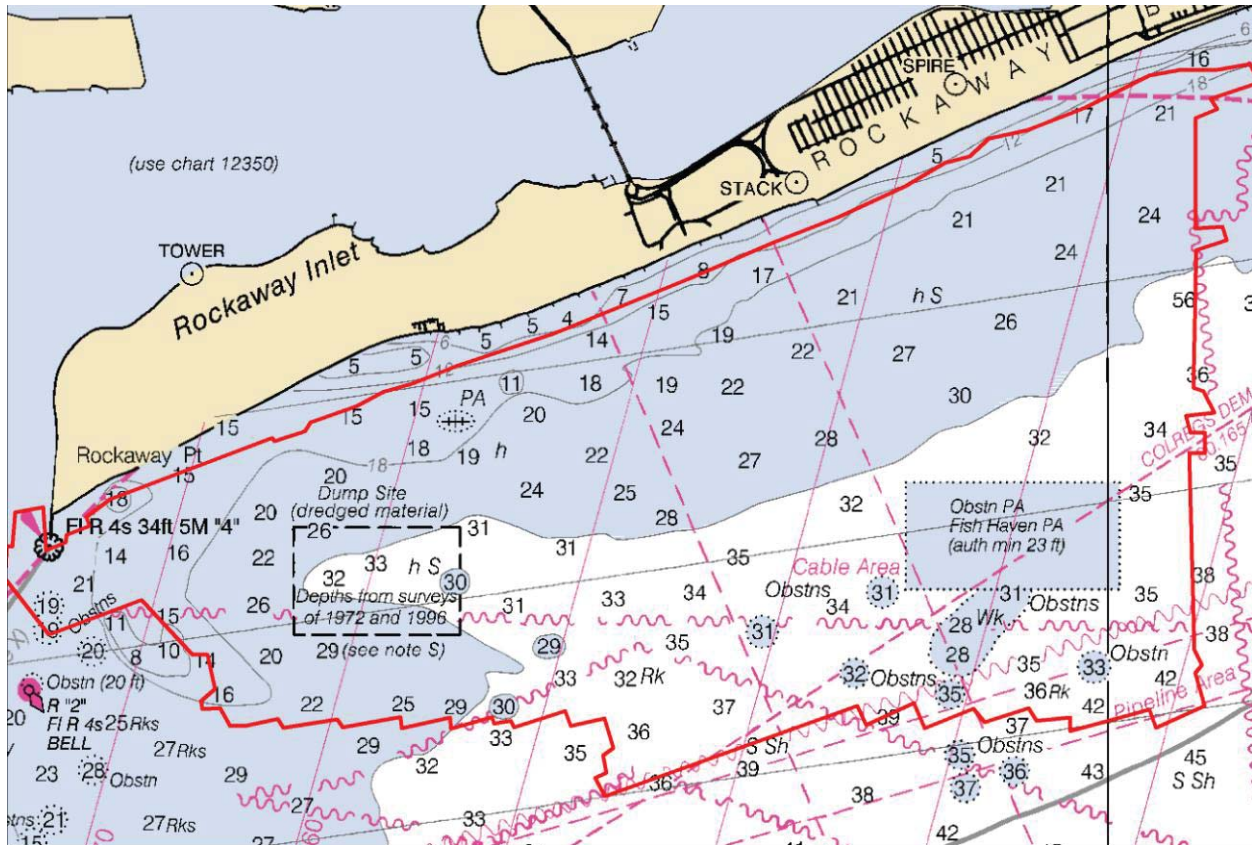


Figure 1 Survey Limits

Calendar Date	Julian Day
26 October 2009	299
27 October 2009	300
28 October 2009	301
29 October 2009	302
30 October 2009	303
31 October 2009	304
1 November 2009	305
2 November 2009	306
3 November 2009	307
4 November 2009	308
5 November 2009	309
6 November 2009	310
7 November 2009	311
8 November 2009	312
9 November 2009	313

Table 2. Dates of Multibeam Data Acquisition in Calendar and Julian Days

B. DATA ACQUISITION AND PROCESSING

Refer to *OPR-B310-TJ-09 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.

B 1. EQUIPMENT AND VESSELS

Data were acquired by Hydrographic Survey Launches 3101 and 3102. Launch 3101 acquired Klein 5000 side-scan imagery, Reson 8125 multibeam echosounder soundings (nadir soundings with side scan and multibeam over developments), sound velocity profiles, and bottom samples. Launch 3102 acquired Klein 5000 side-scan imagery, Reson 7125 multibeam echosounder soundings (nadir beam soundings only), sound velocity profiles, and bottom samples. Vessel configurations, equipment operation and data acquisition and processing were consistent with specifications described in the DAPR.

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.

B.2.2 Sounding Coverage

As per the Letter Instructions, this survey was conducted using 200% Side Scan Sonar with concurrent bathymetry. Side Scan Sonar coverage was monitored by creation of 100% and 200% coverage mosaics, each with 1 meter resolution. Multibeam developments were acquired over side scan contacts.

Launch 3101 side scan sonar lines 18_091107131600 and 18_091107134100 on DN 311 did not have bathymetry acquired with them. All contacts that fell in those areas were covered by multibeam developments. Two charted depths a 29 ft depth at 40 32 39.28 N ,073 52 08.81W and a 30 ft depth at 40 32 42.83N 073 51 56.24W were found shoal of the surveyed soundings. No split or development was obtained over them. The general trend of the area though indicates a deepening of the area. Recommend retaining those charted depths.

The survey limits for H11710 were extended to encompass charted light "4" at Breezy Point Point. The feature sits on a rock jetty. The extension was to eliminate ambiguity of the shoal surrounding the jetty area and approach to Rockaway inlet (see, Fig.2 and 3). Red= Tide zone limits, Green= Modified survey limits, Blue=original survey limits.



Figure 2 Left Aerial LT "4" :

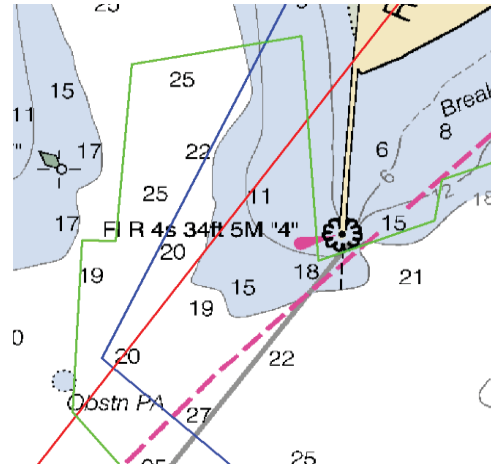


Figure 3 Right: Modified survey limits

Large holidays exist in the 100 and 200 percent mosaics. In the center of the 100% mosaic there are some large holidays. In the northeast area there are some small holidays caused by getting too far off line. To the south is another holiday where the launch had to turn. The 200% mosaic has a large holiday in the north center. All areas had a least 100% coverage and significant features were developed with multibeam. See Fig. 4 and 5

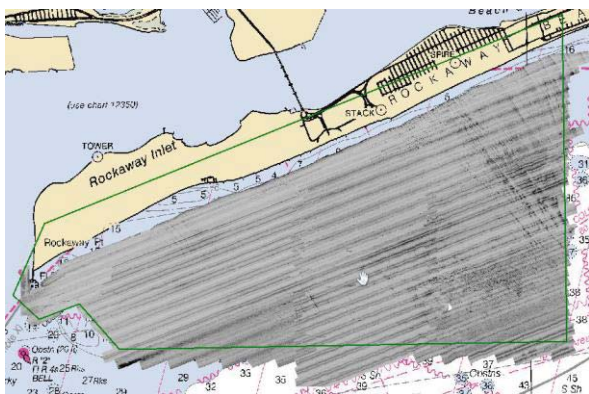


Figure 4 100 % Coverage

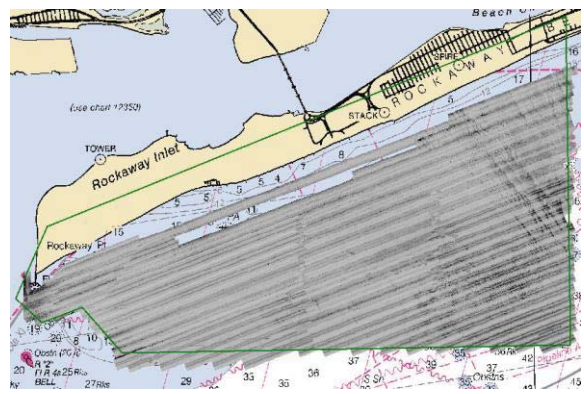


Figure 5 200 % Coverage

A multibeam development was acquired over the fish haven but did not meet total coverage requirements. Object detection was achieved by 200% side scan coverage. No SSS contacts or evidence of shoaling were observed between adjacent multibeam lines containing holidays as depicted in Figure 6. The holidays were covered by 200% SSS.



Figure 6 MB and Object detection Side scan overlay Blue MB red SSS.

A Compliance Review for Density was performed. This computes basic statistics to assess compliance with of NOS Hydrographic Specifications and Deliverables sections 5.1.3 and 5.2.2.1 2012. This confirms that 95% of the nodes in the finalized surfaces are populated with at least 5 soundings. The surface was created and finalized, the total number of nodes in the density were queried. A filter on the density layer was set to 0 minimum and 4 maximum. The number of nodes in that query were used to compute the required percentile. For the Fish haven alone Out of 7,713,912 soundings, 96.9% had 5 or more soundings which met the HSSD requirement. The combined MB development and Fish Haven were considerably less at 92.9%. Consideration must be made that on average 30% of the development sounding coverage did not overlap each other until the item investigated was covered.

B 2.3 Crosslines

Multibeam echosounder cross-lines totaling 27.18 lineal nautical miles, comprising 7.6 percent of main scheme hydrography, were acquired during the course of the survey. As per email dated 10 September 2009 from AHB, the quality control check was done using the standard deviation layer of the survey's uncertainty surface. Areas of unusually high standard deviation were investigated and resolved in processing. Exceptions were caused by areas of high bathymetric relief as described in Section 2.5 Systematic Errors.

An IHOness examination was performed on the Multibeam data. This tests whether the uncertainty values are met as specified in HSSD section 5.1.3 Uncertainty Standards. The IHO Publication S-44 is stated $as \pm \sqrt{a^2 + (b*d)^2}$ where:

- a* represents that portion of the uncertainty that does not vary with depth
- b* is a coefficient which represents that portion of the uncertainty that varies with depth
- (b x d)* represents that portion of the uncertain that does vary with depth
- d* is the depth

The variables a and b shall be defined as follows:

In depths less than 100 meters, *a* = 0.5 meters and *b* = 0.013 (IHO Order 1)

In depths greater than 100 meters, *a* = 1.0 meters and *b* = 0.023 (IHO Order 2)

Through CARIS processing each node receives the formula computation minus the computed uncertainty of the depth layer. Positive values pass IHO, negative values fail IHO. Out of a total of 924169 soundings, the 99.4 percent passed. This exceeds the 95 percentile IHO Order 1 specifications. The majority of the soundings that failed were near features and spoils of the fish haven. See appendix 5 for IHOness statistics.

B 2.4 Junctions and Prior Surveys

The following contemporary surveys junction with H11710:

<u>Registry #</u>	<u>Scale</u>	<u>Date</u>	<u>Field Party</u>	<u>Junction side</u>
H12138	1:10,000	2009	<i>Thomas Jefferson</i>	East

Survey H11710 has a junction in the east with H12138. The difference in soundings between the two surveys is no greater than one foot.

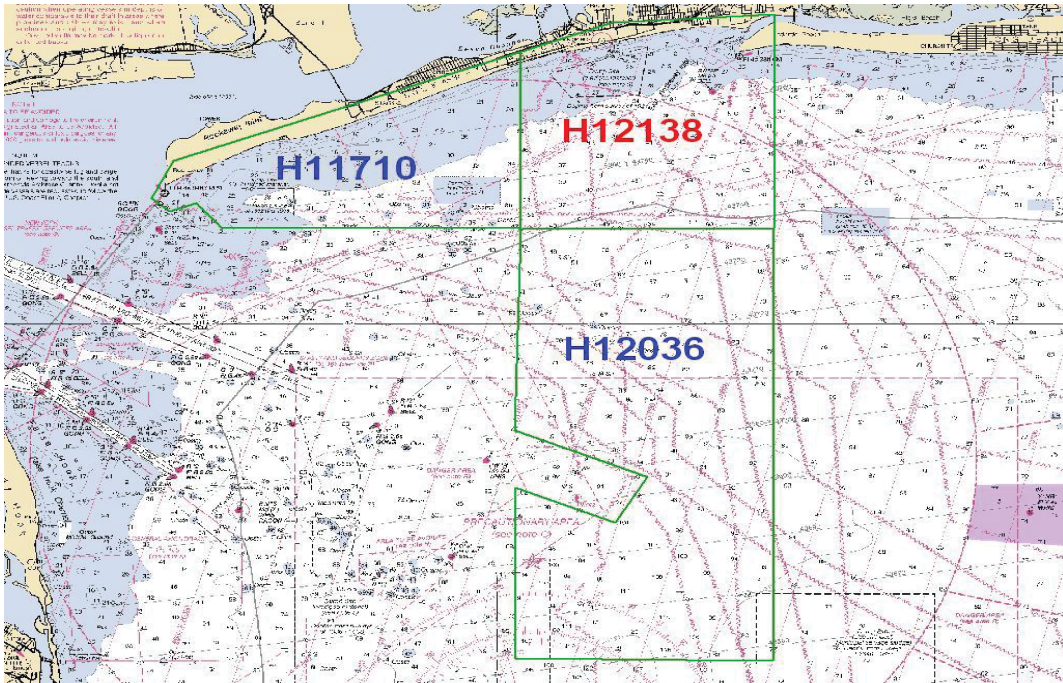


Figure 7 H11710 Junction Surveys.

B 2.5 Systematic Errors

Launch 3101 had a timing error present on DN 312 in the fish haven. Lines with the error are clearly seen in the standard deviation layer in Figure 8. This error does not impact the surface by more than 10cm. and can be seen in Figure 9 clearly showing .25 m STD dev in red on the Fish Haven debris mounds and scours. Figure 9 shows the standard deviation threshold at 0.25 With only features revealed.

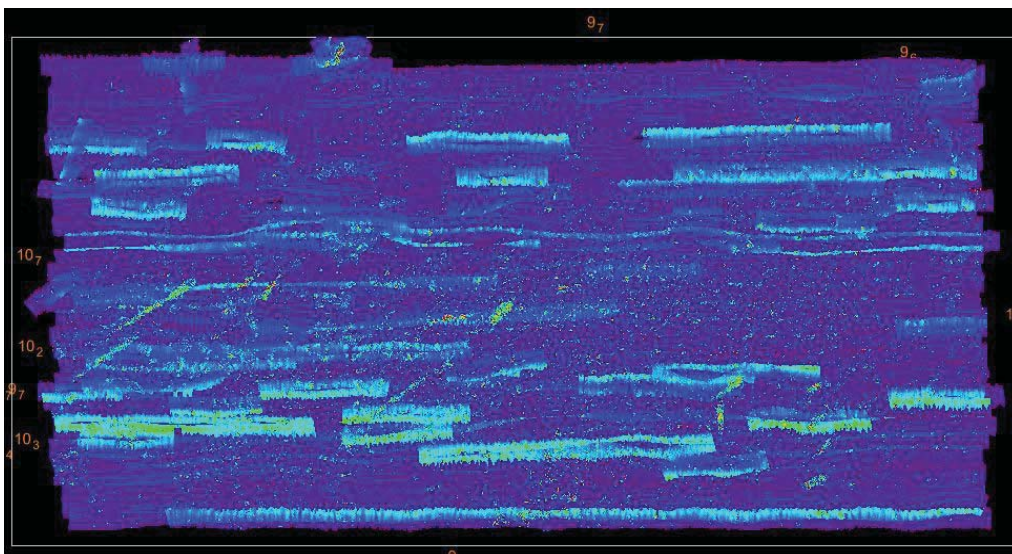


Figure 8 Standard deviation over fish haven showing timing error

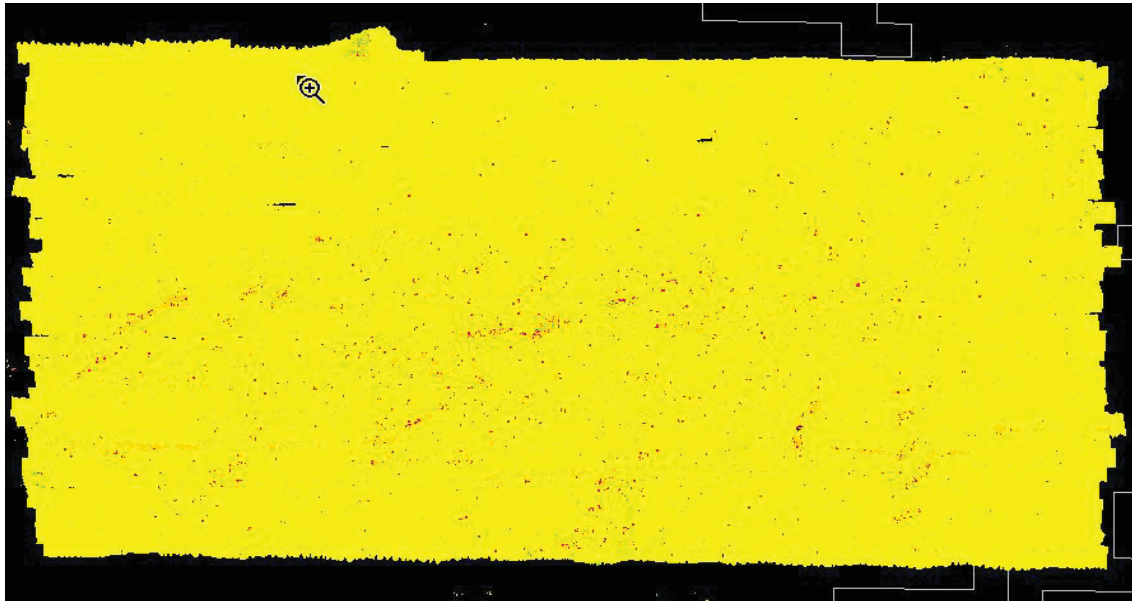


Figure 9 Standard deviation greater than 0.25m. in red

Heave artifacts are present in the vertical beam data. The cause of this error is unknown, but in general it does not exceed 0.2m.

B 3. CORRECTIONS TO ECHO SOUNDINGS

HDCS sounding data were reduced to mean lower-low water (MLLW) using verified tides from The Battery, NY (851-8750) and Sandy Hook, NJ (853-1680) with final tide zoning applied as provided by CO-OPS in the Tide Note dated November 13 and illustrated in Figure 10.

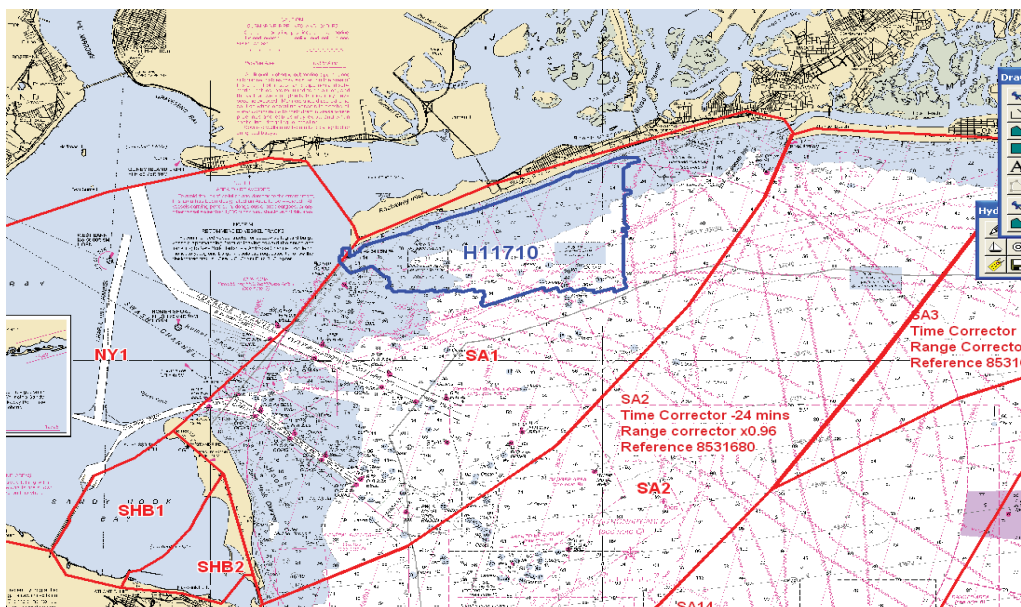


Figure 10 Final Tide Zoning

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

All methods and instruments used for sound velocity correction were as described in the *DAPR*. All sound speed data are contained in the CARIS SVP directory, and concatenated daily by acquisition platform.

B 4. DATA PROCESSING

B 4.1 Total Propagated Error

For the 2009 field season, Total Propagated Error (TPE) parameters for sound speed and tides are calculated separately for each project. The project-specific parameters for OPR-B310-TJ-09, Survey H11710 are as follows:

Project	Vessel	Tide Values Combined Measured & Zoning	Sound Velocity Values	
			CTD	Surface
H11710	3101	0.09	4	0.2
H11710	3102	0.09	4	0.2

Table 3: TPE Parameters

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

B 4.2 BASE Surfaces and Mosaics

The following table describes all BASE Surfaces and Mosaics submitted as part of Survey H11710:

Name of Surfaces and/or Mosaics	Resolution	Type	Purpose
H11710_Cu_50cm_MLLW_Final	0.5 meter	CUBE	Object Detection
H11710_VB_Uncert_2m_MLLW_Final	2.0 meter	Uncertainty	Sounding Coverage
H11710_FH_50cm_MLLW_Final	0.5 meter	CUBE	Object Detection
H11710_100_SSS_Mosaic_1m	1.0 meter	SSS Mosaic	100% SSS Coverage
H11710_200_SSS_Mosaic_1m	1.0 meter	SSS Mosaic	200% SSS Coverage

Table 4: Fieldsheets

This survey was processed using the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm for multibeam data and Uncertainty for single beam data. The CUBE configuration was set to NOAA 0.5m for all object detection surfaces. Refer to the 2009 Data Acquisition and

Processing Report, 2009 Field Procedures Manual, and CARIS HIPS/SIPS manual for further discussion. Additional quality control was used in processing sss and multibeam data using CARIS/HIPS 7.1.2.

B 4.3 Data Cleaning

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

C. VERTICAL AND HORIZONTAL CONTROL

As per FPM section 5.2.3.2.3 an HVCR report was not filed. No horizontal and vertical control stations were established by the field party for this survey. A summary of horizontal and vertical control for this survey follows below.

C 1.1 Horizontal Control

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

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

C 1.2 Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at The Battery, NY (851-8750) and Sandy Hook, NJ (853-1680), will serve as datum control for H11710. Verified tides with final zoning were applied to all sounding data.

A request for delivery of final approved (verified) tides for this survey was forwarded to N/OPS1 on 24 October 2009 in accordance with the FPM and project letter instructions. Final smooth tide letter was received 13 November 2009, and states preliminary zoning is accepted as the final zoning.

D. RESULTS AND RECOMMENDATIONS

D.1 Chart Comparison

Survey H11710 was compared with chart 12350 (59th Ed.; March 2006, 1:20,000), chart 12326 (51st Ed.; April 2009, 1:80,000), chart 12335 (43rd Ed.; March 2009, 1:10,000), chart 12402 (11th

Ed.; June 2009, 1:150,000), and ENC's US5NY50M, US4NY1AM, US5NY1DM, and US5NY19M. Chart comparisons were performed in Pydro using survey-scale excess soundings.

D.1.1 Chart 12350 Comparison

In general the soundings agree within two feet. South of Rockaway Point, there are shoals that differ from the chart up to ten feet. On the western side there are areas that were observed to be up to eight feet deeper than charted.

D.1.2 Chart 12326 Comparison

In general the soundings agree within two feet. South of Rockaway Point shoaling can be seen with differences up to ten feet. On the western side there are areas that were observed to be up to eight feet deeper than charted.

D.1.3 Chart 12335 Comparison

None of the depths on chart 12335 fall within the limits of H11710.

D.1.4 Chart 12402 Comparison

Depths on chart 12402 fall within the western limits of H11710. Generally, overall agreement is within 1 foot.

D.1.5 ENC US5NY50M Comparison

In general the soundings agree within one meter. South of Rockaway Point there are differences of up to three meters where it has become shoal. On the western side there are areas that were observed to be up to eight feet deeper than charted.

D1.6 ENC US4NY1AM Comparison

In general the soundings agree within one meter.

D 1.7 ENC US5NY1DM Comparison

None of the depths on ENC US5MY1DM fall within the limits of H11710.

D 1.8 ENC US5NY19M

In general the soundings agree within one meter.

D.2 ADDITIONAL RESULTS

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

A total of 23 assigned AWOIS items were located within the modified limits of H11710 and investigated during this survey. AWOIS items were investigated with 200 percent side scan sonar over the search radius. All AWOIS items are described in detail in Appendix II of this report.

AWOIS #4301 was not investigated due to it being too close to shore.

D.2.4 Shoreline

Shoreline was not investigated during survey H11710.

D.2.5 Charted Features

The dump site in the vicinity of 40° 32' 14.604" N 073° 54' 28.548" W, has soundings that agree to within one foot with the exception of isolated features. In the south west area there is shoaling up to five foot difference. There are numerous obstructions scattered around the charted fish haven. The hydrographer recommends increasing the size of the charted fish haven to encompass the surrounding obstructions. None of the nearby obstructions have a least depth that is less than the authorized minimum of the fish haven as currently charted.

The shoalest feature is in the lower right quadrant of Figure 4, as seen in section B.2.2 Coverage. The item has a least depth of 7.372 meters (24.1 feet) . It is an outer beam that normally would not be accepted as a least depth. A close examination of bathymetry and the SSS imagery was done. The nature of the item (see Figure 11) plus the shadow heights over the item that were considerably less in height in comparison to the surrounding depths are in range of the authorized minimum depth of 23 feet and it is deemed the shoalest item in the fish haven. Recommend retaining the authorized minimum depth as charted.

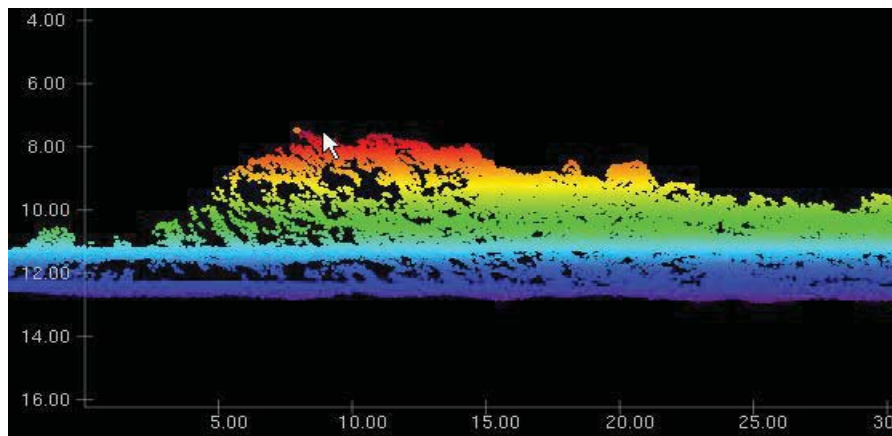


Figure 11 Shoalest Spot in FishHaven

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

D.2.6 Charted Pipelines and Cables

Three charted cables and one pipeline area are located in the survey area. Some of these are seen in the side scan sonar data in the deep areas. The hydrographer has no recommendations regarding these cables and pipeline.

D.2.7 Bridges, Ferry Routes, and Overhead Cables

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

D.3 Dangers to Navigation and Shoals

D 3.1 Dangers to Navigation

There are no dangers to navigation within the survey limits of H11710 except the soundings 10 feet shoal of charted soundings near rockaway pt.

D 3.2 Shoals

The area of the 12 foot curve in this area was inaccessible at the time of survey. Breakers were observed from the Light "4" to the breaker text. The area should be defined with breaker symbols to warn mariners of the conditions of this area as soundings could not be obtained. See H11710_added features.hob.

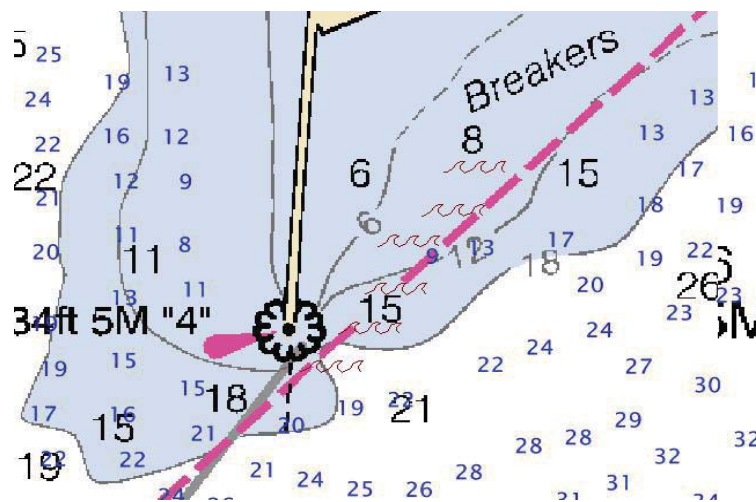


Figure 12 Sand WavesD.4 Aids to Navigation

There is one charted Aids to Navigation (ATONs) within the revised limits of H11710.

The Aids to Navigation were found to be on station and serving their intended purpose. The Hydrographer has no recommendations regarding these ATONs.

D.5 Coast Pilot Information

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

D.6 Miscellaneous

Bottom Samples

Bottom samples were collected in accordance with NOAA Hydrographic Survey Specifications and Deliverables. A total of 13 bottom samples were acquired. A list of bottom samples is contained in Appendix V.

Coast Pilot

The hydrographer has no recommendations for the Coast Pilot.

D.7 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

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

E. APPROVAL

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

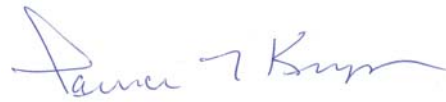
All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to N/CS33, Atlantic Hydrographic Branch.

The Data Acquisition and Processing Report for OPR-B310-TJ-09 are submitted separately and contain additional information relevant to this survey.

Approved and Forwarded:



LT William G. Winner, NOAA
Field Operations Officer



CDR Lawrence T. Krepp, NOAA
Commanding Officer

APPENDIX I
TIDES AND WATER LEVELS

WATER LEVEL INSTRUCTIONS

**OPR-B310-TJ-2009 New York Harbor and Approaches, NY & NJ (Revised2)
(09/02/2009 LH)**

1.0. TIDES AND WATER LEVELS

1.1. Specifications

Tidal data acquisition, data processing, tidal datum computation and final tidal zoning shall be performed utilizing sound engineering and oceanographic practices as specified in National Ocean Service (NOS) Hydrographic Surveys Specifications and Deliverables (HSSD), dated April 2008, and OCS Field Procedures Manual (FPM), dated May 2008. Specifically reference Chapter 4 of the HSSD and Sections 1.5.8, 1.5.9, 2.4.3, and 3.4.2 of the FPM.

1.2. Vertical Datums

The tidal datums for this project are referenced to Chart Datum, Mean Lower Low Water (MLLW) and Mean High Water (MHW). Soundings are referenced to MLLW and heights of overhead obstructions (bridges and cables) are referenced to MHW.

The operating National Water Level Observation Network (NWLON) stations at The Battery, NY (8518750) and Sandy Hook, NJ (8531680) serve as datum control for the survey area including determination at each subordinate station.

1.2.1. Water Level Data Acquisition Monitoring

The Commanding Officer (or Team Leader) and the Center for Operational Oceanographic Products and Services (CO-OPS) are jointly responsible for ensuring that valid water level data are collected during periods of hydrography. The Commanding Officer (or Team Leader) is required to monitor the pertinent water level data via the CO-OPS Web site at <http://tidesandcurrents.noaa.gov/hydro.shtml>, email data transmissions through TIDEBOT, or through regular communications with CO-OPS/Engineering Division (ED) personnel before and during operations. During traditional non duty hours, the Commanding Officer/Team Leader may contact the Continuous Operational Real-Time Monitoring System (CORMS) watch stander who is available 24 hours/day - 7 days/week for assistance in assessing the status of applicable water level station operation. The CORMS watch stander may be contacted either by phone at 301-713-2540 or by Email: CORMS@noaa.gov. Problems or concerns regarding the acquisition of valid water level data identified by the Commanding Officer/Team Leader shall be communicated with CO-OPS/ED (Tom Landon, 301-713-2897 ext. 191, Email: Thomas.Landon@noaa.gov on the East Coast) to coordinate the appropriate course of action to be taken such as gauge repair and/or developing contingency plans for hydrographic survey operations. In addition, CO-OPS is required to coordinate with the Commanding Officer (or Team Leader) before interrupting the acquisition of water level data for any reason during periods of hydrography.

1.2.2. NWLON Water Level Station Operation and Maintenance

The operating water level stations at The Battery, NY (8518750) and Sandy Hook, NJ (8531680) will also provide water level reducers for this project. Therefore it is critical that they remain in operation during the survey. See Sections 1.1. and 1.2. concerning responsibilities.

No leveling is required at The Battery, NY (8518750) and Sandy Hook, NJ (8531680) by NOAA ship THOMASJEFFERSON personnel.

CO-OPS/FOD is responsible for the operation and maintenance of all NWLON primary control stations. If a problem is identified at an NWLON primary control station, FOD shall make all reasonable efforts to repair the malfunctioning station. However, CO-OPS may request assistance from the NOAA ship or NRT personnel in the actual repair of the water level station to facilitate a rapid repair. CO-OPS/FOD and the Commanding Officer (or Team Leader) shall maintain the required communications until the repairs to the water level station have been completed.

1.3. Tide Reducer Stations

1.3.1. No subordinate water level stations are required for this project, however, supplemental and/or back-up water level stations may be necessary depending on the complexity of the hydrodynamics and/or the severity of the environmental conditions of the project area. The installation and continuous operation of water level measurement systems (tide gauges) at subordinate station locations is left to the discretion of the Commanding Officer (or Team Leader), subject to the approval of CO-OPS. If the Commanding Officer (or Team Leader) decides to install additional water level stations, then a 30-day minimum of continuous data acquisition is required. For all subordinate stations, data must be collected throughout the entire survey period for which they are applicable, and not less than 30 continuous days. This is necessary to facilitate the computation of an accurate datum reference as per NOS standards.

Tide Component Error Estimation

The estimated tidal error contribution to the total survey error budget between Sandy Hook (8531680) and The Battery (8518750) is 0.18 meters at the 95% confidence level, and includes the estimated gauge measurement error, tidal datum computation error, and tidal zoning error. Based on this analysis, no subordinate stations will be required at the survey areas. It should be noted that the tidal error component can be significantly greater than stated if a substantial meteorological event or condition should occur during time of hydrography.

1.3.2. GOES Satellite Enabled Subordinate Stations

This section is not applicable for this project.

1.3.3. Benchmark Recovery and GPS Requirements

This section is not applicable for this project.

1.3.4. This section is not applicable for this project.

1.4. Discrete Tidal Zoning

1.4.1. The water level station at The Battery, NY (8518750) and Sandy Hook, NJ (8531680) are the reference stations for preliminary tides for hydrography in New York Harbor and Approaches. The time and height correctors listed below for applicable zones should be applied to the preliminary data at The Battery, NY (8518750) and Sandy Hook, NJ (8531680) during the acquisition and preliminary processing phases of this project. Preliminary data may be retrieved

in one month increments over the Internet from the CO-OPS Home Page at <http://tidesandcurrents.noaa.gov/olddata> and then clicking on “Preliminary Water Level”. The Commanding Officer (or Team Leader) must notify CO-OPS/RDD personnel immediately of any problems concerning the preliminary tides. Preliminary data are six-minute time series data relative to MLLW in metric units on Greenwich Mean Time. For the time corrections, a negative (-) time correction indicates that the time of tide in that zone is earlier than (before) the preliminary tides at the reference station. A positive (+) time correction indicates that the time of tide in that zone is later than (after) the predicted tides at the reference station. For height corrections, the water level heights **relative to MLLW** at the reference station are multiplied by the range ratio to estimate the water level heights relative to MLLW in the applicable zone.

<u>Zone</u>	<u>Time Corrector(mins)</u>	<u>Range Ratio</u>	<u>Predicted Reference Station</u>
HR1	+12	x0.98	8518750
HR2	+24	x0.95	8518750
NY1	-6	x1.01	8531680
SHB1	0	x0.99	8531680
SHB2	+6	x0.96	8531680
SA1	-18	x1.00	8531680
SA2	-24	x0.96	8531680
SA3	-30	x0.91	8531680
SA4	-30	x0.87	8531680
SA13	-36	x0.87	8531680
SA14	-36	x0.91	8531680

1.4.2. Polygon nodes and water level corrections referencing The Battery, NY (8518750) and Sandy Hook, NJ (8531680) are provided in CARIS[®] format denoted by a *.zdf extension file name.

NOTE: The tide corrector values referenced to The Battery, NY (8518750) and Sandy Hook, NJ (8531680) are provided in the zoning file “B310TJ2009CORP_Rev2” for this project and are in the fourth set of correctors designated as TS4. Longitude and latitude coordinates are in decimal degrees. Negative (-) longitude is a MapInfo[®] representation of West longitude

“Preliminary” data for the control water level station, The Battery, NY (8518750) and Sandy Hook, NJ (8531680), are available in near real-time and verified data will be available on a weekly basis for the previous week. These water level data may be obtained from the CO-OPS web site at <http://tidesandcurrents.noaa.gov/olddata> . From this site, click on either “Preliminary Water Level” or “Verified Water Level” to obtain preliminary or verified/historical water level data as appropriate.

Please contact the Hydrographic Planning Team at NOS.COOPS.HPT@noaa.gov and the Operational Engineering Team NOS.COOPS.OETTEAM@noaa.gov **before** survey operations begin and **once survey operations are completed** so that the appropriate CO-OPS water level stations are added to or removed from the CO-OPS Hydro Hot List (<http://tidesandcurrents.noaa.gov/hydro>).

1.4.3 Zoning Diagram(s)

Zoning diagrams, created in MapInfo® and Adobe PDF, are provided in digital format to assist with the zoning in section 1.4.1.

1.4.4 Final Zoning

Upon completion of project OPR-B310-TJ-2009, submit a Pydro generated request for smooth tides, with times of hydrography abstract and mid/mif tracklines attached. Forward this request to smooth.tides@noaa.gov . Provide the project number, as well as a sheet number, in the subject line of the email.

CO-OPS will review the times of hydrography, final tracklines, and six-minute water level data from all applicable water level gauges. After review, CO-OPS will send a notice indicating that the tidal zoning scheme sent with the project instructions has been approved for final zoning. If there are any discrepancies, CO-OPS will make the appropriate adjustments and forward a revised tidal zoning scheme to the field group and project manager for final processing.

1.5 TideBot

Preliminary and verified six minute water level time series data may be retrieved from the CO-OPS database via TideBot application. TideBot delivers timely preliminary/verified tidal and Great Lakes six minute water level observations via email to users on a scheduled, recurring basis. To access TideBot through an email account, send an email to TideBot@noaa.gov with the word “help” as the subject. An email reply will be sent with instructions on how to subscribe to TideBot for time series data retrieval.

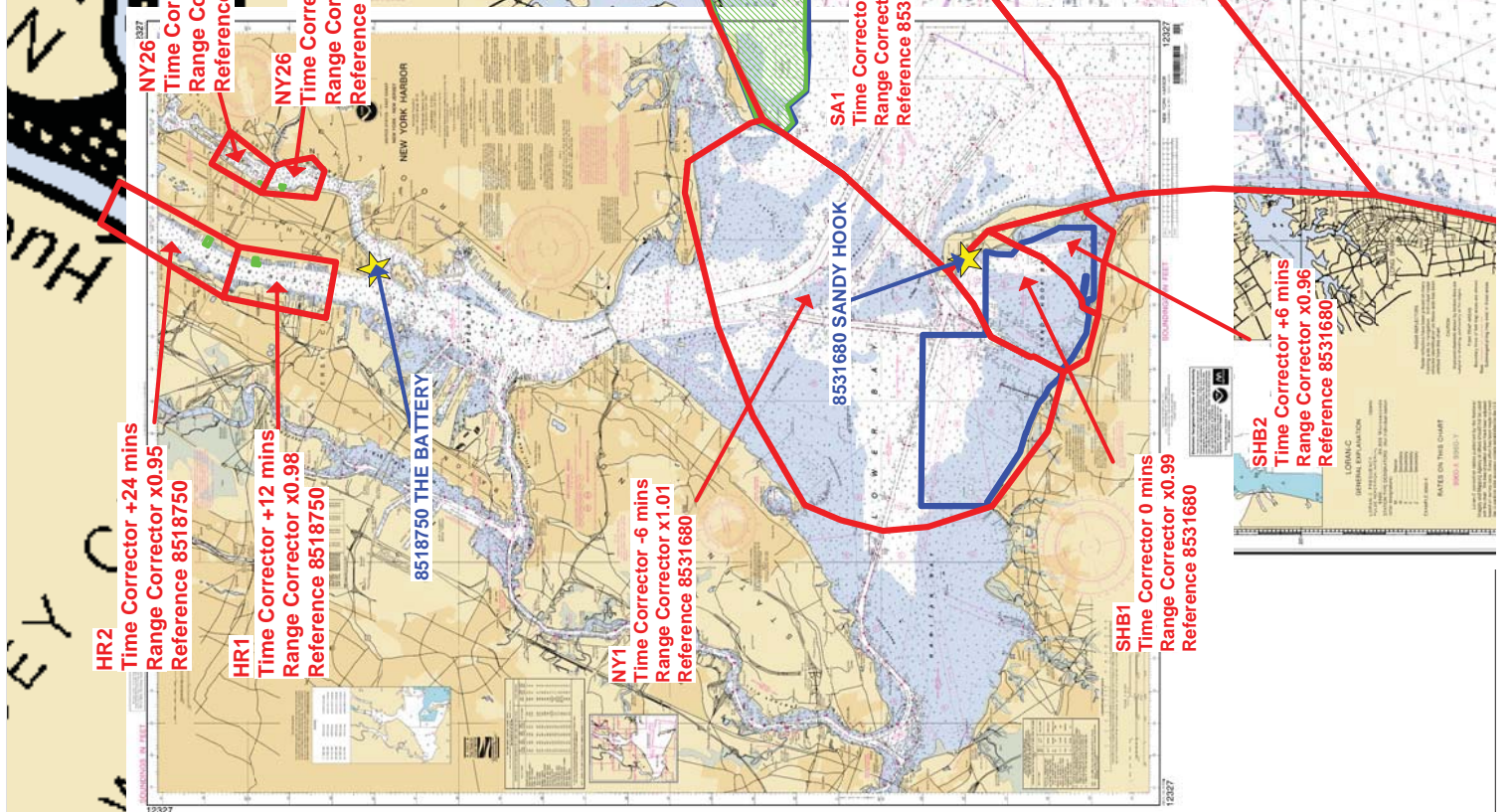
1.6 Water Level Records

Submit water level data, such as leveling records, field reports, and any other relevant data/reports, including the data downloaded onto diskette/CD within 1 week after the end of each month or the end of hydrography to CO-OPS/ED. Refer to Section 1.1.

1.6.1 Water level records should be forwarded to the following address:

NOAA/National Ocean Service/CO-OPS
Chief, Engineering Division
N/OPS1 - SSMC4, Station 6531
1305 East-West Highway
Silver Spring, MD 20910

Preliminary Tidal Zoning for OPR-B310-TJ-2009 New York Harbor and Approaches, NY/NJ (Revised2)





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

November 10, 2009

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

FROM: CDR Shep Smith, NOAA Ship THOMAS JEFFERSON (MOA-TJ)

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

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

Transmit data to the following:

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

NOAA Ship Thomas Jefferson S222
439 West York Street
Norfolk, VA 23510

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

Project No.: OPR-B310-TJ-09
Registry No.: H11710
State: New York
Locality: New York Harbor and Approaches, NY
Sublocality: Rockaway Beach: Rockaway Pt. to Silver Pt.

Attachments containing:

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

cc: N/CS33





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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : November 13, 2009

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B310-TJ-2009
HYDROGRAPHIC SHEET: H11710

LOCALITY: Rockaway Beach: Rockaway Pt. to Silver Pt., NY
TIME PERIOD: October 26 - November 9, 2009

TIDE STATION USED: 853-1680 Sandy Hook, NJ
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

Preliminary zoning is accepted as the final zoning for project OPR-B310-TJ-2009, H11710, during the time period between October 26 and November 9, 2009.

Please use the zoning file "B310TJ2009CORP_Rev2" submitted with the project instructions for OPR-B310-TJ-2009. Zones NY1 and SA1 are the applicable zones for H11710.

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: 2009.11.18 14:51:34 -05'00'

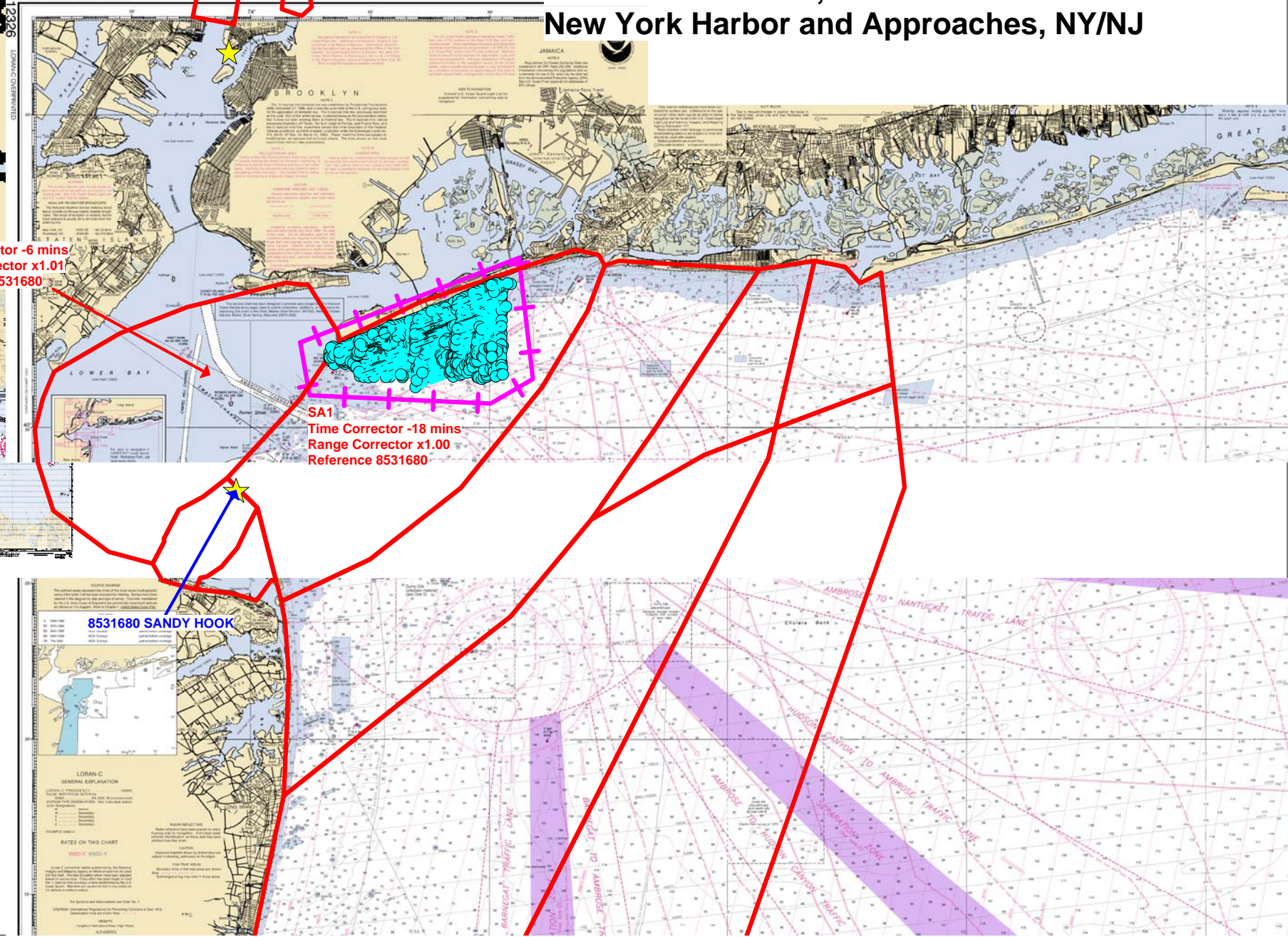
CHIEF, OCEANOGRAPHIC DIVISION



Preliminary as Final Tidal Zoning for OPR-B310-TJ-2009, H11710 New York Harbor and Approaches, NY/NJ

NEWARK CITY
HABETH

SOUNDINGS IN FEET



NY1
Time Corrector -6 mins
Range Corrector x1.01
Reference 8531680

SA1
Time Corrector -18 mins
Range Corrector x1.00
Reference 8531680

8531680 SANDY HOOK

LORAN-C
GENERAL EXPLANATION

RATES ON THIS CHART
\$800 X \$500-Y

APPENDIX II

SUPPLEMENTAL SURVEY RECORDS
AND CORRESPONDENCE

NO SUPPLEMENTAL SURVEY RECORDS OR
CORRESPONDENCE IN SURVEY H12503

From Jeremy McHugh <Jeremy.McHugh@noaa.gov>

Sent Thursday, July 30, 2009 9:49 am

To daniel wright <Daniel.Wright@noaa.gov> , jasper schaeer <jasper.schaer@noaa.gov>

Cc "shep.smith" <Shep.Smith@noaa.gov> , Kyle Ward <Kyle.Ward@noaa.gov> , James M Crocker <James.M.Crocker@noaa.gov>

Subject Re: [Fwd: Re: [Fwd: H11710]] revised Rockaway Beach sheets for B310

Dan (and Jasper),

Thanks for the revised MapInfo table. That works for us too. Here are the new details for the two pieces I just updated in Survey Tracker:

registry number: **H11710**

sublocality: **Rockaway Beach: Rockaway Pt. to Seaside**

ESNM: **10**

sheet/priority: **3**

registry number: **H12138**

sublocality: **Rockaway Beach: Seaside to Silver Pt.**

ESNM: **13**

sheet/priority: **2**

Jeremy

daniel wright wrote, On 7/29/2009 3:46 PM:

Hi Jeremy,

Attached are the revised mapinfo outlines for B310 divided sheet 2. Please let us know if you need any additional info.

Br,
Dan

shep.smith wrote:

CST,

Jasper is up to his ears today, maybe you could take care of this, or ask one of your folks.

CO

Subject: Re: [Fwd: H11710]

From: Jeremy McHugh <Jeremy.McHugh@noaa.gov>

Date: Wed, 29 Jul 2009 12:07:27 -0400

To: Jasper Schaer <jasper.schaer@noaa.gov>

To: Jasper Schaer <jasper.schaer@noaa.gov>

CC: "Kyle.Ward" <Kyle.Ward@noaa.gov>, James M Crocker <James.M.Crocker@noaa.g

Smith <Shep.Smith@noaa.gov>

Jasper,

Go ahead and split the sheet in the way that works best for you and then send me the revised table of the sheets. I will then issue an additional registry number for the new piece.

Jeremy

Kyle.Ward wrote, On 7/29/2009 11:54 AM:

Jeremy,

I do not see a problem with splitting the sheet.

Shep,

I would like to participate in the call.

Thanks,

Kyle

Jeremy McHugh wrote:

I am forwarding this since Jim is out...they want to break the NY Harbor / Rockaway beach survey into two sheets. Do you see any reason why we should not do that?

I won't be able to join in on the conference call next Monday. Does someone else want to join in?

Jeremy

----- Original Message -----

Subject: H11710

Date: Wed, 29 Jul 2009 14:35:38 +0000

From: shep.smith <Shep.Smith@noaa.gov>

To: Jeremy McHugh <Jeremy.McHugh@noaa.gov>, LCDR Rick Brennan NOAA <Richard.T.Brennan@noaa.gov>, Vanessa.Self@noaa.gov

CC: James Crocker <James.M.Crocker@noaa.gov>,

Daniel.Wright@noaa.gov, jasper.schaer <jasper.schaer@noaa.gov>,

Jeffrey.Ferguson@noaa.gov

Jeremy,

We would like to open a conversation with you up front on how we should handle these nearshore areas and shoreline that have clearly changed significantly. It appears to me that some fairly recent shoreline was applied to the chart that moved the land seaward, covering what used to be soundings on the chart. MCD, in accordance with their policies, did not remove any nearshore soundings in the area of the change, but it clearly is not 17 or 15 ft deep where it is charted.

I expect that we will find a new 18 some distance from the beach. Since TJ does not have inshore survey capability, I recommend that we plan to blue tint (DEPARE 0-18) everything inside the 18 curve.

The project instructions require us to get to the 4 meter curve (approx 12 ft). However, the only survey boats we have to accomplish this are the two 17,000 lb launches. These draw 4-5 ft and are not very nimble. I am not comfortable sending them to survey the 12 ft curve on this project, on an open beach. We will guarantee the 18, but will not likely get the 12 curve regularly. If this sort of work is expected to continue to be assigned to TJ, I recommend we acknowledge the fact that we don't have the boat for the job, and go about getting one. I also recommend that we consider breaking this survey into two sheets, one east and one west. As it stands now, it is almost 10 miles from one end to the other, and our experience is that these inshore sheets in NY are full of features. I think we would get it off the ship and through AHB faster in two sheets. I think we should use a 20 boat-day rule of thumb for sheet size, and as one sheet, this exceeds this limit.

We plan to use orthophotos to sketch in a low water line for use by the launches in these areas that have changed. We can provide our shoreline edits to the branch as part of the deliverables package, or let the branch do it from scratch later, at AHB's direction. We would probably use AHB staff to do the shoreline digitization anyway, so it might be easier to just take care of it up front in a way that would work for the H-Cell later.

I would like to invite Jeremy and Vanessa (and others if they desire) to join us to discuss this next Monday at 1500. Rick-may we use AHB's conference calling codes?

Shep

--

CDR Shepard Smith, NOAA
Commanding Officer
NOAA Ship Thomas Jefferson
439 West York St

Norfolk, VA 23510
757-647-0187

--

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

--

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

Subject: Re: Crossline comparison

From: Chris van Westendorp <Christiaan.VanWestendorp@noaa.gov>

Date: Thu, 10 Sep 2009 13:00:35 -0400

To: "mark.blankenship" <Mark.Blankenship@noaa.gov>

CC: LCDR Rick Brennan <Richard.T.Brennan@noaa.gov>, Castle Parker <Castle.E.Parker@noaa.gov>, Edward Owens <Edward.Owens@noaa.gov>, LT Jasper Schaer <jasper.schaer@noaa.gov>, CDR Shep Smith <Shep.Smith@noaa.gov>, Daniel Wright <Daniel.Wright@noaa.gov>

Mark,

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

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

R/

LCDR Chris van Westendorp, NOAA

mark.blankenship wrote:

Chris,

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

Mark

LCDR Chris van Westendorp <christiaan.vanwestendorp@noaa.gov>

Atlantic Hydrographic Branch

NOAA OCS

Subject: [Fwd: Revised Coverage Requirements]
From: "co.thomas.jefferson" <co.thomas.jefferson@noaa.gov>
Date: Mon, 14 Sep 2009 17:17:28 -0400
To: foo.thomas.jefferson@noaa.gov, daniel wright <daniel.wright@noaa.gov>

Please include in DR correspondence as appropriate.

CO

----- Original Message -----

Subject: Revised Coverage Requirements
Date: Mon, 14 Sep 2009 17:05:00 -0400
From: james.m.crocker <James.M.Crocker@noaa.gov>
To: _NMAO MOA CO Thomas Jefferson <CO.Thomas.Jefferson@noaa.gov>, _NMAO MOA FOO Thomas Jefferson <FOO.Thomas.Jefferson@noaa.gov>
CC: Jeffrey Ferguson <Jeffrey.Ferguson@noaa.gov>, Jeremy McHugh <Jeremy.McHugh@noaa.gov>, Richard T Brennan <Richard.T.Brennan@noaa.gov>, Kyle Ward <Kyle.Ward@noaa.gov>, Benjamin K Evans <Benjamin.K.Evans@noaa.gov>

CDR Smith,

This email is to detail the agreement to relax the multibeam resolution requirements for a survey when collecting multibeam bathymetry concurrent with side scan sonar data, where complete coverage for object detection for the survey is being met by 200% side scan sonar coverage. This agreement supersedes, where applicable, the requirements outlined in the 2009 HSSD and HTD 2009-2 for grid resolution and density.

For all projects assigned in 2009, where the complete coverage requirement for assigned surveys is being met by 200% side scan sonar data acquisition, the following requirements shall be met at a minimum:

- 1 - Grid resolutions shall be 2m for water depths less than 20m, and 4 m for water depths of 20m to 40m.
- 2 - Sounding density requirements are set at a minimum of 2 sounding per node.
- 3 - Grid resolution and density for feature developments used to determine least depth shall meet object detection requirements as defined in 2009 HSSD and HTD 2009-2 and soundings shall be designated where appropriate.

Regards,
Jim

--
CDR Shepard Smith, NOAA
Commanding Officer
NOAA Ship Thomas Jefferson
439 West York St
Norfolk, VA 23510
757-647-0187



Bryan Chauveau - NOAA Federal <bryan.chauveau@noaa.gov>

H11710 MB converted as VB

Bryan Chauveau - NOAA Federal <bryan.chauveau@noaa.gov>

Tue, Apr 2, 2013 at 2:14 PM

To: Peter Lewit - NOAA Federal <peter.lewit@noaa.gov>

Pete,

There was no detail in the DAPR for survey H11710 explaining the reasoning for using the 7125 and 8125 MB systems to collect data only to convert it and process it as VB data.

Do you recall the reasoning for this process on this survey?

Thanks.

Bryan Chauveau



Bryan Chauveau - NOAA Federal <bryan.chauveau@noaa.gov>

H11710 MB converted as VB

Peter.Lewit <peter.lewit@noaa.gov>

Wed, Apr 3, 2013 at 11:34 AM

To: Bryan Chauveau - NOAA Federal <Bryan.Chauveau@noaa.gov>

At the timme multiple modes of acquisition were acquired for the day. The Multibeam was acquired with SSS, in order to eliminate switching all the configurations. At the time we had no triggering mechanism to eliminate crosstalk between SSS and Mb which of course our the same frequency. Converting it to Vertical beam was the only way to get accurate readings, as the the full swath was totally hosed. A comparison was done to test this and it proved to be reliable. The Nadir depth is extracted out of the EC1 0 field inside the Multibeam datagram and converted to a vertical beam record. By performing this method you would acquire Multibeam and SSS together. Then Identify in the log which was meant to be converted as VB. When the dual mode was complete and SSS no longer needed. You would just turn off SSS acquire MB and flag it as convert to full multibeam.

[Quoted text hidden]

APPENDIX III
FEATURES REPORT

DTONS -- Seven

AWOIS -- Twenty-four

Wrecks -- Three (See AWOIS section)

Maritime Boundaries -- None

H11710 DTON Items

Registry Number: H11710
State: New York
Locality: New York Harbor and Approaches, NY
Sub-locality: Rockaway Beach: Rockaway Pt. to Silver Pt.
Project Number: OPR-B310-TJ-09
Survey Date: 26 October 2009 - 9 November 2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12350	59th	03/01/2006	1:20,000 (12350_1)	[L]NTM: ?
12327	101st	04/01/2008	1:40,000 (12327_1)	[L]NTM: ?
12326	50th	05/01/2006	1:80,000 (12326_1)	[L]NTM: ?
12300	47th	05/01/2008	1:400,000 (12300_1)	[L]NTM: ?
13006	34th	05/01/2007	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?
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	DTON 3: 8 ft Shoal Sounding	Shoal	2.50 m	40° 32' 37.3" N	073° 56' 02.6" W	---
1.2	DTON 2: 8 ft Shoal Sounding	Shoal	2.53 m	40° 32' 39.5" N	073° 55' 54.9" W	---
1.3	DTON 7: 10 ft Shoal Sounding	Shoal	3.08 m	40° 32' 44.0" N	073° 55' 39.9" W	---
1.4	DTON 1: 9 ft Shoal Sounding	Shoal	2.95 m	40° 32' 48.7" N	073° 55' 23.5" W	---
1.5	DTON 6: 10 ft Shoal Sounding	Shoal	3.07 m	40° 32' 53.6" N	073° 55' 05.9" W	---
1.6	DTON 4: 8 ft Shoal Sounding	Shoal	2.42 m	40° 32' 59.1" N	073° 54' 52.0" W	---
1.7	DTON 5: 9 ft Shoal Sounding	Shoal	2.86 m	40° 33' 06.3" N	073° 54' 31.3" W	---

1.1) DTON 3: 8 ft Shoal Sounding

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 32' 37.3" N, 073° 56' 02.6" W
Least Depth: 2.50 m (= 8.21 ft = 1.369 fm = 1 fm 2.21 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_DTONS for PYDRO.000
FOID: US 0003082293 00001(0226002F08350001/1)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

SOUNDG/remrks: Field unit identified soundings east of Rockaway Point that were 10 ft. shoaler than charted 18 ft sounding

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_DTONS for PYDRO.000	US 0003082293 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

8ft (12350_1, 12327_1, 12326_1)
 1 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 2.5m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710

TECSOU - 3:found by multi-beam

Office Notes

SAR Note: 8 ft Shoal sounding validated during AHB's survey review The bathymetry data within the common area has been reviewed and verified. The selected sounding is shoaler than what is charted and the shoalest survey depth within the common area. The horizontal datum is NAD83, with soundings corrected to MLLW datum.

Compile: Concur. Chart an 8 ft. depth in the present survey position

Feature Images

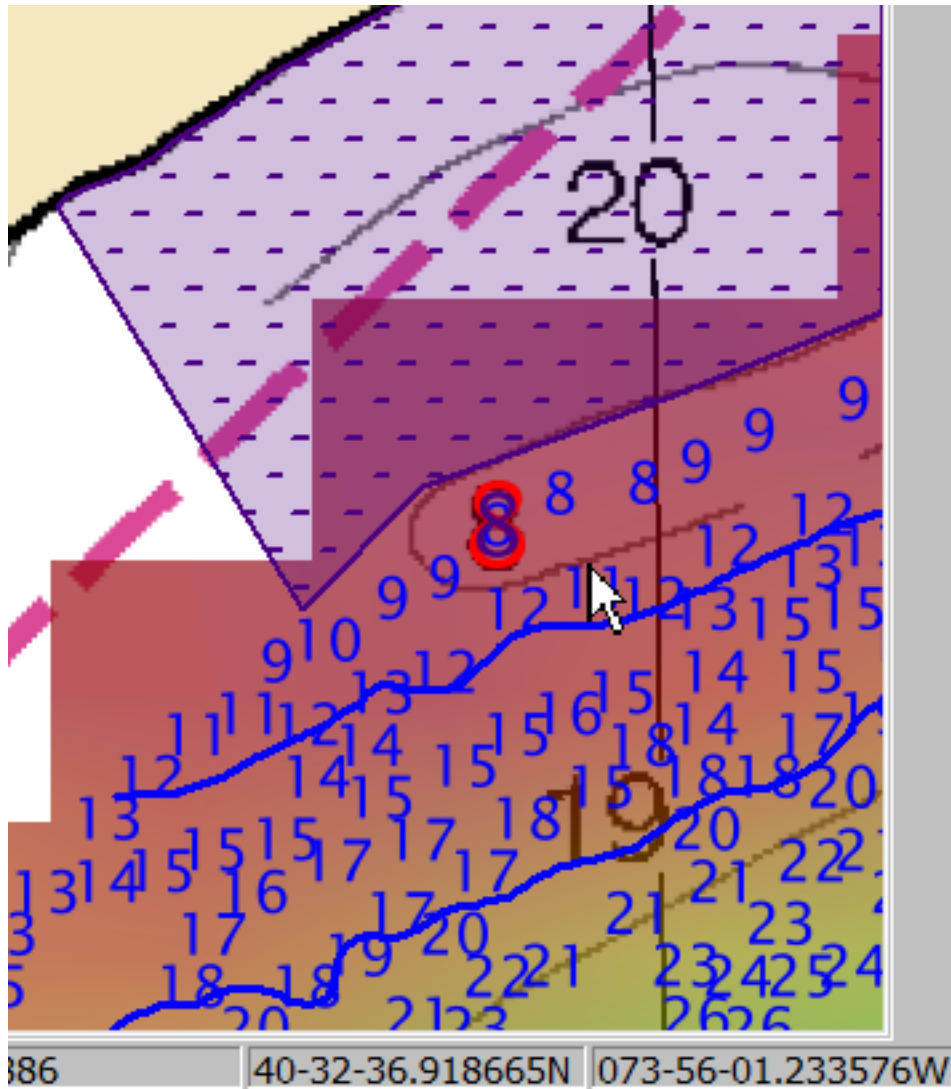


Figure 1.1.1

1.2) DTON 2: 8 ft Shoal Sounding

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 32' 39.5" N, 073° 55' 54.9" W
Least Depth: 2.53 m (= 8.30 ft = 1.384 fm = 1 fm 2.30 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_DTONS for PYDRO.000
FOID: US 0003082292 00001(0226002F08340001/1)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

SOUNDG/remrks: Field unit identified soundings east of Rockaway Point that were 11 ft. shoaler than charted 19 ft sounding

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_DTONS for PYDRO.000	US 0003082292 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

8ft (12350_1, 12327_1, 12326_1)

1 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

2.5m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710

TECSOU - 3:found by multi-beam

Office Notes

SAR Note: 8 ft Shoal sounding validated during AHB's survey review The bathymetry data within the common area has been reviewed and verified. The selected sounding is shoaler than what is charted and the shoalest survey depth within the common area. The horizontal datum is NAD83, with soundings corrected to MLLW datum.

Compile: Concur. Chart an 8 ft. depth in the present survey position.

Feature Images

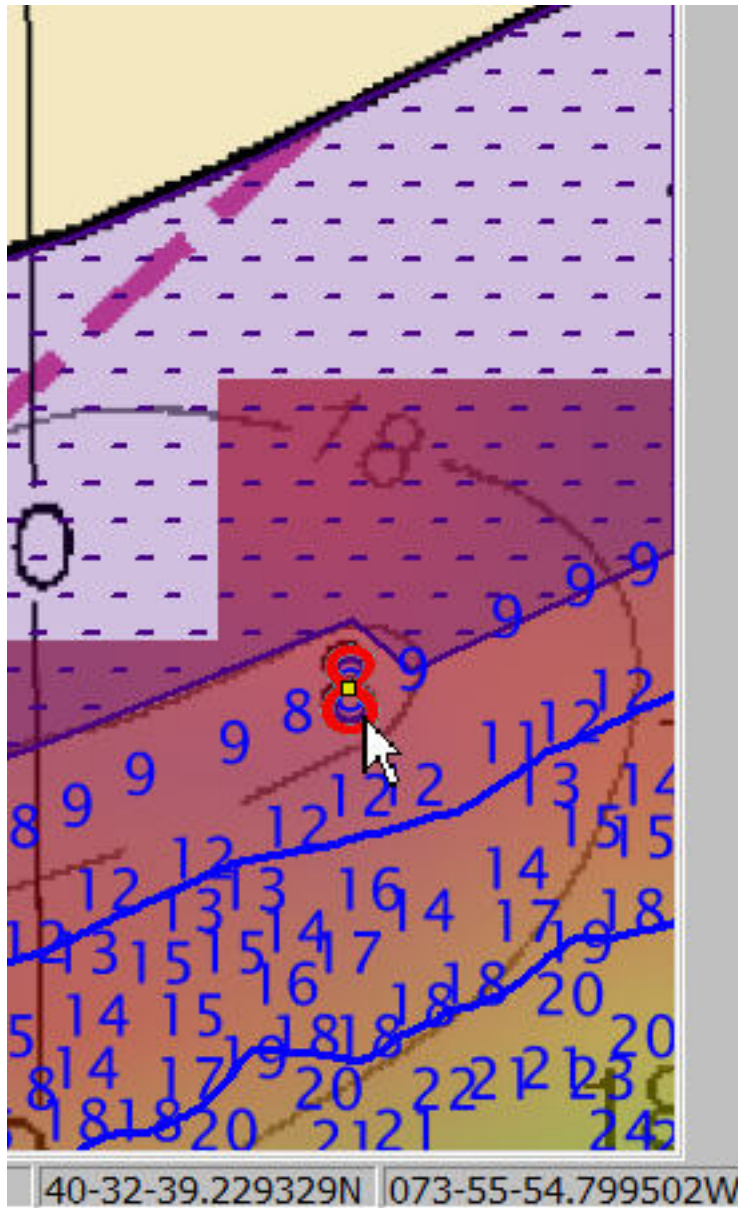


Figure 1.2.1

1.3) DTON 7: 10 ft Shoal Sounding

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 32' 44.0" N, 073° 55' 39.9" W
Least Depth: 3.08 m (= 10.10 ft = 1.684 fm = 1 fm 4.10 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_DTONS for PYDRO.000
FOID: US 0003082296 00001(0226002F08380001/1)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

SOUNDG/remrks: Field unit identified soundings east of Rockaway Point that were 5 ft. shoaler than charted 15 ft sounding

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_DTONS for PYDRO.000	US 0003082296 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

10ft (12350_1, 12327_1, 12326_1)
 1 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 3.1m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710

TECSOU - 3:found by multi-beam

Office Notes

SAR Note: 10 ft Shoal sounding validated during AHB's survey review The bathymetry data within the common area has been reviewed and verified. The selected sounding is shoaler than what is charted and the shoalest survey depth within the common area. The horizontal datum is NAD83, with soundings corrected to MLLW datum.

Compile: Concur. Chart a 10 ft. depth in the present survey position.

Feature Images

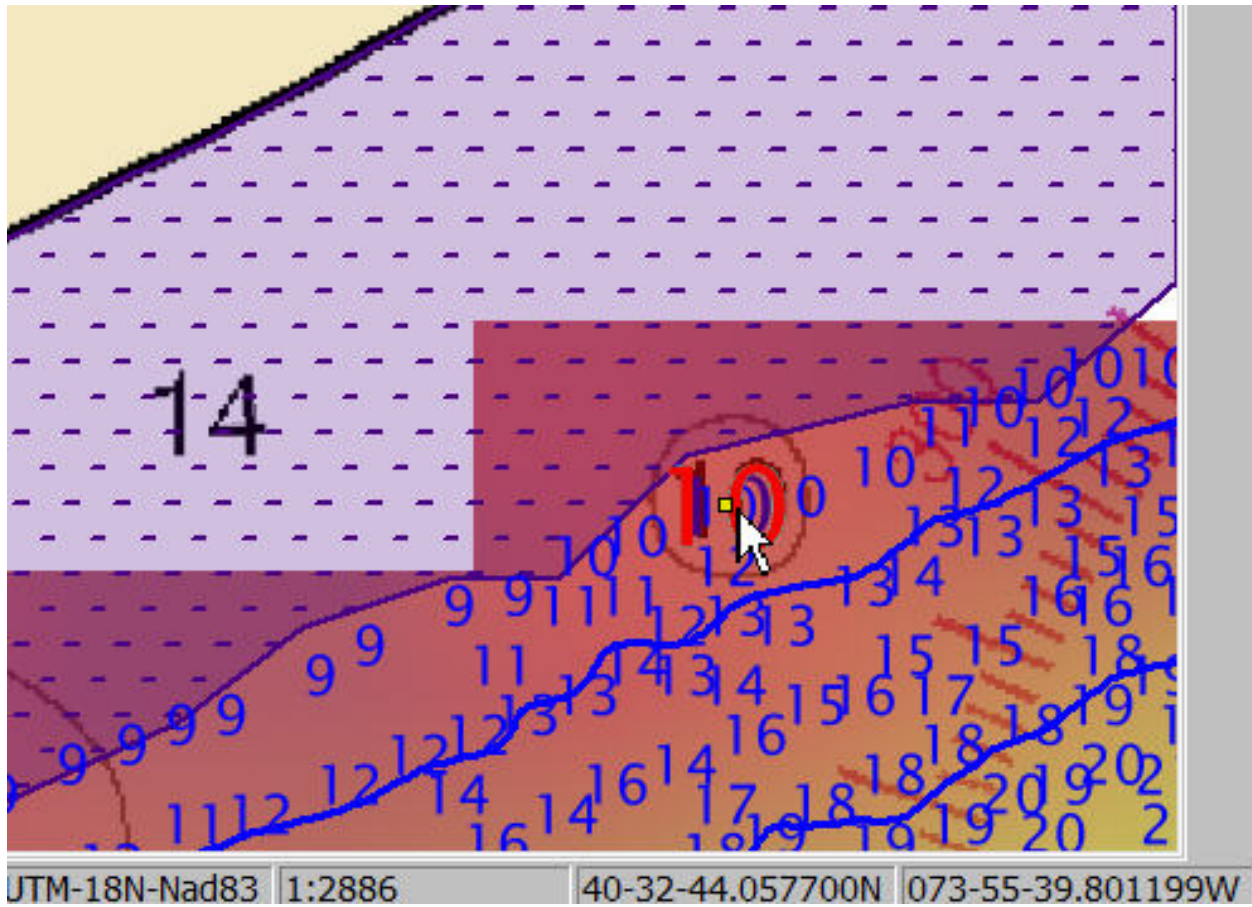


Figure 1.3.1

1.4) DTON 1: 9 ft Shoal Sounding

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 32' 48.7" N, 073° 55' 23.5" W
Least Depth: 2.95 m (= 9.68 ft = 1.613 fm = 1 fm 3.68 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_DTONS for PYDRO.000
FOID: US 0003082297 00001(0226002F08390001/1)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

SOUNDG/remrks: Field unit identified soundings east of Rockaway Point that were 8 ft. shoaler than charted 17 ft sounding

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_DTONS for PYDRO.000	US 0003082297 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

9ft (12350_1, 12327_1, 12326_1)

1 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

3.0m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710

TECSOU - 3:found by multi-beam

Office Notes

SAR Note: 9 ft Shoal sounding validated during AHB's survey review The bathymetry data within the common area has been reviewed and verified. The selected sounding is shoaler than what is charted and the shoalest survey depth within the common area. The horizontal datum is NAD83, with soundings corrected to MLLW datum.

Compile: Concur. Chart a 9ft. depth in the present survey position.

Feature Images

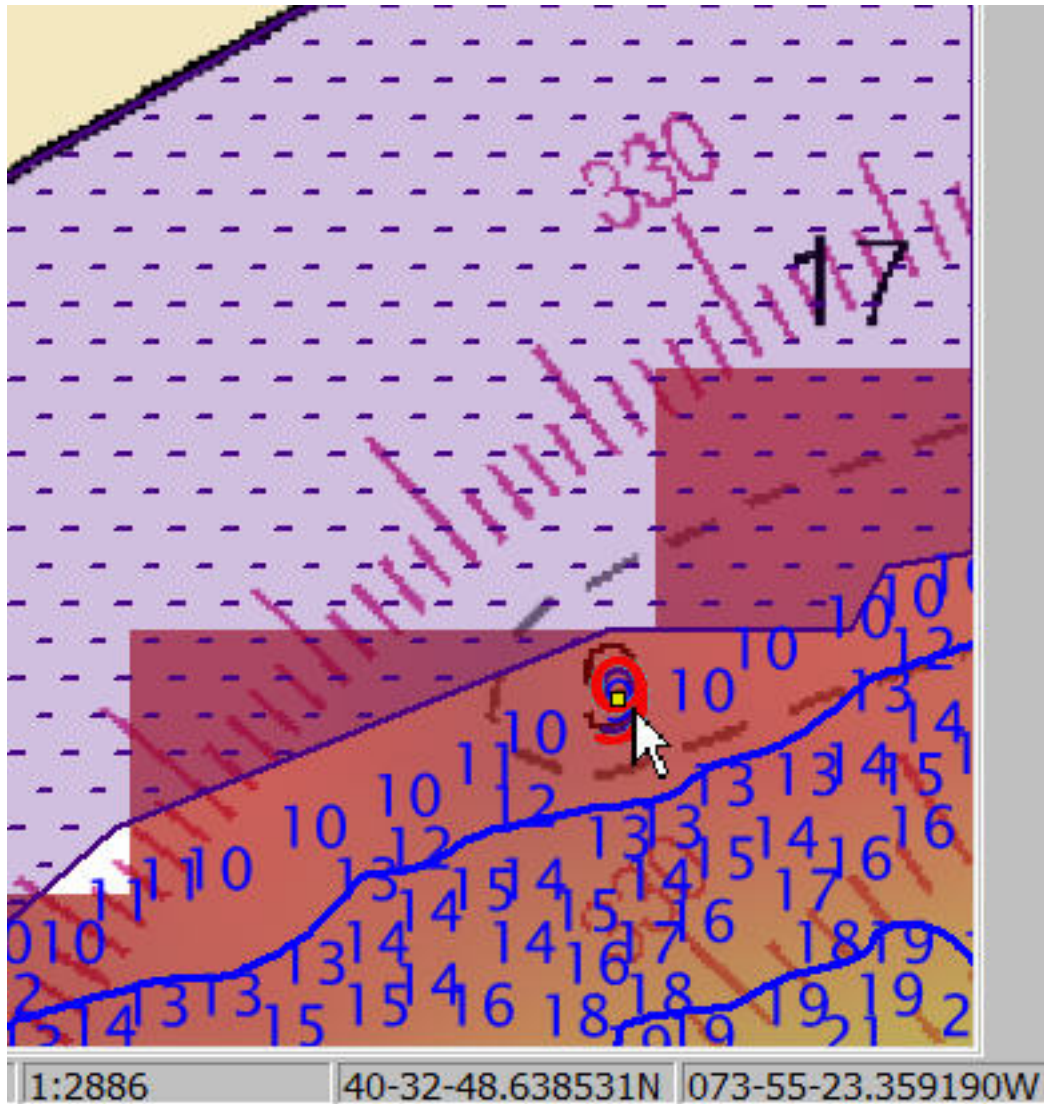


Figure 1.4.1

1.5) DTON 6: 10 ft Shoal Sounding

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 32' 53.6" N, 073° 55' 05.9" W
Least Depth: 3.07 m (= 10.07 ft = 1.679 fm = 1 fm 4.07 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_DTONS for PYDRO.000
FOID: US 0003082295 00001(0226002F08370001/1)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

SOUNDG/remrks: Field unit identified soundings east of Rockaway Point that were 7 ft. shoaler than charted 17 ft sounding

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_DTONS for PYDRO.000	US 0003082295 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

10ft (12350_1, 12327_1, 12326_1)
 1 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 3.1m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710

TECSOU - 3:found by multi-beam

Office Notes

SAR Note: 10 ft Shoal sounding validated during AHB's survey review The bathymetry data within the common area has been reviewed and verified. The selected sounding is shoaler than what is charted and the shoalest survey depth within the common area. The horizontal datum is NAD83, with soundings corrected to MLLW datum.

Compile: Concur. Chart a 10 ft. depth in the present survey position.

Feature Images

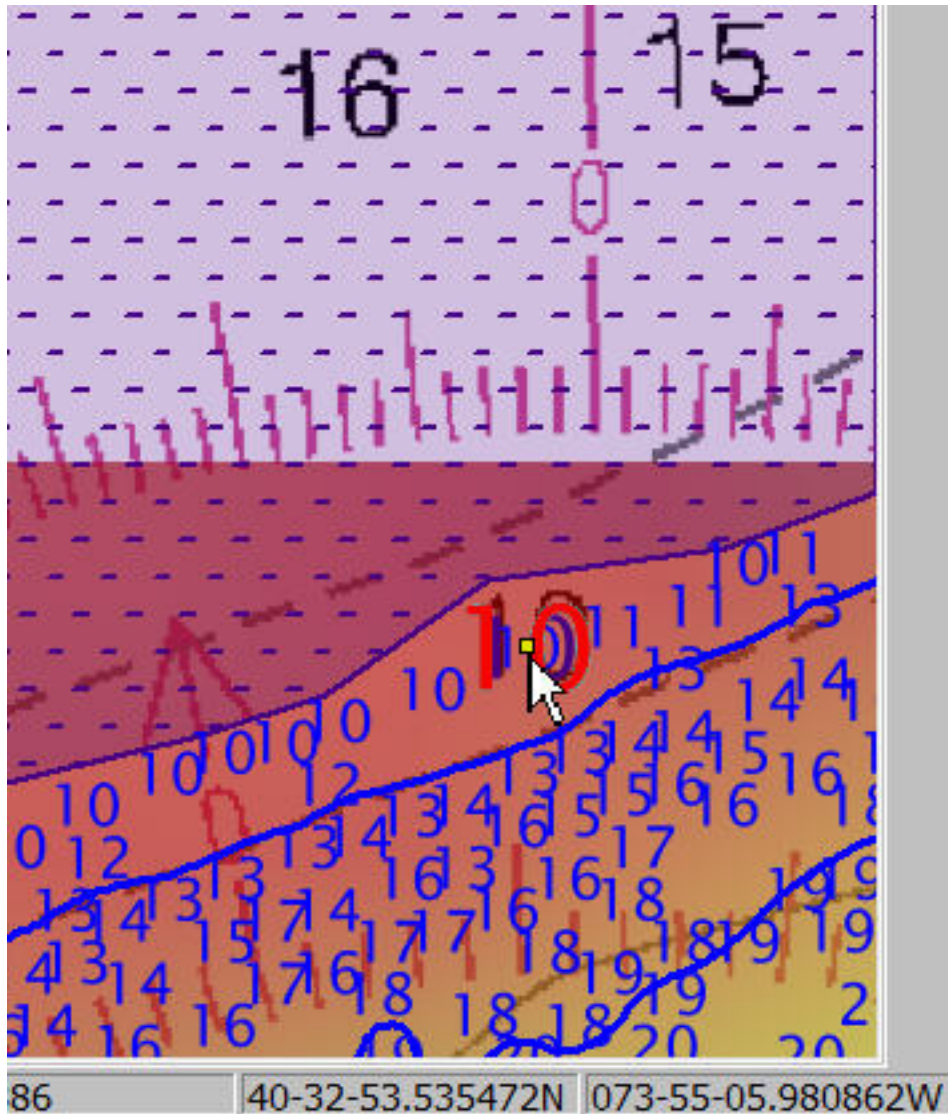


Figure 1.5.1

1.6) DTON 4: 8 ft Shoal Sounding

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 32' 59.1" N, 073° 54' 52.0" W
Least Depth: 2.42 m (= 7.96 ft = 1.326 fm = 1 fm 1.96 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_DTONS for PYDRO.000
FOID: US 0003082291 00001(0226002F08330001/1)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

SOUNDG/remrks: Field unit identified soundings east of Rockaway Point that were 7 ft. shoaler than charted 15 ft soundings

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_DTONS for PYDRO.000	US 0003082291 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

8ft (12350_1, 12327_1, 12326_1)

1 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

2.4m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710

TECSOU - 3:found by multi-beam

Office Notes

SAR Note: 8 ft Shoal sounding validated during AHB's survey review The bathymetry data within the common area has been reviewed and verified. The selected sounding is shoaler than what is charted and the shoalest survey depth within the common area. The horizontal datum is NAD83, with soundings corrected to MLLW datum.

Compile: Concur. Chart an 8 ft. depth in the present survey position.

Feature Images

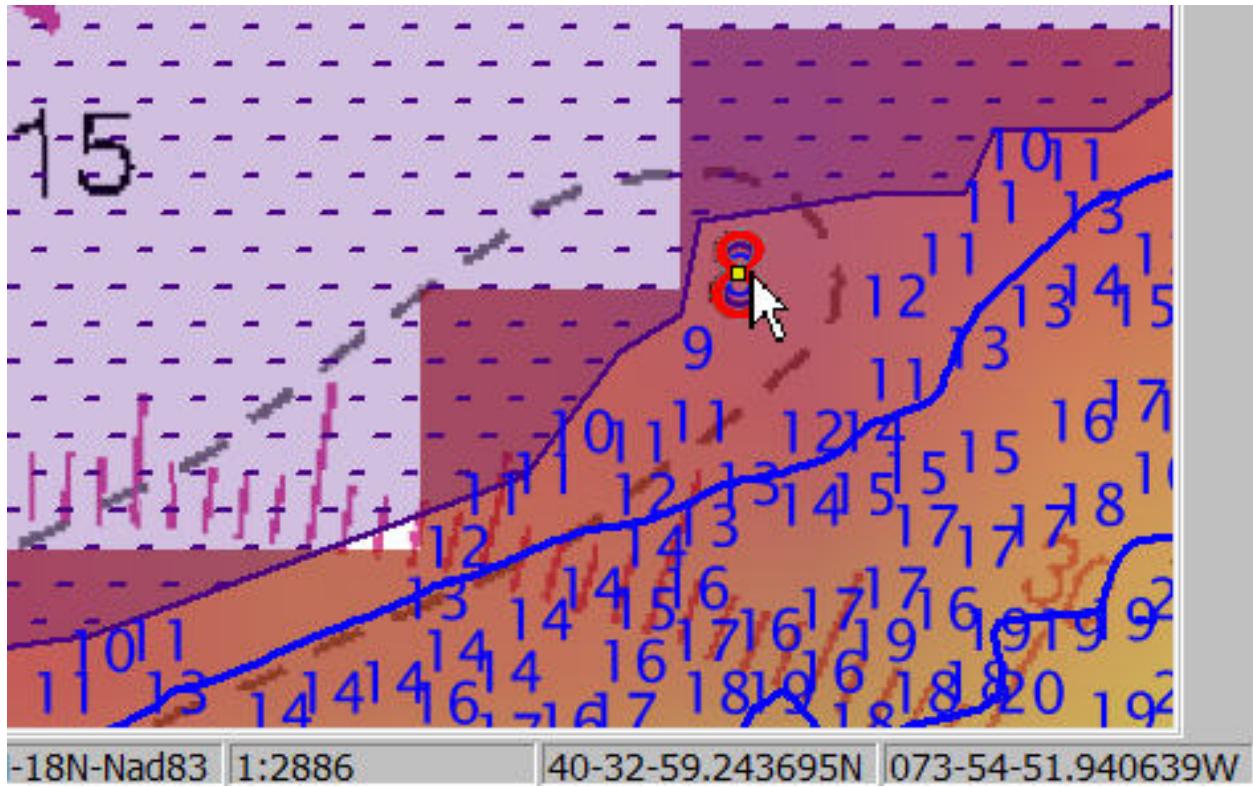


Figure 1.6.1

1.7) DTON 5: 9 ft Shoal Sounding

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 33' 06.3" N, 073° 54' 31.3" W
Least Depth: 2.86 m (= 9.38 ft = 1.564 fm = 1 fm 3.38 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_DTONS for PYDRO.000
FOID: US 0003082294 00001(0226002F08360001/1)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

SOUNDG/remrks: Field unit identified soundings east of Rockaway Point that were 5 ft. shoaler than charted 14 ft sounding

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_DTONS for PYDRO.000	US 0003082294 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

9ft (12350_1, 12327_1, 12326_1)

1 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

2.9m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710

TECSOU - 3:found by multi-beam

Office Notes

SAR Note: 9 ft Shoal sounding validated during AHB's survey review The bathymetry data within the common area has been reviewed and verified. The selected sounding is shoaler than what is charted and the shoalest survey depth within the common area. The horizontal datum is NAD83, with soundings corrected to MLLW datum.

Compile: Concur. Chart a 9 ft. depth in the present survey position.

Feature Images

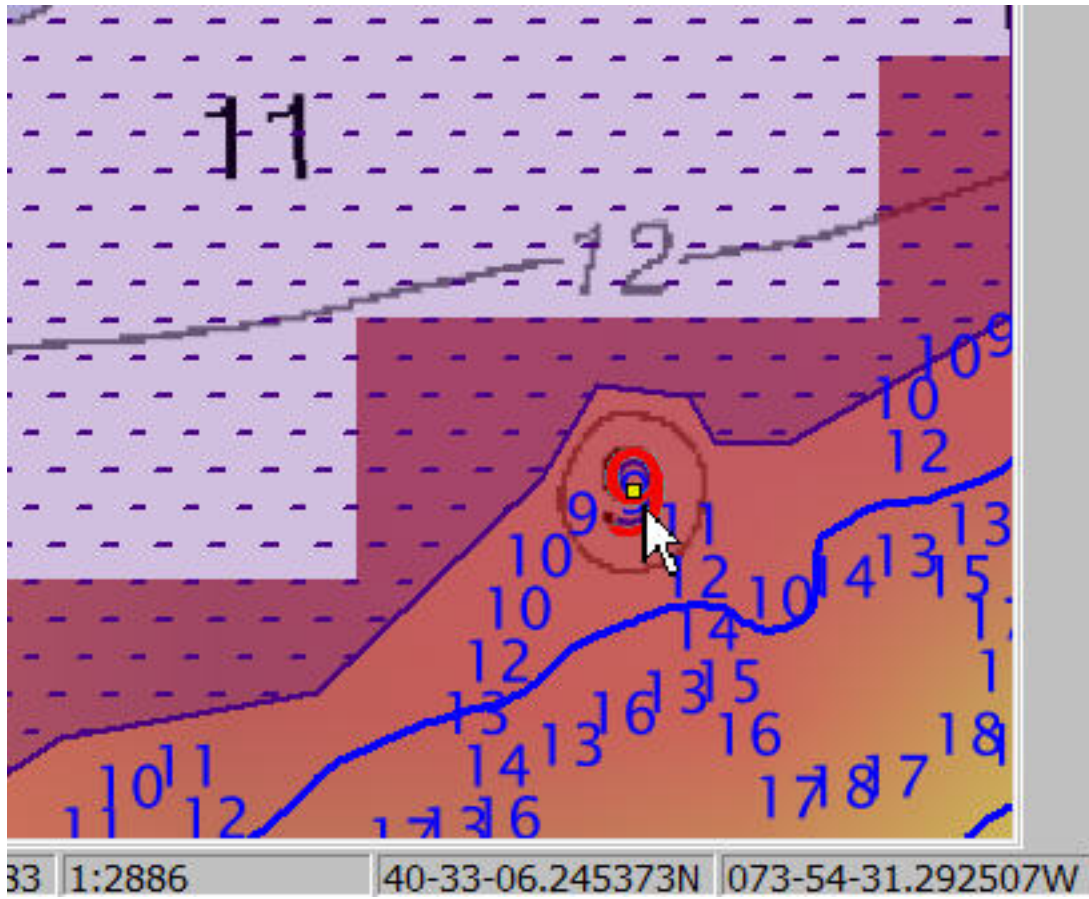


Figure 1.7.1

H11710 AWOIS Items

Registry Number: H11710
State: New York
Locality: New York Harbor and Approaches, NY
Sub-locality: Rockaway Beach: Rockaway Pt. to Silver Pt.
Project Number: OPR-B310-TJ-09
Survey Dates: 10/26/2009 –11/09/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	10th	05/01/2006	1:15,000 (12402_1)	[L]NTM: ?
12350	59th	03/01/2006	1:20,000 (12350_1)	[L]NTM: ?
12327	101st	04/01/2008	1:40,000 (12327_1)	[L]NTM: ?
12326	50th	05/01/2006	1:80,000 (12326_1)	[L]NTM: ?
12300	47th	05/01/2008	1:400,000 (12300_1)	[L]NTM: ?
13006	34th	05/01/2007	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?
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.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	AWOIS	9.72 m	40° 32' 03.3" N	073° 50' 54.0" W	1649
1.2	AWOIS	9.70 m	40° 31' 49.0" N	073° 51' 33.0" W	12942
1.3	AWOIS	9.40 m	40° 32' 01.1" N	073° 52' 07.8" W	12943
1.4	AWOIS	9.49 m	40° 32' 11.9" N	073° 51' 22.8" W	12944
1.5	AWOIS	10.00 m	40° 31' 50.8" N	073° 50' 06.0" W	12945
1.6	AWOIS	9.59 m	40° 32' 10.0" N	073° 50' 40.8" W	12950
1.7	AWOIS	10.22 m	40° 32' 12.7" N	073° 50' 37.2" W	12951
1.8	AWOIS	9.68 m	40° 32' 12.7" N	073° 50' 34.5" W	12952

1.9	AWOIS	9.19 m	40° 31' 54.6" N	073° 50' 50.8" W	12953
1.10	AWOIS	[None]	40° 32' 14.8" N	073° 50' 08.2" W	12954
1.11	AWOIS	[None]	40° 33' 00.3" N	073° 53' 58.5" W	13255
1.12	AWOIS	5.70 m	40° 32' 08.1" N	073° 56' 27.6" W	13260
1.13	AWOIS	7.00 m	40° 32' 12.9" N	073° 51' 07.9" W	9725
1.14	AWOIS	7.93 m	40° 32' 38.7" N	073° 53' 16.0" W	7470
1.15	AWOIS	None	40° 33' 06.1" N	073° 50' 21.4" W	7782
1.16	AWOIS	[None]	40° 32' 43.0" N	073° 50' 50.1" W	7802
1.17	AWOIS	[None]	40° 32' 49.0" N	073° 55' 21.3" W	7713
1.18	AWOIS	[None]	40° 32' 34.3" N	073° 53' 57.1" W	7719
1.19	AWOIS	6.18 m	40° 33' 00.4" N	073° 53' 29.9" W	7720
1.20	AWOIS	5.70 m	40° 32' 01.4" N	073° 56' 27.8" W	14516
1.21	AWOIS	11.75 m	40° 31' 44.5" N	073° 50' 26.8" W	14395

1.1) AWOIS #1649 - MISTLETOE

Primary Survey Feature is US 000023264 00001 / H11710_AWOIS_Features.000

Search Position: 40° 32' 03.4" N, 073° 50' 53.9" W
Historical Depth: 8.53 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

CL46/30--COE; DANGEROUS WK REPORTED, LOCATED BY SEXTANT ANGLES, IN 39 FT WITH ABOUT 12FT OVER IT; REMOVAL IS CONTEMPLATED DURING SPRING OF 1930.

H6463/39WD--26 FT SNDG TAKEN ON WK IN LAT 40-32-12N, LONG 73-51-12W; CLEARED TO 24 FT IN SURROUNDING DEPTHS OF 35 FT (ENTERED MSM 1/86).

H10668/97-- OPR-C399-RU; 200% SIDE SCAN SONAR SEARCH NEGATIVE FOR 152-FOOT WRECK. HOWEVER, THIS AWOIS ITEM WAS LOCATED IN AN AREA OF NUMEROUS CONTACTS CLOSE TO THE CHARTED FISH HAVEN. SHOALEST CONTACT LOCATED APPROX. 480 METERS SE OF GIVEN POSITION. ROSE OFF THE BOTTOM 3 METERS (10 FEET) IN LAT. 40-32-03.385N, LONG. 73-50-53.942W. SEABAT DEPTH OF 28 FEET. EVALUATOR RECOMMENDS DELETING 24-FOOT WIRE DRAG CLEARED DEPTH AND CHARTING A 28 WK AS SURVEYED. (UP 12/22/04, SJV)

DESCRIPTION

24 NO.344; TRAWLER; SUNK 1930; POS. ACCURACY 1-3 MILES; WD CLEARED TO 24 FT; POSSIBLY IN 1939.

195 LORAN-C RATES HAVE BEEN PROVIDED BY MR. RICHARD TARACKA, GREENWICH, CT. POLICE DEPT.,

TEL. NO. 203-622-8020; 9960-X 26933.3, 9960-Y 43747.6 (ENTERED MSM 6/89)

Survey Summary

Survey Position: 40° 32' 03.3" N, 073° 50' 54.0" W
Least Depth: 9.72 m (= 31.89 ft = 5.315 fm = 5 fm 1.89 ft)
TPU (±1.96σ): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023264 00001(022600005AE00001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 0000023264 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 1649	2.18	205.3	Secondary (grouped)

Hydrographer Recommendations

Delete charted Wreck for AWOIS #1649 and chart Wreck with updated depth.

Cartographically-Rounded Depth (Affected Charts):

32ft (12350_1, 12326_1)

5 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

9.7m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 OBJNAM - Mistletoe
 QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 9.720 m
 WATLEV - 3:always under water/submerged

Office Notes

AWOIS #1649 is a charted dangerous 28 Wk Mistletoe. SAR Note: Feature is verified real, evident in 200% sss and multibeam.

Compile: AWOIS #1649: Delete charted dangerous wreck, least depth 28 ft and chart a dangerous wreck, least depth 32 feet, in the present survey position.

Feature Images

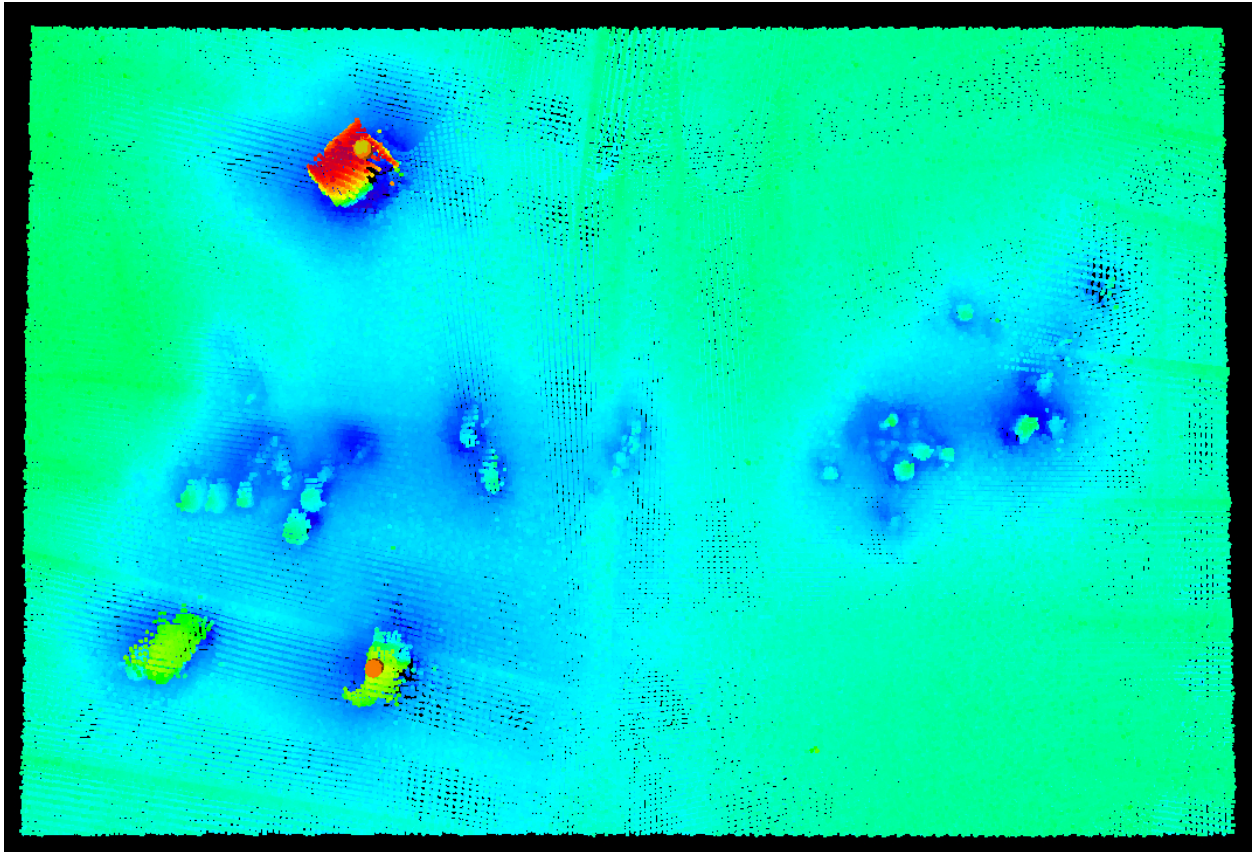


Figure 1.8.1

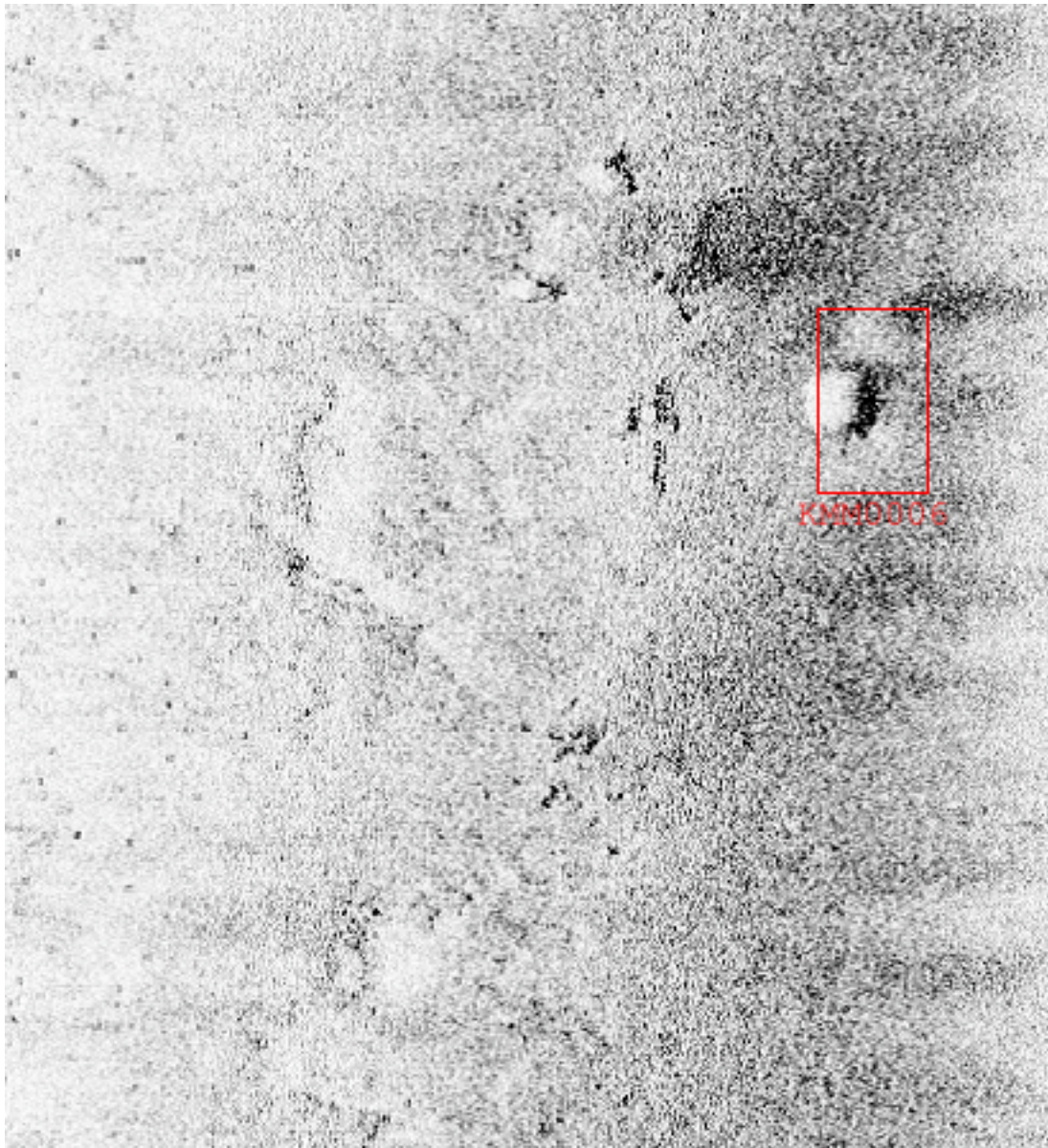


Figure 1.8.2

1.2) AWOIS #12942 - OBSTRUCTION

Primary Survey Feature is US 0165128718 04439 / H11916_AWOIS_Feature.000

Search Position: 40° 31' 49.1" N, 073° 51' 33.0" W
Historical Depth: 9.45 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10668/97- OPR-C399-RU; UNCHARTED OBSTRUCTION LOCATED WITH A SWMB LD OF 9.5 METERS (31 FEET) IN LAT. 40-31-49.147N, LONG. 73-51-33.022W. EVALUATOR RECOMMENDS CHARTING A 31 OBSTN AS SURVEYED. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 31' 49.0" N, 073° 51' 33.0" W
Least Depth: 9.70 m (= 31.82 ft = 5.304 fm = 5 fm 1.82 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2008-196.00:00:00.000 (07/14/2008)
Dataset: H11916_AWOIS_Feature.000
FOID: US 0165128718 04439(022609D7AA0E1157)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11916_AWOIS_Feature.000	US 0165128718 04439	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 12942	3.35	165.0	Secondary (grouped)
H11710_AWOIS_Features.000	US 0000023251 00001	3.36	162.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

32ft (12350_1, 12326_1)

5 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

9.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
SORDAT - 20080714
SORIND - US,US,graph,H-11916
VALSOU - 9.700 m
WATLEV - 3:always under water/submerged

Office Notes

AWOIS #12942 is a charted dangerous 32 Obstn - SAR Note: not fully investigated by field, identified via sss only, no least depth obtained -- field comment - least depth not supported by sss, not fully covered by mb

Compile: AWOIS #12942, charted dangerous 32 Obstn. Retain as charted as investigation of the AWOIS feature was incomplete.

1.3) AWOIS #12943 - OBSTRUCTION

**Primary Survey Feature is US 000023136 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 01.2" N, 073° 52' 07.6" W
Historical Depth: 9.45 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10668/97-- OPR-C399-RU; 200% SIDE SCAN SONAR SEARCH LOCATED AN UNCHARTED OBSTRUCTION WITH A SWMB LD OF 9.5 METERS (31 FEET) IN LAT. 40-32-01.242N, LONG. 73-52-07.635W. EVALUATOR RECOMMENDS CHARTING A 31 OBSTN AS SURVEYED. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 32' 01.1" N, 073° 52' 07.8" W
Least Depth: 9.40 m (= 30.84 ft = 5.140 fm = 5 fm 0.84 ft)
TPU (±1.96σ): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2006-060.00:00:00.000 (03/01/2006)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023136 00001(022600005A600001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023136 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 12943	5.35	217.4	Secondary (grouped)

Hydrographer Recommendations

Retain AWOIS #12943 as charted.

Cartographically-Rounded Depth (Affected Charts):

31ft (12350_1, 12326_1)

5fm (12300_1, 13006_1, 13003_1, 14500_1)

9.4m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: SORDAT - 20060300
SORIND - US,US,graph,Chart 12350
VALSOU - 9.400 m
WATLEV - 3:always under water/submerged

Office Notes

AWOIS #12943, charted dangerous 31 Obstrn. SAR Note: Feature identified in 200% sss. No bathy data over feature; depth not confirmed.

Compile: AWOIS #12943, charted dangerous 31 Obstrn. Retain as charted as investigation of the AWOIS feature was incomplete.

1.4) AWOIS #12944 - OBSTRUCTION

**Primary Survey Feature is US 000023253 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 12.3" N, 073° 51' 22.6" W
Historical Depth: 9.45 m
Search Radius: 50
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

H10668/97-- OPR-C399-RU; UNCHARTED OBSTRUCTION LOCATED BY SIDE SCAN SONAR WITH A SWMB LD OF 9.4 METERS (31 FEET) IN LAT. 40-32-12.28N, LONG. 73-51-22.58W. EVALUATOR RECOMMENDS CHARTING A 31 OBSTN AS SURVEYED. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 32' 11.9" N, 073° 51' 22.8" W
Least Depth: 9.49 m (= 31.13 ft = 5.188 fm = 5 fm 1.13 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023253 00001(022600005AD50001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023253 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 12944	12.33	204.2	Secondary (grouped)

Hydrographer Recommendations

Update charted AWOIS #12944 Obstrn with surveyed depth.

Cartographically-Rounded Depth (Affected Charts):

31ft (12350_1, 12326_1)

5 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

9.5m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20091109

SORIND - US,US,graph,H11710

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

VALSOU - 9.487 m

WATLEV - 3:always under water/submerged

Office Notes

AWOIS #12944, charted 31 Obstrn - SAR Note: Feature is verified real, evident in 200% sss and multibeam.

Compile: Delete charted dangerous obstruction, least depth 31 feet. Add dangerous obstruction, least depth 31 feet in the present survey position.

Feature Images

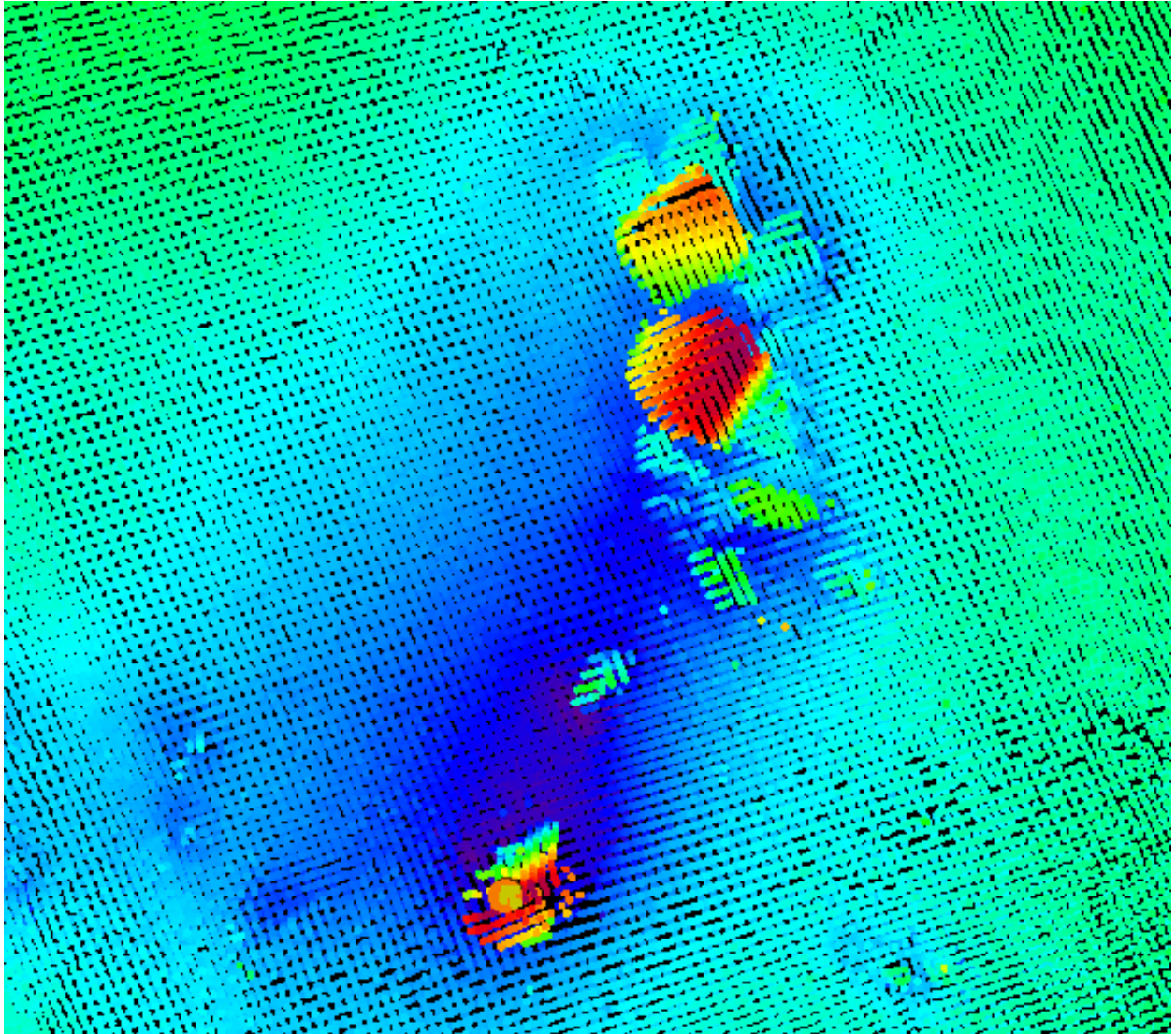


Figure 1.11.1



Figure 1.11.2

1.5) AWOIS #12945 - OBSTRUCTION

**Primary Survey Feature is US 000023247 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 31' 50.7" N, 073° 50' 05.8" W
Historical Depth: 10.06 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10668/97-- OPR-C399-RU; UNCHARTED OBSTRUCTION LOCATED BY SIDE SCAN SONAR. SWMB LD OF 10.1 METERS (33 FEET) IN LAT. 40-31-50.73N, LONG. 73-50-05.78W. EVALUATOR RECOMMENDS CHARTING A 33 OBSTN AS SURVEYED. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 31' 50.8" N, 073° 50' 06.0" W
Least Depth: 10.00 m (= 32.81 ft = 5.468 fm = 5 fm 2.81 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2006-060.00:00:00.000 (03/01/2006)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023247 00001(022600005ACF0001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023247 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 12945	4.97	277.7	Secondary (grouped)

Hydrographer Recommendations

Retain AWOIS #12945 as charted.

Cartographically-Rounded Depth (Affected Charts):

33ft (12350_1, 12326_1)

5 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

10.0m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
SORDAT - 20060300
SORIND - US,US,graph,Chart 12350
VALSOU - 10.000 m
WATLEV - 3:always under water/submerged

Office Notes

AWOIS #12945, charted dangerous 33 Obstrn - SAR Note: Feature is verified present in 200% sss, no multibeam obtained over the feature.

Compile: Concur. AWOIS #12945, charted dangerous 33 Obstrn. Retain as charted as investigation of the AWOIS feature was incomplete.

1.6) AWOIS #12950 - OBSTRUCTION

**Primary Survey Feature is US 000023244 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 10.0" N, 073° 50' 40.8" W
Historical Depth: 9.45 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10668/97-- OPR-C399-RU; UNCHARTED OBSTRUCTION LOCATED BY SIDE SCAN SONAR. SWMB LD OF 9.6 METERS (31 FEET) IN LAT.. 40-32-09.99N, LONG. 73-50-40.83W. EVALUATOR RECOMMENDS CHARTING A 31 OBSTN AS SURVEYED. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 32' 10.0" N, 073° 50' 40.8" W
Least Depth: 9.59 m (= 31.48 ft = 5.246 fm = 5 fm 1.48 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023244 00001(022600005ACC0001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023244 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 12950	1.86	113.3	Secondary (grouped)

Hydrographer Recommendations

Update AWOIS #12950 Obstrn with surveyed depth.

Cartographically-Rounded Depth (Affected Charts):

31ft (12350_1, 12326_1)

5 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

9.6m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20091109

SORIND - US,US,graph,H11710

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

VALSOU - 9.594 m

WATLEV - 3:always under water/submerged

Office Notes

AWOIS #12950, charted 31 Obstrn - SAR Note: Feature is verified real, evident in 200% sss and multibeam.

Compile: Delete charted dangerous obstructions, least depth 31 feet. Add dangerous obstructions, least depth 31 feet in the present survey position and add notation Obstructions.

Feature Images

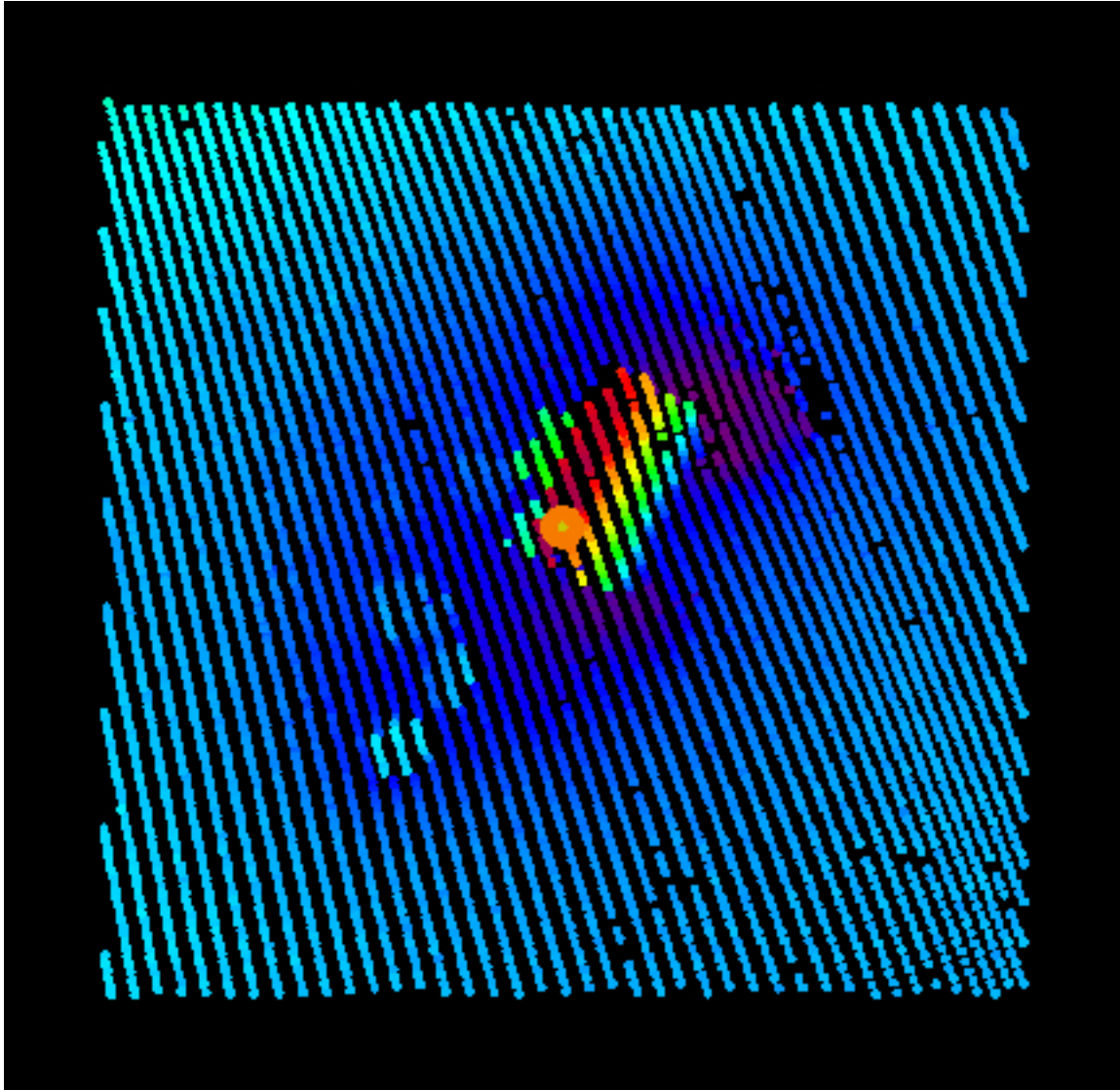


Figure 1.13.1

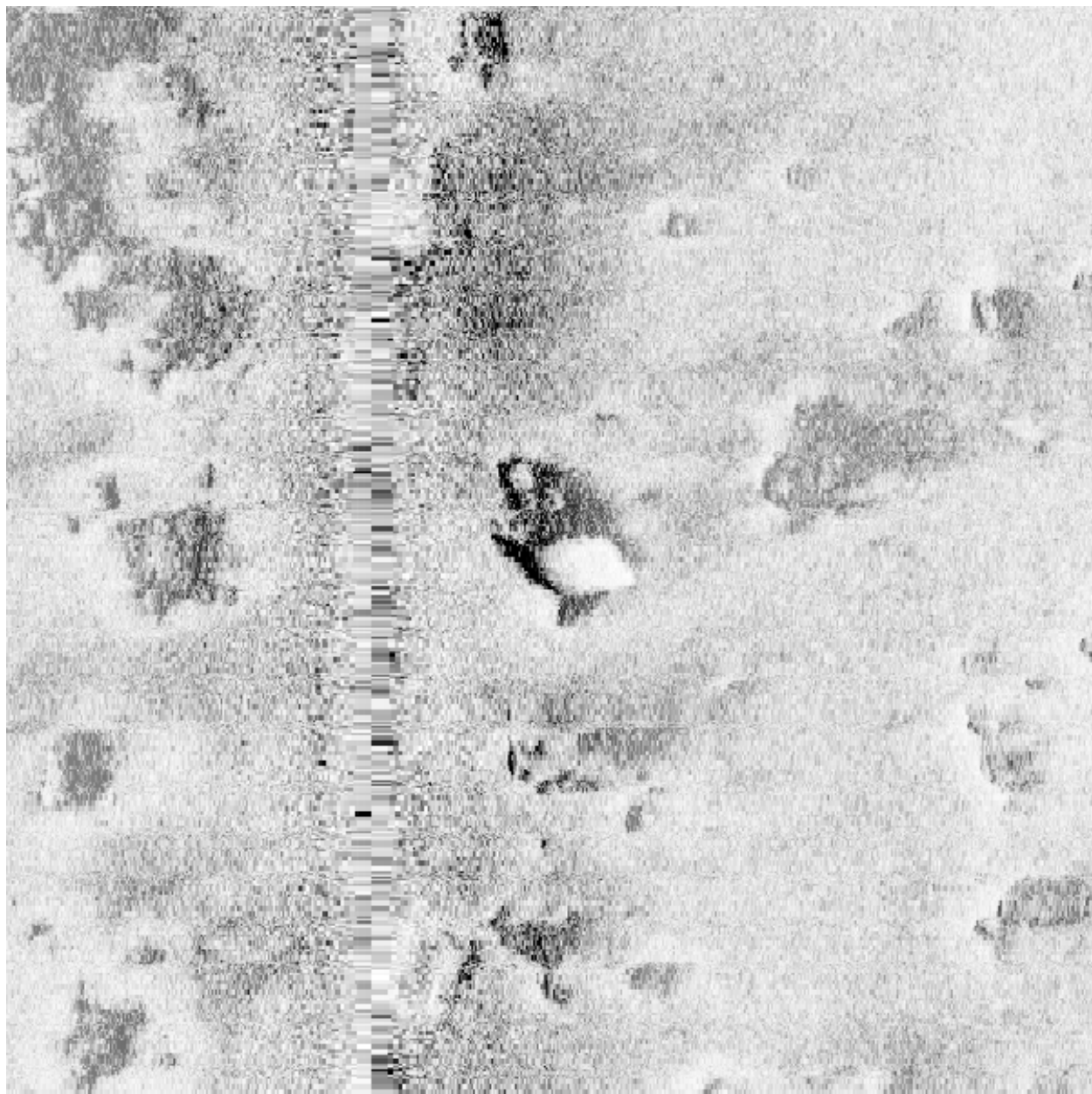


Figure 1.13.2

1.7) AWOIS #12951 - OBSTRUCTION

**Primary Survey Feature is US 000023242 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 12.0" N, 073° 50' 36.0" W
Historical Depth: 9.45 m
Search Radius: 50
Search Technique: MB,S2
Technique Notes: [None]

History Notes:

H10668/97-- OPR-C399-RU; UNCHARTED OBSTRUCTION LOCATED BY SIDE SCAN SONAR. SWMB LD OF 9.5 METERS (31 FEET) IN LAT. 40-32-11.99N, LONG. 73-50-35.97W. EVALUATOR RECOMMENDS CHARTING A 31 OBSTN AS SURVEYED. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 32' 12.2" N, 073° 50' 37.2" W
Least Depth: 10.22 m (= 33.53 ft = 5.588 fm = 5 fm 3.53 ft)
TPU (±1.96σ): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023242 00001(022600005ACA0001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023242 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 12952	1.66	160.8	Secondary (grouped)
NewYorkHarborAndApproachesAWOIS	AWOIS # 12951	40.70	055.3	Secondary

Hydrographer Recommendations

Update AWOIS #12952 Obstrns with surveyed depths.

Cartographically-Rounded Depth (Affected Charts):

32ft (12350_1, 12326_1)

5 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

9.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20091109

SORIND - US,US,graph,H11710

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

VALSOU - 9.684 m

WATLEV - 3:always under water/submerged

Office Notes

AWOIS #12952, charted 31 Obstrn - SAR Note: Feature is verified real, evident in 200% sss and multibeam.

Compile: Concur with conditions. AWOIS #12951, delete the charted 31 Obstrn. Present survey found 33 foot obstruction to the NW of the charted feature.

Do not chart this feature as the charted fish haven, the 31 foot AWOIS 12950 and the surrounding soundings make it obsolete to chart as an obstruction.

Feature Images

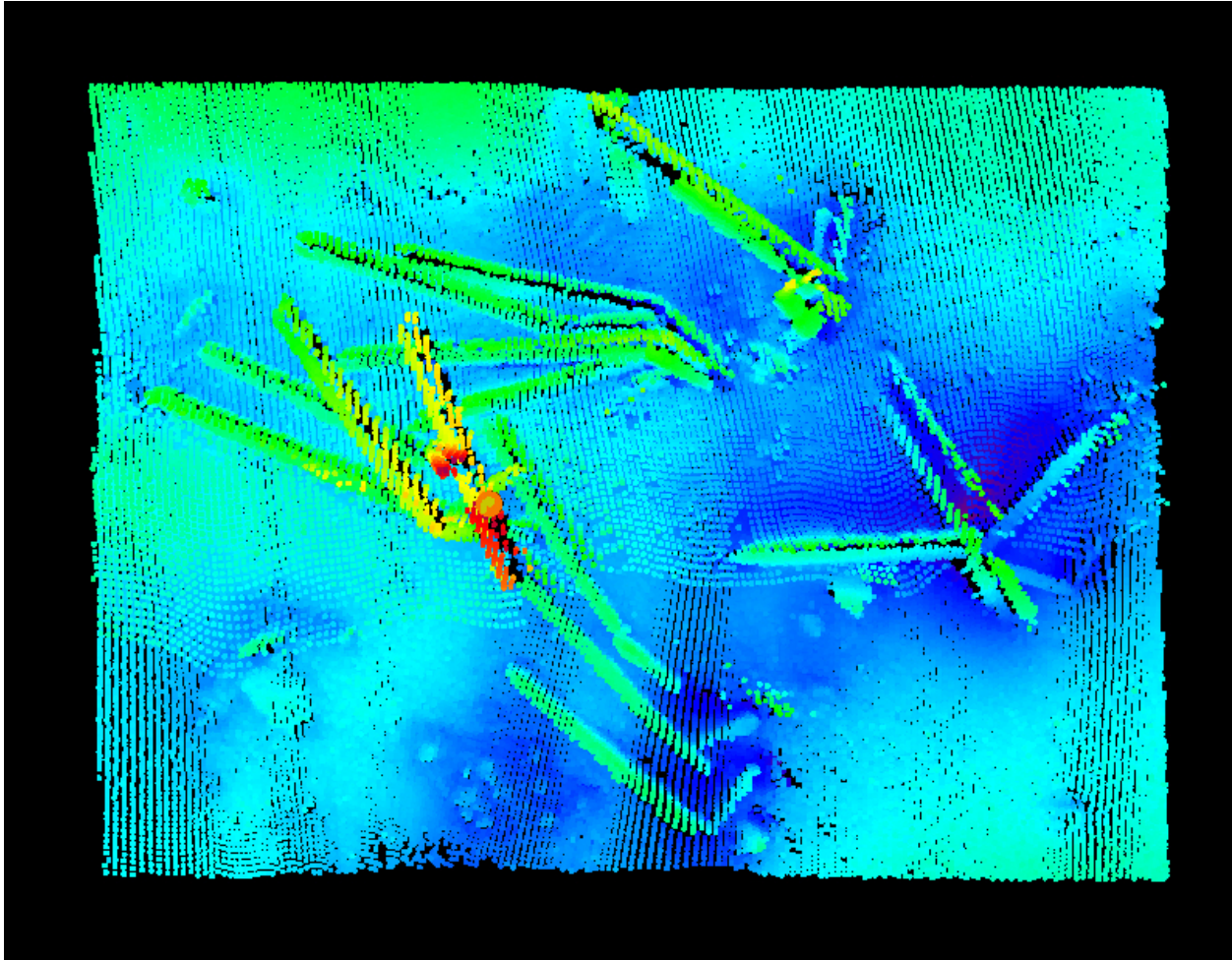


Figure 1.14.1

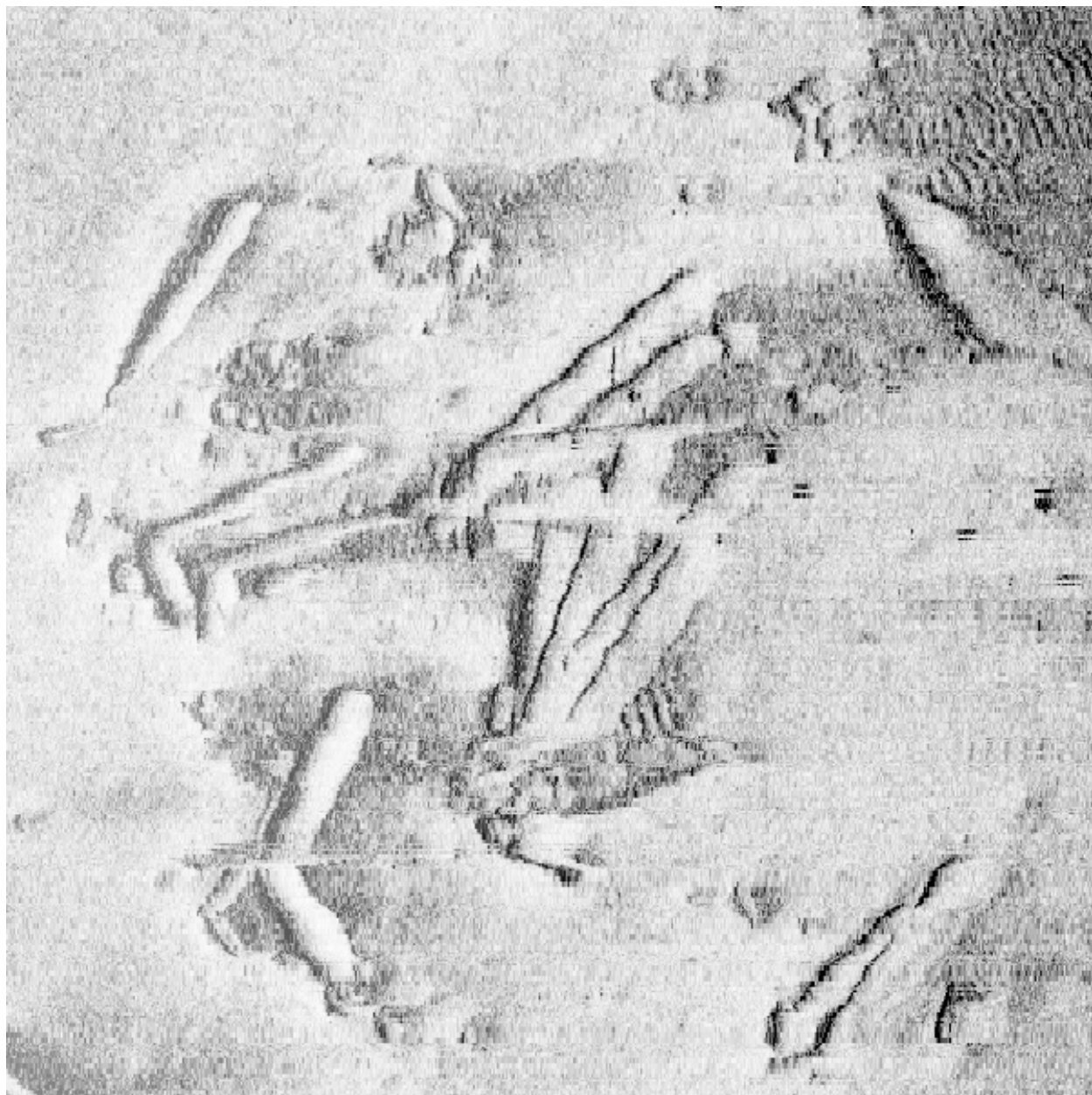


Figure 1.14.2

1.8) AWOIS #12952 - OBSTRUCTION

Primary Survey Feature is US 000023242 00001 / H11710_AWOIS_Features.000

Search Position: 40° 32' 12.8" N, 073° 50' 34.6" W
Historical Depth: 9.45 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10668/97-- OPR-C399-RU; UNCHARTED OBSTRUCTION LOCATED BY SIDE SCAN SONAR. SWMB LD OF 9.6 METERS (31 FEET) IN LAT. 40-32-12.79N, LONG. 73-50-34.56W. EVALUATOR RECOMMENDS CHARTING A 31 OBSTN AS SURVEYED. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 32' 12.7" N, 073° 50' 34.5" W
Least Depth: 9.68 m (= 31.77 ft = 5.295 fm = 5 fm 1.77 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023242 00001(022600005ACA0001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023242 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 12952	1.66	160.8	Secondary (grouped)
NewYorkHarborAndApproachesAWOIS	AWOIS # 12951	40.70	055.3	Secondary

Hydrographer Recommendations

Update AWOIS #12952 Obstrns with surveyed depths.

Cartographically-Rounded Depth (Affected Charts):

32ft (12350_1, 12326_1)

5 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

9.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20091109

SORIND - US,US,graph,H11710

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

VALSOU - 9.684 m

WATLEV - 3:always under water/submerged

Office Notes

AWOIS #12952, charted 31 Obstrn - SAR Note: Feature is verified real, evident in 200% sss and multibeam.

Compile: Concur with conditions. AWOIS #12952, is not charted on the latest edition of the raster. The present survey found 32 foot obstruction at the southern end of the already charted Fish Haven.

Do not chart this feature as the fish haven, the 31 foot AWOIS 12950 and the surrounding soundings make it obsolete as an obstruction. Chart 32 foot sounding as a depth.

Feature Images

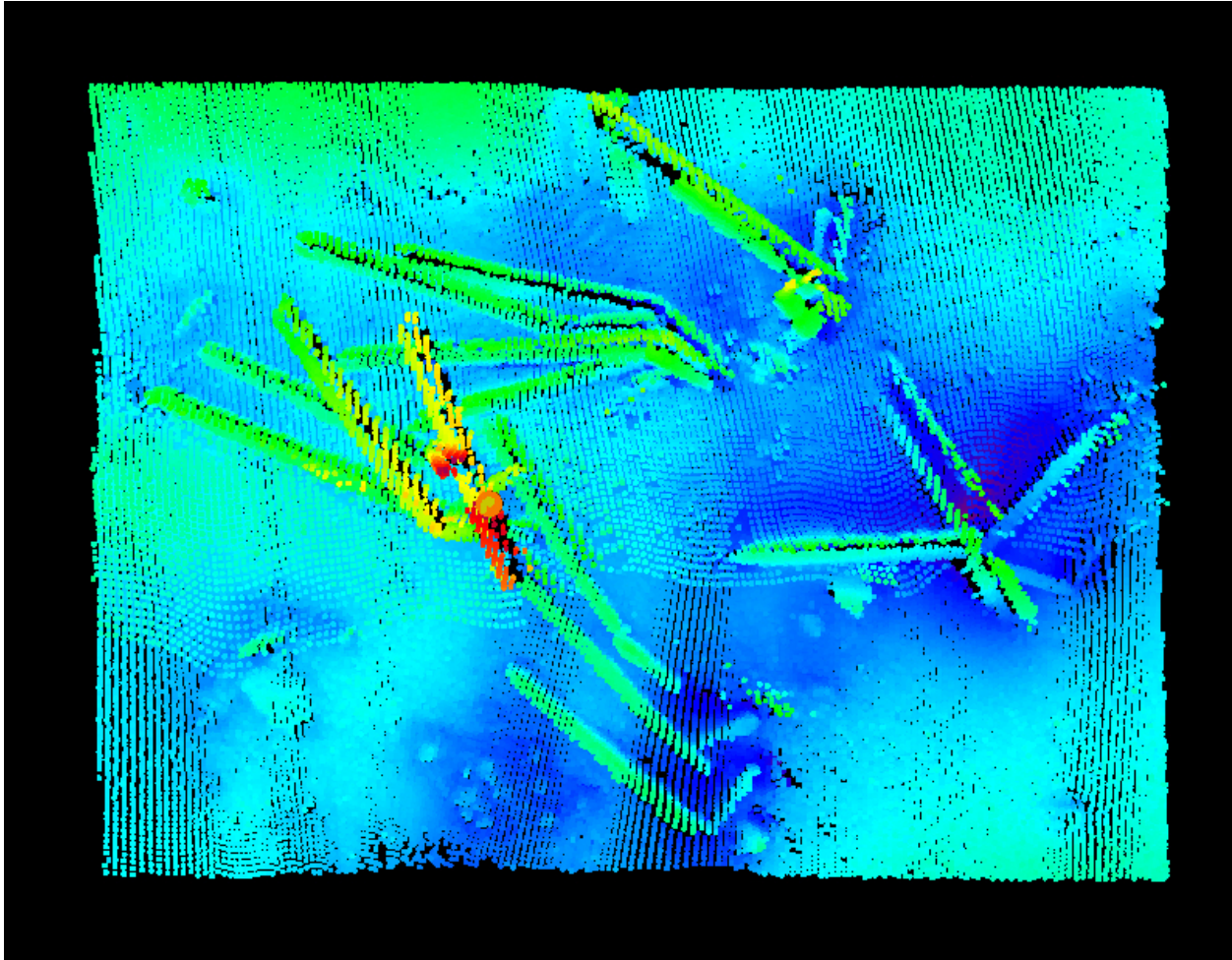


Figure 1.15.1

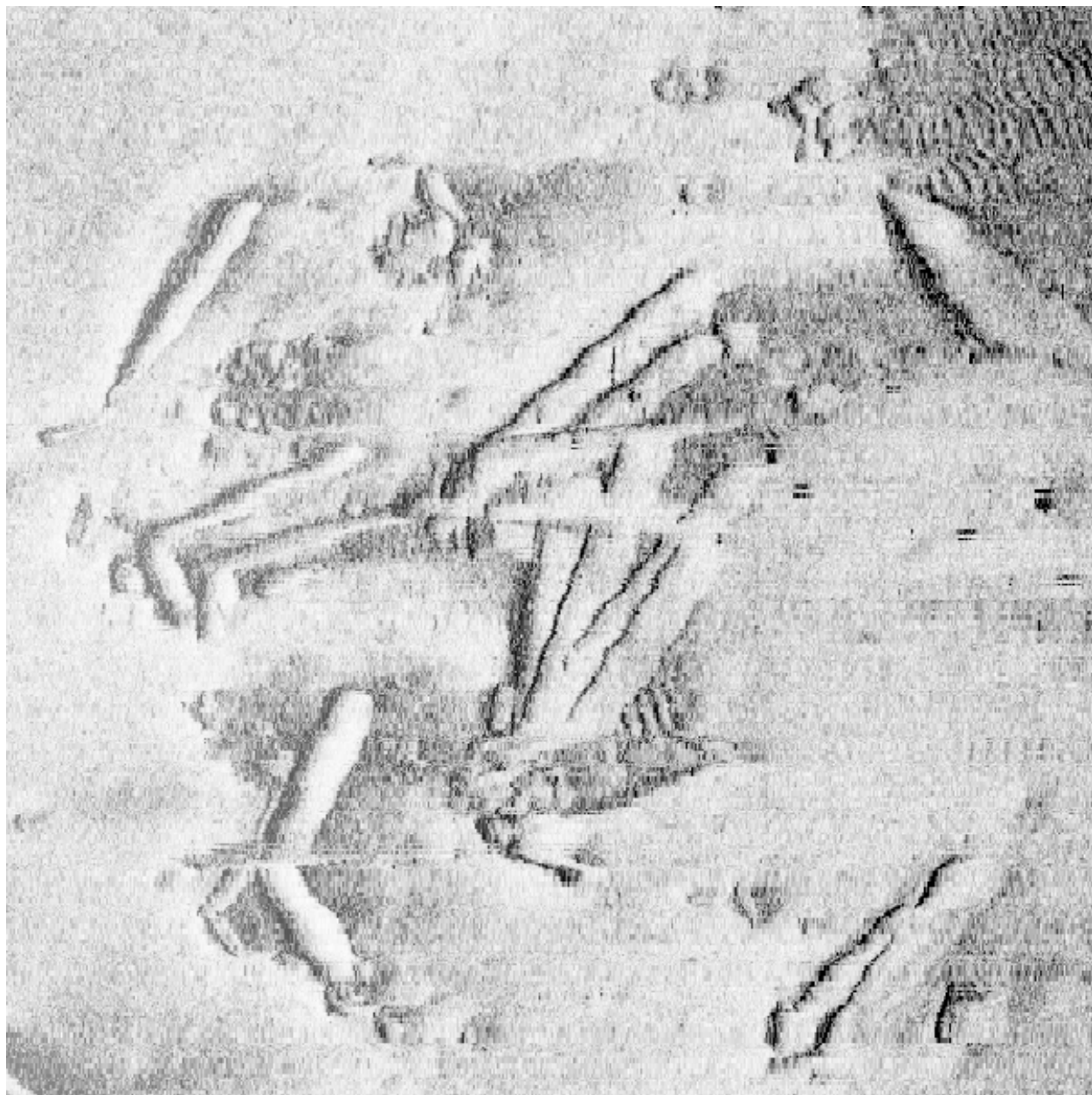


Figure 1.15.2

1.9) AWOIS #12953 - OBSTRUCTION

Primary Survey Feature is US 000023268 00001 / H11710_AWOIS_Features.000

Search Position: 40° 31' 55.1" N, 073° 50' 54.8" W
Historical Depth: 8.53 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: SEARCH 50 METER RADII AROUND EACH OF THE THREE OBSTRUCTIONS

History Notes:

H10668/97-- OPR-C399-RU; THE FOLLOWING UNCHARTED OBSTRUCTIONS WERE LOCATED BY SIDE SCAN SONAR: SWMB LD OF 9.2 METERS (30 FEET) IN LAT. 40-31-57.86N, LONG. 73-51-00.76W;

" " 8.6 METERS (28 FEET) IN LAT. 40-31-55.09N, LONG. 73-50-54.75W

" " 8.7 METERS (28 FEET) IN LAT. 40-31-54.62N, LONG. 73-50-51.05W

EVALUATOR RECOMMENDS CHARTING A 28 OBSTN IN LAT. 40-51-55.09N, LONG. 73-50-54.75W. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 31' 54.6" N, 073° 50' 50.8" W
Least Depth: 9.19 m (= 30.15 ft = 5.025 fm = 5 fm 0.15 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023268 00001(022600005AE40001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023268 00001	0.00	000.0	Primary
H11710_AWOIS_Features.000	US 000023265 00001	79.41	098.5	Secondary (grouped)

NewYorkHarborAndApproachesAWOIS	AWOIS # 12953	92.34	099.6	Secondary (grouped)
H11710_AWOIS_Features.000	US 0000023252 00001	244.66	114.2	Secondary (grouped)

Hydrographer Recommendations

Update AWOIS #12953 with updated depth.

Cartographically-Rounded Depth (Affected Charts):

30ft (12350_1, 12326_1)

5fm (12300_1, 13006_1, 13003_1, 14500_1)

9.2m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known
 SORDAT - 20091109
 SORIND - US,US,graph,H11710
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 9.189 m
 WATLEV - 3:always under water/submerged

Office Notes

AWOIS #12953, charted 28 Obstrns - SAR Note: Feature is verified real, evident in 200% sss and multibeam.

Compile: AWOIS #12953, three charted Obstrns -

Retain charted Obstruction area feature as charted.

Delete charted dangerous obstruction, least depth 30 feet. Add dangerous obstruction, least depth 31.11 feet in the present survey position.

Delete charted dangerous obstruction, least depth 28 feet. Add dangerous obstruction, least depth 33.07 feet in the present survey position.

Delete charted dangerous obstruction, least depth 28 feet. Add dangerous obstruction, least depth 30.15 feet in the present survey position.

Feature Images

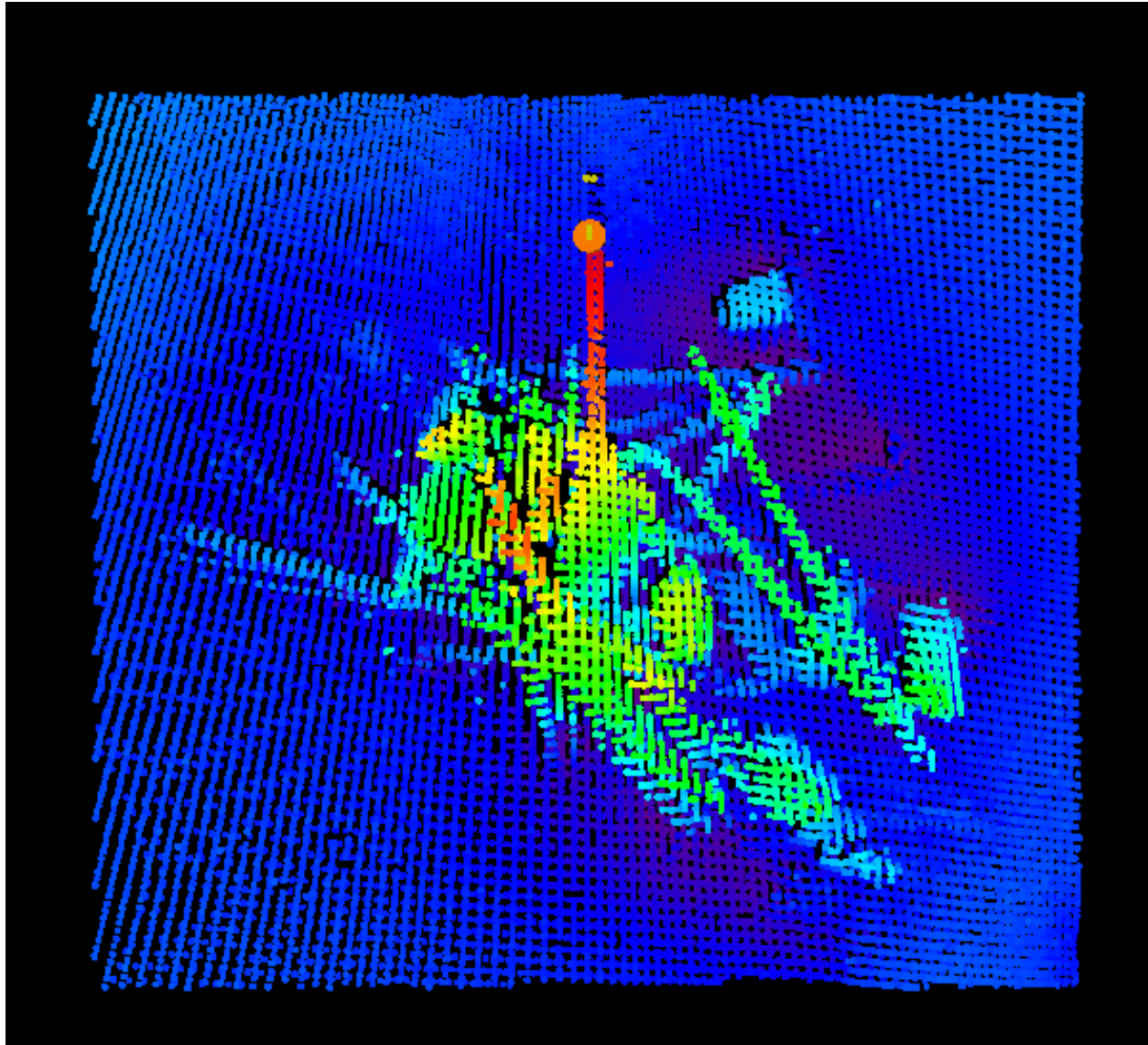


Figure 1.16.1

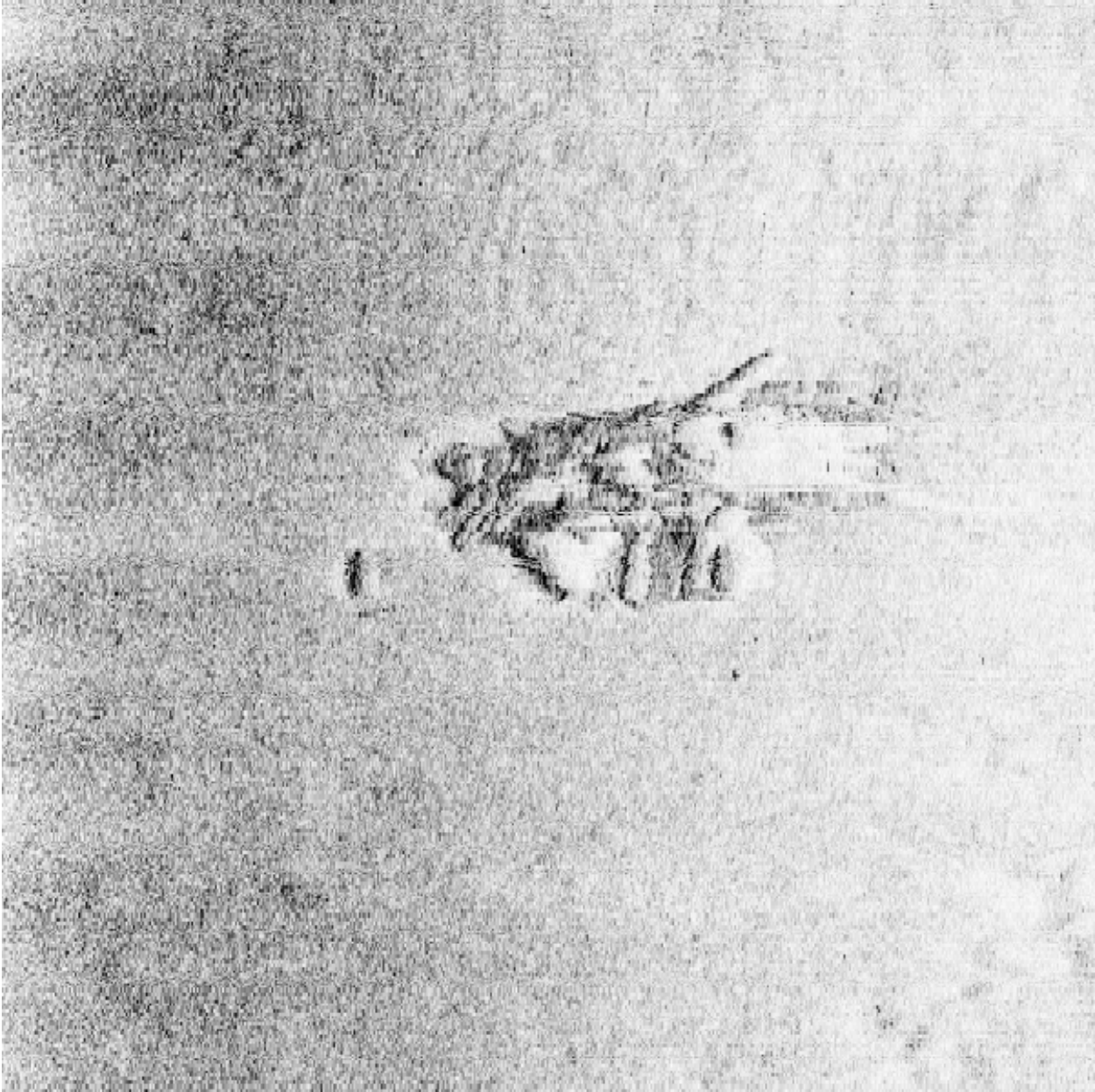


Figure 1.16.2

1.10) AWOIS #12954 - OBSTRUCTION

**Primary Survey Feature is US 000023212 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 14.8" N, 073° 50' 08.2" W
Historical Depth: 8.84 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

H10668/97-- OPR-C399-RU; THE FOLLOWING UNCHARTED OBSTRUCTIONS WERE LOCATED BY SIDE SCAN SONAR WITHIN THE BOUNDARIES OF A CHARTED FISH HAVEN:

SWMB LD OF 9.0 METERS (29 FEET) IN LAT. 40-32-15.80N, LONG. 73-50-08.16W
 " " 9.1 METERS (30 FEET) IN LAT. 40-32-15.10N, LONG. 73-50-02.18W

EVALUATOR RECOMMENDS NO CHANGE IN CHARTING STATUS. (ENT 12/22/04, SJV)

Survey Summary

Survey Position: 40° 32' 14.8" N, 073° 50' 08.2" W
Least Depth: [None]
TPU (±1.96σ): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023212 00001(022600005AAC0001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023212 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 12954	0.00	000.0	Secondary (grouped)

Hydrographer Recommendations

Update AWOIS #12954 as proven existing within extents of charted Fish Haven.

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: SORDAT - 20091109
SORIND - US,US,graph,H11710

Office Notes

AWOIS #12954, uncharted Obstructions within Fish Haven AWOIS #9725, Obstns present verified by 200% sss, AWOIS #12954 covered by extents of AWOIS #9725 Fish Haven.

COMPILE: Concur. AWOIS #12954 is an uncharted 29 foot obstruction found within the limits of AWOIS #9725, the obstruction (fish haven). The present survey found a 29.53 foot obstruction. No changes to charting are recommended.

1.11) AWOIS #13255 - CORSAIR

**Primary Survey Feature is US 000023201 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 33' 00.4" N, 073° 53' 58.5" W
Historical Depth: [None]
Search Radius: 500
Search Technique: MB, S2
Technique Notes: SEARCH INSHORE OF 4M CURVE NOT REQUIRED FOR DISPROVAL

History Notes:

NM44/59 -- CABIN CRUISER CORSAIR REPORTED SUNK IN APPROX POSITION 40/33/00N 73/54/00W NAD27 (ENT. 05/26/05, SME)

Survey Summary

Survey Position: 40° 33' 00.3" N, 073° 53' 58.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023201 00001(022600005AA10001)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023201 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 13255	1.20	143.9	Secondary (grouped)

Hydrographer Recommendations

Delete AWOIS #13255 and update AWOIS as disproved.

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
OBJNAM - Corsair
QUASOU - 2:depth unknown
SORDAT - 20091109
SORIND - US,US,graph,H11710
WATLEV - 3:always under water/submerged

Office Notes

AWOIS #13255 is a charted dangerous Wreck PA (Corsair). SAR Note: AWOIS search radius was not covered completely with 200% SSS; No wreck was observed in the 100% coverage which was complete. 200% coverage was obtained with the exception of one adjacent SS line; no wreck was observed in the common 100% coverage. No MB coverage obtained; no wreck is evident in the SSS coverage obtained within the AWOIS search radius. Although the SS coverage is missing from one line of the second pass, the wreck is clearly not evident in the SS record. Recommend to delete charted wreck PA.

COMPILE: Concur. Delete charted dangerous wreck PA, depth unknown. Update with present survey data.

1.12) AWOIS #13260 - OBSTRUCTION

**Primary Survey Feature is US 000023228 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 08.1" N, 073° 56' 27.6" W
Historical Depth: 5.79 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

F00434/96 -- OPR-C399-RU-97; OBSTR FOUND 40/32/07.94N 73/56/27.34W WITH A LEAST DEPTH OF 19FT(ENT. 05/26/05, SME)

H11601/06 -- OFFICE RECOMMENDS CHARTING AN OBSTRUCTION WITH A DEPTH OF 19 FEET IN LAT. 40/32/8.1N LONG. 73/56/27.6W (NAD83). (ENTERED 12/23/08, EAN)

Survey Summary

Survey Position: 40° 32' 08.1" N, 073° 56' 27.6" W
Least Depth: 5.70 m (= 18.70 ft = 3.117 fm = 3 fm 0.70 ft)
TPU (±1.96σ): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2006-295.00:00:00.000 (10/22/2006)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023228 00001(022600005ABC0001)
Charts Affected: 12402_1, 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023228 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 13260	0.05	000.0	Secondary (grouped)

Hydrographer Recommendations

Retain AWOIS #13260 as charted.

Cartographically-Rounded Depth (Affected Charts):

18ft (12402_1, 12350_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
SORDAT - 20061022
SORIND - US,US,graph,H-11601
VALSOU - 5.700 m
WATLEV - 3:always under water/submerged

Office Notes

AWOIS #13260, charted dangerous 19 Obstrn - SAR Note: Feature identified in 200% sss, no multibeam obtained over feature.

Compile: Concur. Retain AWOIS #13260, charted dangerous obstruction, least depth 19 foot in the charted position.

1.13) AWOIS #9725 - OBSTRUCTION

Primary Survey Feature is US 000023147 00001 / H11710_AWOIS_Features.000

Search Position: 40° 32' 30.0" N, 073° 50' 30.0" W
Historical Depth: [None]
Search Radius: 0
Search Technique: MB, S2
Technique Notes: SEARCH WITHIN THE CHARTED LIMITS OF THE FISH HAVEN

History Notes:

CL1582/67-- FROM CHIEF, NY FIELD OFFICE, USESSA, TO DIRECTOR, C, ESSA; DATED 11/13/67; COE ADVISES FISH HAVEN UNDER CONSTRUCTION. CONSISTS OF ROCK, RUBBLE, AND PRECAST CONCRETE STRUCTURES TO FORM AN ARTIFICIAL REEF APPROX. 2000 YARDS LONG AND 1000 YARDS WIDE. TOP OF REEF WILL BE MORE THAN 23 FEET BELOW THE PLANE OF MLW. PURPOSE OF PROJECT IS TO CREATE A SIMULATED UNEVEN BOTTOM WHICH WOULD BE CONDUCIVE TO GROWTH OF MARINE ORGANISMS AND THEREBY ATTRACT BOTTOM FEEDING FISH. PROPOSAL OF REEF BY BUREAU OF MARINE FISHERIES, CONSERVATION DEPT., STATE OF NEW YORK, DIVISION OF FISH GAME, OAKDALE, NEW YORK, DATED 11/24/64.

NM49/67-- NEW YORK HARBOR APPROACH - ROCKAWAY BEACH - FISH HAVEN - BOUYS ESTABLISHED. ORANGE AND WHITE BANDED SPAR BOUYS WITH WHITE REFLECTORS REP. ESTABLISHED: IN 38 FEET ABOUT 4,935 YARDS, 163 DEG. FROM SPIRE IN LAT. 40-34-34N, LONG. 73-50-55W; IN 37 FEET ABOUT 4,665 YARDS, 184 DEG. FROM SAME SPIRE. NOTE: BUOYS ARE PRIVATE AIDS. (ENT 4/16/96, SJV)

H10668/97-- OPR-C399-RU; 200% SIDE SCAN SONAR SEARCH REVEALED NUMEROUS SIGNIFICANT CONTACTS. DIVERS FOUND AREA AS DESCRIBED ABOVE, IE. PILES OF ROCK, RUBBLE, AND PRE-CAST CONCRETE STRUCTURES. SWMB DEVELOPMENTS RUN TO DETERMINE LDS. EVALUATOR RECOMMENDS CHARTING AS SURVEYED AND EXTENDING THE SOUTHERN BOUNDARY OF THE FISH HAVEN TO CORRESPOND WITH THE NUMEROUS CONTACTS DEVELOPED DURING THE SURVEY. (UP 12/22/04, SJV)

Survey Summary

Survey Position: 40° 32' 12.9" N, 073° 51' 07.9" W
Least Depth: 7.00 m (= 22.97 ft = 3.828 fm = 3 fm 4.97 ft)
TPU (±1.96σ): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2006-060.00:00:00.000 (03/01/2006)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023147 00001(022600005A6B0001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 0000023147 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 9725	534.78	189.6	Secondary (grouped)

Hydrographer Recommendations

Retain AWOIS #9725 as charted.

Cartographically-Rounded Depth (Affected Charts):

23ft (12350_1, 12326_1)

3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

7.0m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: CATOBS - 5:fish haven

EXPSOU - 2:shoaler than range of depth of the surrounding depth area

INFORM - Position approximate

QUASOU - 6:least depth known

SORDAT - 20060300

SORIND - US,US,graph,Chart 12350

VALSOU - 7.000 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: AWOIS #9725; Permitted feature, numerous SS contacts are located within the charted limits. No depths shoaler than the fish haven's authorized minimum depth of 23ft exist within the limits of the Fish Haven.

Compile: Concur. Retain AWOIS #9725, charted Obstruction (Fish Haven) as charted.

1.14) AWOIS #7470 - BLACK WARRIOR**Primary Survey Feature is US 000023106 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 46.2" N, 073° 53' 16.1" W
Historical Depth: [None]
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

195 LORAN-C RATES HAVE BEEN PROVIDED BY MR. RICHARD TARACKA, GREENWICH, CT. POLICE DEPT., TEL. NO. 203-622-8007; 9960-X 26951.9, 9960-Y 43755.2.(ENTERED MSM 6/89)

Survey Summary

Survey Position: 40° 32' 38.7" N, 073° 53' 16.0" W
Least Depth: 7.93 m (= 26.02 ft = 4.337 fm = 4 fm 2.02 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023106 00001(022600005A420001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023106 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 7470	233.67	179.1	Secondary (grouped)
H11710_AWOIS_Features.000	US 000023107 00001	233.67	179.1	Secondary (grouped)

Hydrographer Recommendations

Chart AWOIS #7470 Wreck at surveyed location.

Cartographically-Rounded Depth (Affected Charts):

26ft (12350_1, 12326_1)

4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

7.9m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
QUASOU - 6:least depth known
SORDAT - 20091109
SORIND - US,US,graph,H11710
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 7.931 m
WATLEV - 3:always under water/submerged

Office Notes

AWOIS #7470 is an uncharted Wreck (Black Warrior). SAR Note: Feature is verified real, evident in 200% sss and multibeam.

COMPILE: Concur. Add dangerous wreck, least depth 26 feet, in the present survey position. Update AWOIS #7470 Wreck - Black Warrior, information with new surveyed location.

Feature Images

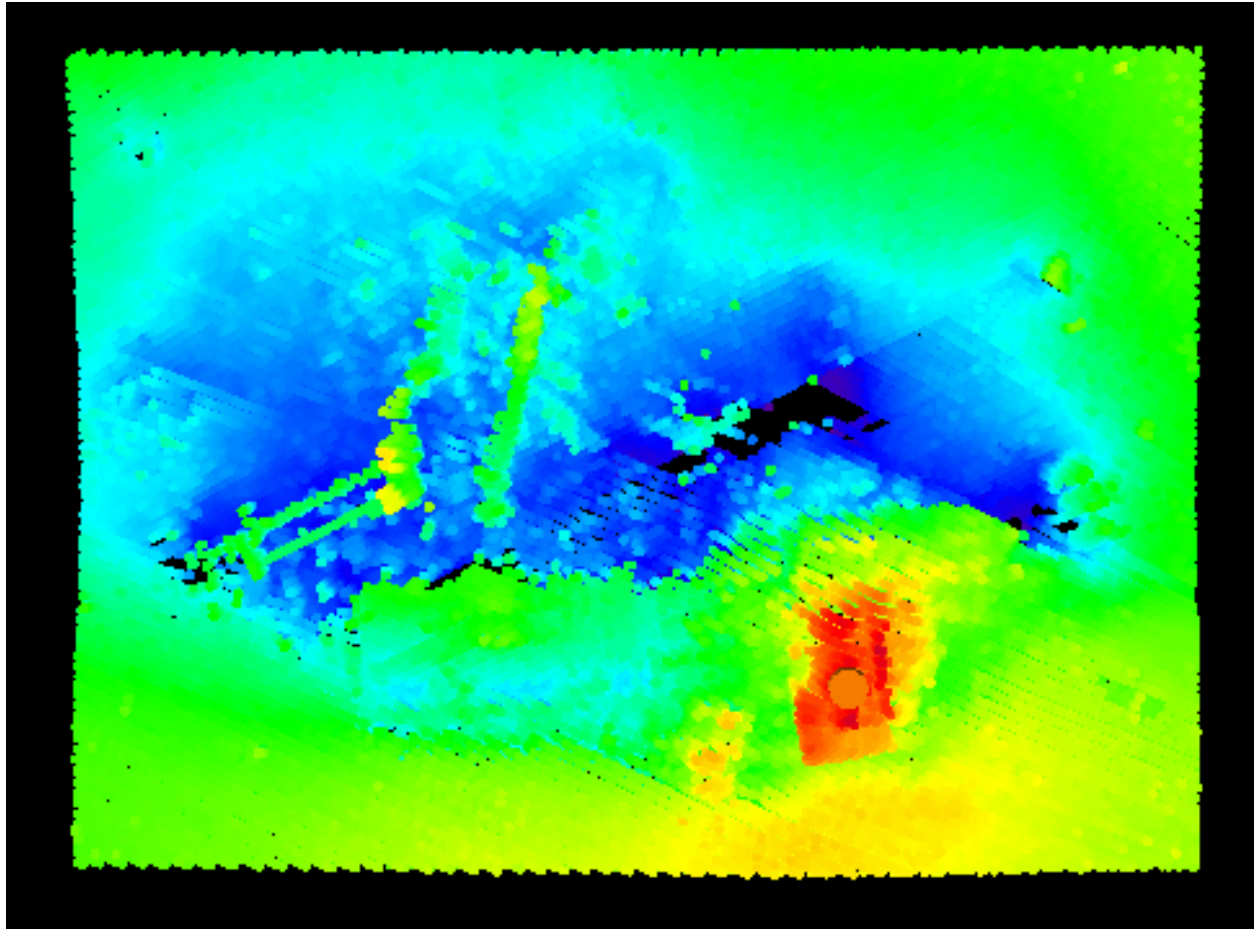


Figure 1.21.1

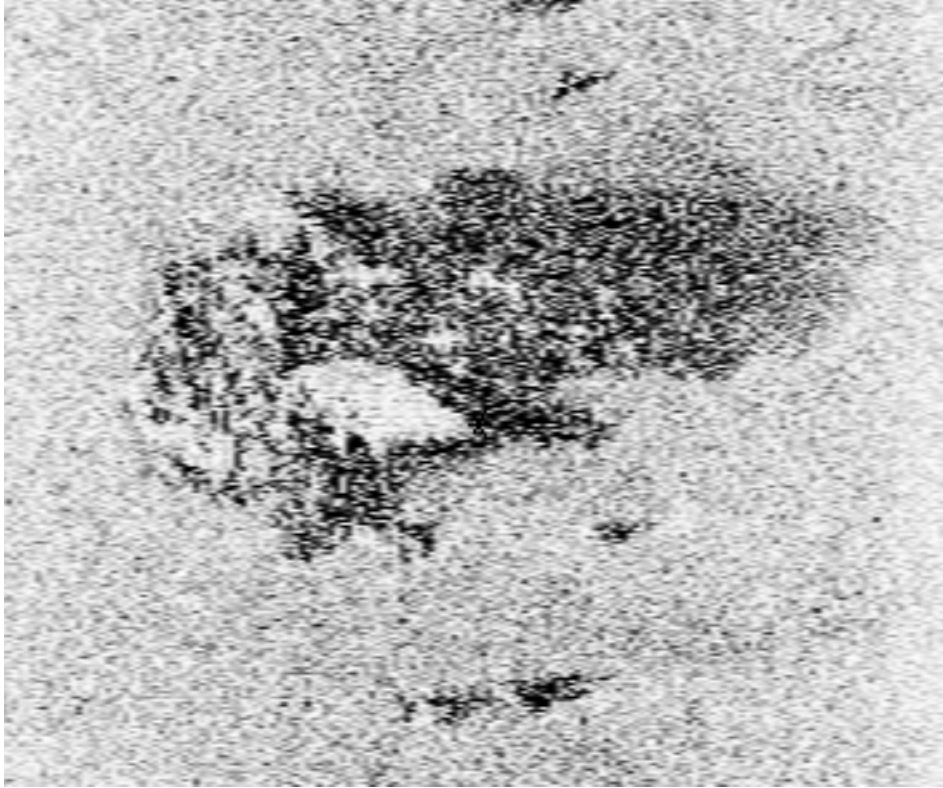


Figure 1.21.2

1.15) AWOIS #7782 - CHARLES E. DUNLAP**Primary Survey Feature is US 000023211 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 33' 06.1" N, 073° 50' 21.4" W
Historical Depth: [None]
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, CT. POLICE DEPARTMENT, TEL NO 203-622-8020; 9960-X 26929.0, 9960-Y 43755.1. (ENTERED MSM 6/90)

Survey Summary

Survey Position: 40° 33' 06.1" N, 073° 50' 21.4" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023211 00001(022600005AAB0001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023211 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 7782	0.00	000.0	Secondary (grouped)

Hydrographer Recommendations

Retain AWOIS #7782 as uncharted and update AWOIS database for #7782 as disproved.

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: INFORM - Charles E Dunlap
SORDAT - 20091109
SORIND - US,US,graph,H11710
Geo object 2: Wreck (WRECKS)

Office Notes

AWOIS #7782 is the uncharted remains of the wreck Charles E Dunlap - SAR Note: Investigated by field with 200% sss, no wreck observed.

Compile: Concur. No indication of wreck found in the area. AWOIS #7782, uncharted Wreck, Charles E Dunlap, is considered disproved. Update AWOIS listing based on present survey findings. No changes to charting recommended.

1.16) AWOIS #7802 - OBSTRUCTION

Charting Action is Not Addressed

**Primary Survey Feature is US 000023187 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 43.0" N, 073° 50' 50.1" W
Historical Depth: [None]
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

[None]

Survey Summary

Survey Position: 40° 32' 43.0" N, 073° 50' 50.1" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023187 00001(022600005A930001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023187 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 7802	0.00	000.0	Secondary (grouped)
H11710_AWOIS_Features.000	US 000023176 00001	50.97	171.2	Secondary (grouped)

Hydrographer Recommendations

Update AWOIS #7802 as a duplicate of AWOIS #9725

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: SORDAT - 20091109
SORIND - US,US,graph,H11710

Office Notes

AWOIS #7802 - duplicate of AWOIS 9725

AWOIS #7802, no data or history, appears to be a duplicate of AWOIS #9725, charted Fish Haven.

Compile: Concur with conditions. Feature is just north of AWOIS 9725 (fish haven), and is not charted. Nothing of significance found in area immediately north of charted Obstruction (Fish Haven) during present survey operations. No changes to charting recommended

1.17) AWOIS #7713 - PRINCESS ANN

Charting Action is Not Addressed

**Primary Survey Feature is US 000023220 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 49.0" N, 073° 55' 21.3" W
Historical Depth: [None]
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, CT. POLICE DEPARTMENT, TEL. NO. 203-622-8020; IDENTIFIED AS PRINCESS ANN; 9960-X 26968.3N, 9960-Y 43758.0; LAT. 40-32-48.67N, LONG. 73-55-22.82W (COMPUTED FROM LORAN RATES). (ENTERED 5/90 MSM)

Survey Summary

Survey Position: 40° 32' 49.0" N, 073° 55' 21.3" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023220 00001(022600005AB40001)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023220 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 7713	0.00	000.0	Secondary (grouped)

Hydrographer Recommendations

Retain AWOIS #7713 as an uncharted wreck, update database of AWOIS as disproved.

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: SORDAT - 20091109
SORIND - US,US,graph,H11710
Geo object 2: Wreck (WRECKS)
Attributes: OBJNAM - Princess Ann

Office Notes

AWOIS #7713 is the uncharted wreck Princess Ann - investigated with 200% sss, no feature observed.

Compile: Concur. AWOIS #7713 is presently uncharted. No indication during present survey.

Consider item disproven. Update AWOIS database. No changes to charting are recommended.

1.18) AWOIS #7719 - AJACE

Primary Survey Feature is US 000023221 00001 / H11710_AWOIS_Features.000

Search Position: 40° 32' 34.3" N, 073° 53' 57.1" W
Historical Depth: [None]
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, CT. POLICE DEPARTMENT, TEL. NO. 203-622-8020; IDENTIFIED AS AJACE; 9960-X 26956.6, 9960-Y 43754.1; LAT. 40-32-33.93N, LONG. 073-53-58.56W (COMPUTED FROM LORAN RATES). (ENTERED 5/90 MSM)

Survey Summary

Survey Position: 40° 32' 34.3" N, 073° 53' 57.1" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023221 00001(022600005AB50001)
Charts Affected: 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023221 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 7719	0.00	000.0	Secondary (grouped)

Hydrographer Recommendations

Retain AWOIS #7719 as an uncharted wreck, update database of AWOIS as disproved.

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: SORDAT - 20091109
SORIND - US,US,graph,H11710
Geo object 2: Wreck (WRECKS)
Attributes: OBJNAM - Ajace

Office Notes

AWOIS #7719 is the uncharted Wreck Ajace - SAR Note: investigated with 200% SSS, no feature was observed.

COMPILE: Concur. AWOIS #7719 is an uncharted wreck. No indication of the feature was found during present survey operations. Consider item disproved. Update AWOIS database. No changes to charting recommended.

1.19) AWOIS #7720 - CORNELIA SOULE

**Primary Survey Feature is US 000023219 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 33' 07.7" N, 073° 53' 30.5" W
Historical Depth: [None]
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, CT. POLICE DEPARTMENT, TEL. NO. 203-622-8020; IDENTIFIED AS CORNELIUS SOALE; 9960-X 26954.7, 9960-Y 43759.1; LAT. 40-33-7.28N, LONG. 73-53-31.97W (COMPUTED BY LORAN RATES). (ENTERED 5/90 MSM)

Survey Summary

Survey Position: 40° 33' 00.4" N, 073° 53' 29.9" W
Least Depth: 6.18 m (= 20.28 ft = 3.380 fm = 3 fm 2.28 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023219 00001(022600005AB30001)
Charts Affected: 12350_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023219 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 7720	226.06	176.8	Secondary (grouped)
H11710_AWOIS_Features.000	US 000023223 00001	226.06	176.8	Secondary (grouped)

Hydrographer Recommendations

Delete Wreck at charted location of AWOIS #7720 and chart new Wreck at updated location.

Cartographically-Rounded Depth (Affected Charts):

20ft (12350_1, 12326_1)

3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

6.2m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
QUASOU - 6:least depth known
SORDAT - 20091109
SORIND - US,US,graph,H11710
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 6.182 m
WATLEV - 3:always under water/submerged

Office Notes

AWOIS #7720 - SAR Note: Field investigation of the charted location for AWOIS #7720 found no wreck present, however 226 m south of the charted location of AWOIS #7720 the field identified an uncharted Wreck. Wreck is real and evident in both 200% sss and multibeam.

COMPILE: Concur. No feature charted at AWOIS position. No change in charting there. Add dangerous wreck, least depth 20 ft in the present survey position. Update the AWOIS database to reflect present survey findings.

Feature Images

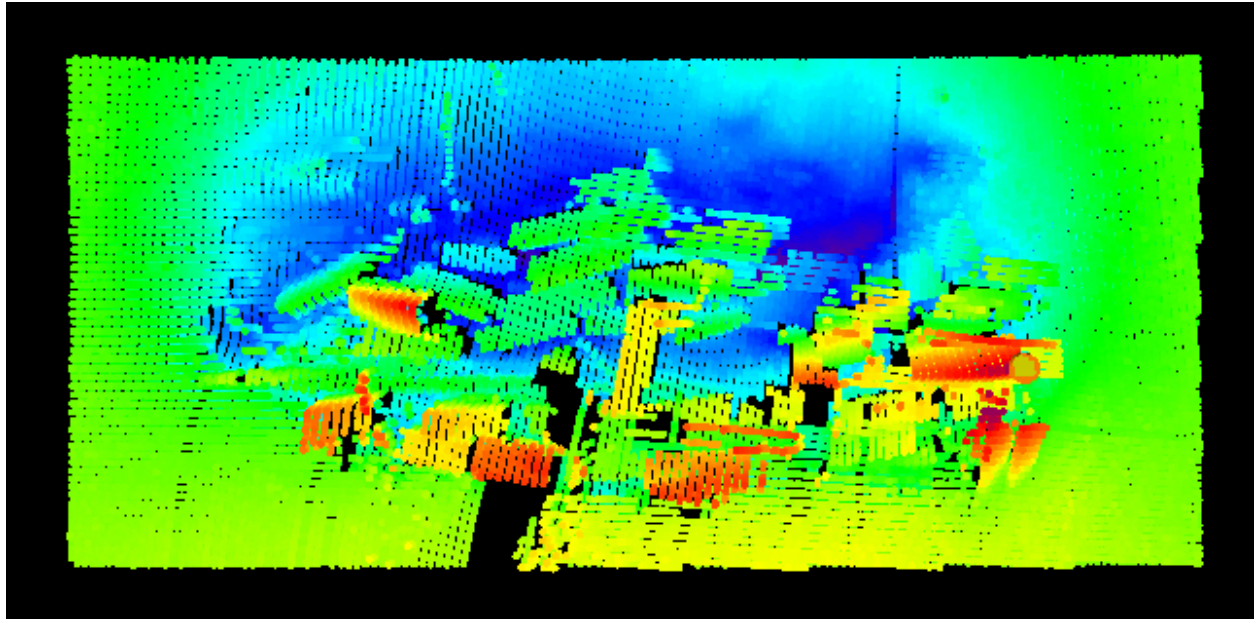


Figure 1.27.1

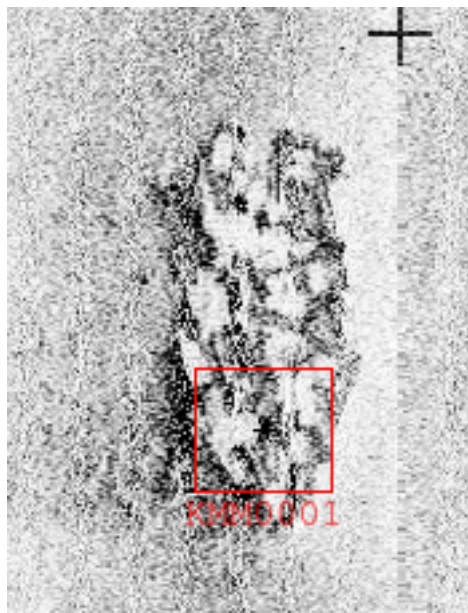


Figure 1.27.2

1.20) AWOIS #14516 - OBSTRUCTION

**Primary Survey Feature is US 000023226 00001 /
H11710_AWOIS_Features.000**

Search Position: 40° 32' 01.4" N, 073° 56' 27.8" W
Historical Depth: [None]
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

H11601/2006;NOS-- Survey located a dangerous obstruction with a least depth of 5.91 m (19.4 ft) at Lat. 40/32/1.41N Long. 73/56/27.8W (NAD83). (Entered 3/17/09, EAN)

Survey Summary

Survey Position: 40° 32' 01.4" N, 073° 56' 27.8" W
Least Depth: 5.70 m (= 18.70 ft = 3.117 fm = 3 fm 0.70 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2006-295.00:00:00.000 (10/22/2006)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023226 00001(022600005ABA0001)
Charts Affected: 12402_1, 12350_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023226 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 14516	0.28	180.0	Secondary (grouped)

Hydrographer Recommendations

Retain AWOIS #14516 as charted.

Cartographically-Rounded Depth (Affected Charts):

18ft (12402_1, 12350_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
SORDAT - 20061022
SORIND - US,US,graph,H-11601
VALSOU - 5.700 m
WATLEV - 3:always under water/submerged

Office Notes

AWOIS #14516, charted dangerous 19 Obstrn - SAR Note: Feature was not fully investigated by field, covered by 100% sss only

Compile: Concur. Retain AWOIS #14516, charted dangerous obstruction, least depth 19 foot in the charted position.

1.21) AWOIS #14395 - Rock

Primary Survey Feature is US 000023135 00001 / H11710_AWOIS_Features.000

Search Position: 40° 31' 44.6" N, 073° 50' 27.1" W
Historical Depth: 10.97 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

H11916 - OPR-B310-TJ-08, Small obstruction located during survey, feature rises approx 1m. above seafloor. Obstrn with danger circle and least depth of 36ft was added to chart @ 40° 31' 44.58" N / 073° 50' 27.06" W. (12/31/08, PTT).

Survey Summary

Survey Position: 40° 31' 44.5" N, 073° 50' 26.8" W
Least Depth: 11.75 m (= 38.54 ft = 6.423 fm = 6 fm 2.54 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2009-313.00:00:00.000 (11/09/2009)
Dataset: H11710_AWOIS_Features.000
FOID: US 000023135 00001(022600005A5F0001)
Charts Affected: 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H11710_AWOIS_Features.000	US 000023135 00001	0.00	000.0	Primary
NewYorkHarborAndApproachesAWOIS	AWOIS # 14395	6.63	119.2	Secondary (grouped)

Hydrographer Recommendations

Update AWOIS #14395 Obstrn with surveyed depth.

Cartographically-Rounded Depth (Affected Charts):

38ft (12326_1)

6 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

11.7m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)

Attributes: QUASOU - 6:least depth known

SORDAT - 20091109

SORIND - US,US,graph,H11710

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

VALSOU - 11.747 m

Office Notes

AWOIS #14395 is a charted dangerous 36 Rk. SAR Note: Feature is verified real, evident in 200% sss and multibeam

Compile: Concur with conditions. Delete AWOIS #14395, a charted 36 foot sounding on a rock. The present survey found a 38.5 foot sounding on this feature and surrounding depths are 34 - 40 feet. Based on present survey depths, this is no longer a threat to navigation. Consider the rock disproved. Update the area with present survey soundings.

Feature Images

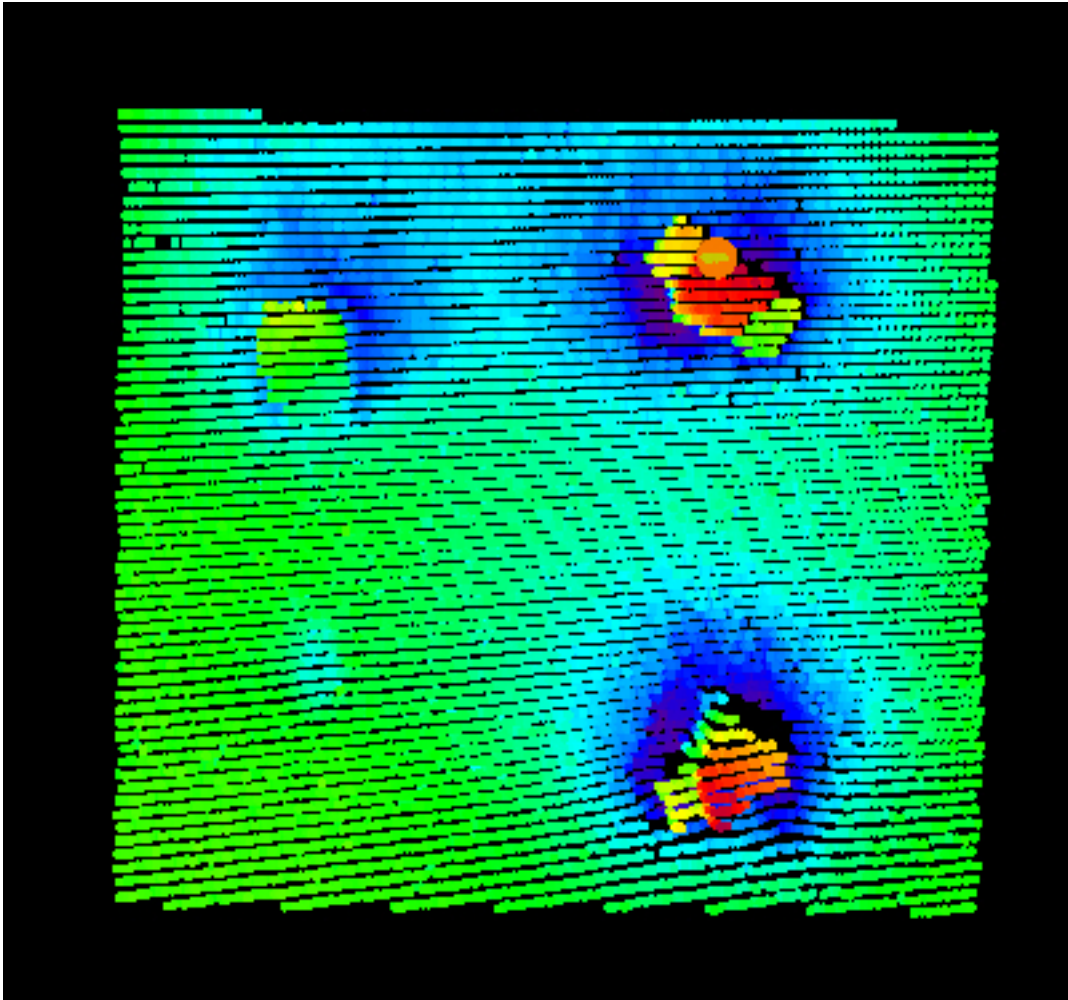


Figure 1.30.1

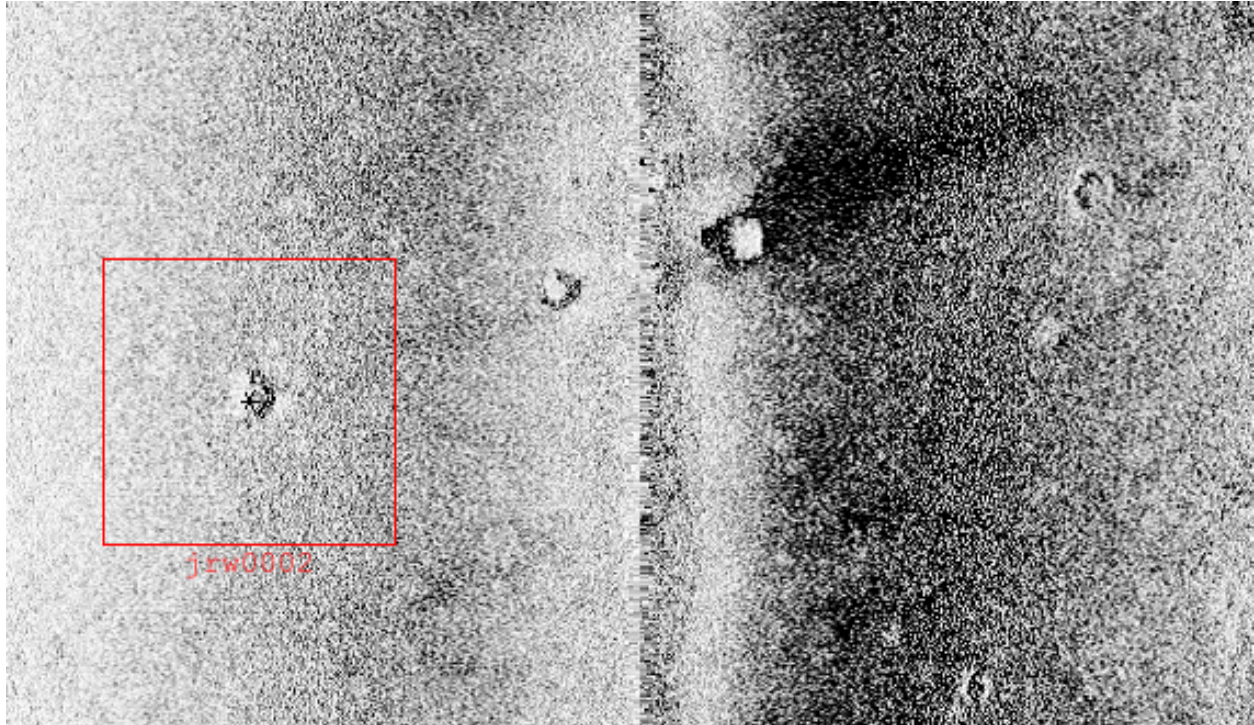


Figure 1.30.2

APPROVAL

PAGE H11710

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NGDC for archive

- H11710_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- H11710_GeoImage.pdf

The survey evaluation and verification has been conducted according current OCS Specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: _____

LT Abigail Higgins, NOAA
Chief, Atlantic Hydrographic Branch