	NOAA FORM 76-35A	
NATIC	U.S. DEPARTMENT OF COMMERCE DNAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE	
	DESCRIPTIVE REPORT	
Type of Survey	Hydrographic Multibeam	
Project No.	OPR-C319-KR-13	
Registry No.	H12610	
	LOCALITY	
State	New Jersey	
General Locality	Southern Approaches to New York and Vicinity	
Sub-locality	5 NM East of Long Branch	
	2014	
	CHIEF OF PARTY Tara Levy	
DATE:	LIBRARY & ARCHIVES	

H12610

NOAA FORM 77-28	U.S. DEPARTMENT OF COMMERCE	REGISTRY No:		
(11-72)	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION			
HYDROGRA	APHIC TITLE SHEET			
INSTRUCTIONS: The Hydrographic She the sheet is forwarded to the Office	eet should be accompanied by this form, filled in as	completely as possible when		
State:	New Jersey			
General Locality:	Southern Approaches to New Yor	k and Vicinity		
Locality:	5 NM East of Long Branch			
Scale:	1: 20000			
Date of Survey:	09/26/213 - 11/18/2013			
Instructions Dated:	September, 2013			
Project Number:	OPR-C319-KR-13			
Vessels:	R/V Shearwater			
Chiefs of Party:	Tara Levy			
Surveyed By:	C&C Technologies Personnel			
Soundings by echsounder:	Simrad EM3002D Multibeam Echo Sounder			
Verification By:	Atlantic Hydrographic Branch			
Soundings in	MetersXat MLLWFathomsat MLLW	X		
Remarks:				

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/.

Descriptive Report to Accompany Survey H12610

Project: OPR-C319-KR-13

Locality: Southern Approaches to New York and Vicinity, NJ

Sublocality: 5 NM East of Long Branch

Scale: 1:20000

September 2013 – November 2013

R/V Shearwater

Chief of Party: Tara Levy

A. Area Surveyed

The survey area is 5 NM East of Long Branch.

A.1. Survey Limits

Data was acquired within the following survey limits:

Northeast Limit	Southwest Limit
40.376 N	40.254 N
73.905 W	73.825 W
73.905 W	73.825 W

Table 1: Survey Limits

Survey limits were acquired in accordance with the requirements in the Project Instructions and the HSSD.

A.2. Survey Purpose

The purpose of this survey is to provide a contemporary survey to update National Ocean Service (NOS) nautical chart products. It covers 24.72 square nautical miles of Critical and Priority 2, 3, and 4 areas as identified in the 2012 NOAA Hydrographic Survey Priorities (NHSP) document. This project is also in response to different user group need following Hurricane Sandy landfall.

A.3. Survey Quality

The entire survey is adequate to supersede previous data.







A.4. Survey Coverage



Figure 1. H12610 Survey Coverage

Survey Coverage was in accordance with the requirements in the Project Instructions and HSSD; Complete or object detection MB coverage with backscatter was acquired in the entire area depending on the depth. It is recognized that the western boundary of the data does not fully cover the survey bounds; this will be addressed in H12609.

Mainlines were oriented north-south and consisted of 107 shotpoints with 125 meters between shotpoints; each mainline was therefore approximately 13.375 km in length. In order to mitigate sound speed issues, the majority of lines were divided in half and run roughly from shotpoints 0 – 50 and a separate line run from shotpoints 50 - 107. These were labeled 'LineName-1' and 'LineName-2'.

In addition, separate line plans were created in AutoCad where fill-ins were necessary to obtain 100% multibeam coverage. A 3100 series line plan was generated between mainlines 3001 and 3008; this line series has a line spacing of 100 m and was created as a split-line file from the





original mainlines in the area. A 3200 series line plan was generated between mainlines 3008 and 3072 of H12610; this series has a line spacing of 110 m.

A.5. Survey Statistics

The following table lists the mainscheme and crossline acquisition mileage for this survey:

	Hull ID	641188	Total
	SBES Mainscheme	0	0
	MBES Mainscheme	493.71	493.71
	SSS Mainscheme	0	0
	SBES/MBES Combo	0	0
	Mainscheme		
I NM	SBES/SSS Combo	0	0
	Mainscheme		
	MBES/SSS Combo	0	0
	Mainscheme		
	SBES/MBES Combo	0	0
	Crosslines		
	Lidar Crosslines	0	0
Number	of Bottom Samples	14	14
Number	of DPs	33	33
Number of Items Investigated		0	0
by Dive	OPs		
Total Nu	umber of SNM	24.72	24.72

Table 2: Hydrographic Survey Statistics

The following table lists the specific dates of data acquisition for this survey:

Survey Dates
09/26/2013
09/27/2013
10/01/2013
10/16/2013
10/18/2013
10/19/2013
10/22/2013
11/11/2013
11/12/2013
11/13/2013
11/14/2013
11/16/2013
11/17/2013
11/18/2013

Table 3: Dates of Hydrography





A.6. Shoreline

No shoreline exists within the limits of H12610.

A.7. Bottom Samples

Fourteen (14) bottom samples were collected within the limits of H12610.

B. Data Acquisition and Processing

B.1. Equipment and Vessels

Refer to the OPR-C319-KR-13 Data Acquisition and Processing Report (DAPR) for additional information regarding survey systems as well as operational, processing and quality control procedures. Additional and supplemental information is included in this descriptive report.

B.1.1. Vessels

The following vessels were used for data acquisition during this survey:

Hull ID	641188
LOA	33.528 meters
Draft	2.1336 meters

Table 4: Vessels Used

B.1.2. Equipment

The following major systems were used for data acquisition during this survey.:

Model	Туре
EM3002	MBES
4200 P	SSS
F180	Vessel Attitude System
3050	Positioning System
600R-BCR-C-T	Sound Speed System
SBE 19 and SBE 19 Plus	Sound Speed System
	Model EM3002 4200 P F180 3050 600R-BCR-C-T SBE 19 and SBE 19 Plus

Table 5: Major Systems Used





B.2. Quality Control

B.2.1. Crosslines

Crosslines were run perpendicular to the mainscheme lines so that quality control statistics could be performed on the data after completion of mainscheme survey lines. The total crossline miles were 46.88 nm and the total mainline miles, fill in lines not included, were 493.71 nm; the crosslines comprise 9.5 percent of the total line miles. During post-processing, crosslines were filtered 60° from nadir on the port and starboard sides in CARIS, mainly due to motion/refraction artifacts, except for over a shoal 55-foot feature in the northern portion of the survey area; the crossline coverage was necessary to ensonify the feature.

Each mainline was compared to all crosslines for which there was overlapping data using C & C's proprietary Hydromap software. The graphs generated from the comparison show the mean difference, RMS difference and confidence interval for each beam. Refer to the DAPR for additional information and Separates II Digital Data for sample graphical documentation.

The surface difference tool in CARIS HIPS was used to evaluate crossline and mainscheme line agreement and statistical information about the difference surface was generated using the compute statistics tool. The statistical output from the CARIS compute statistics tool is shown in Figure 2. The majority of the depth difference values between mainlines and crosslines are within -0.2 and 0.3 m. The mainline and crossline depth difference values do not differ by more than the maximum allowable TVU (total vertical uncertainty) for the depth range of the survey (14.36 m - 31.66 m), which ranges from ± 0.53 to ± 0.67 m. Mainline and crossline depth difference values are greater than 0.5 meters in 2 locations. One area is at the intersection of H12610-TIE-308-1 and mainlines 3005-1 and 3004-1. The second area is at the intersection of H12610-TIE-312-1 and mainlines 3036-1, 3038-3 and 3039-2; this area contains the highest depth difference value of 0.65 m. These higher depth difference values appear to be at least in part the result of refraction.

Statistical crossline information was also generated by comparing each of the crosslines to the depth layer of the 2-m BASE surface of the mainscheme survey lines using the CARIS QC report utility. In general, greater than 99% of crossline soundings were considered to meet IHO Order 1a standards. Crossline comparisons generated with the CARIS QC report utility as well as the difference BASE surface are shown in the Separates II Digital Data\Checkpoint Summary & Crossline Comparisons folder.

Descriptive Report to Accompany Survey H12610 OPR-C319-KR-13





Figure 2. Crossline comparison statistical information and histogram output from CARIS compute statistics tool.

B.2.2. Uncertainty

C&C Technologies

CARIS HIPS was used to compute the Total Propagated Uncertainty (TPU) for each sounding. The uncertainty surface of H12610_MB_2m_MLLW has values that range from 0.37 to 0.71 m. Higher uncertainty exists mainly in the deeper portions of the survey area where outer beams overlap. The highest uncertainty exists on the edges of the deepest lines collected just outside the bounds of the survey area, for which there is no overlap. Some of these values, particularly on lines 3070-1 and 3072-1, exceed the maximum allowable TVU (total vertical uncertainty) for water depths of 29 - 32 m, which ranges from $\pm 0.64 - \pm 0.67$ m.

Uncertainty of all components of the sounding measurement are included in the CARIS vessel file and detailed in the DAPR.

The following survey specific parameters were used for this survey

Measured	Zoning
0.024 m	0.048 m

Table 6: Survey specific tide TPU values

Hull ID	Measured - CTD	Measured - MVP	Surface
641188	2.00 m/s	n/a	0.8 m/s

Table 7: Survey specific sound speed TPU values





B.2.3. Junctions

Registry Number	Scale	Year	Field Unit	Relative Location
H12608	1:10000	2013	C&C Technologies	Ν
H12609	1:20000	2013	C&C Technologies	W

Table 8. Junctioning Surveys

H12608

The areas of overlap between sheets were evaluated using the CARIS Difference Tool to ensure general agreement of depths. Junction analyses were conducted using 1 meter BASE surfaces of all the Sheets. If necessary, data was further reviewed in Subset Editor.

The northern margin of H12610 borders the southeast margin of H12608 (Figure 3). Figure 4 shows statistical information for the junction between H12610 and H12608 generated with the CARIS Compute Statistics tool. The data majority of depth difference values between the two sheets are within ± 0.3 meters. However, several areas of large differences are evident. A large difference value of 0.74 m is located between 1152-1 of H12608 and 3027-1 and 3028-1 of H12610. There appears to be a depression feature evident in both lines of H12610 that is not present in the line of H12608. Because this feature could not be definitively disproven, it was not removed from the data. A large difference of -0.82 m is located at the intersection of 1184-1 and 1373-1 of H12608 and 3055-2 of H12610, where there is a feature that is slightly offset on the lines. Two other areas of large difference are located between 1195-1 of H12608 and 3063-1 of H12610 (difference of -0.91 m) and 1195-1 and 1196-1 of H12608 and 3064-1 and 3065-1 of H12610 (difference of -0.82 m). It is not entirely clear what is causing these large differences, but it appears at least in part due to motion artifacts. Other areas with higher concentration of larger differences that appear to be due to motion artifacts occur in the eastern portion of the junction, particularly between lines 1193 - 1197 of H12608 and 3063 - 3066 of H12610. Although there are some larger differences, the depths between H12608 and H12610 generally show good agreement with over 98% of depth difference values between ± 0.3 meters.







Figure 3. Junctions between H12610, H12608 and H12609.



Descriptive Report to Accompany Survey H12610 OPR-C319-KR-13





Figure 4 Statistical information and histogram output from CARIS Compute Statistics tool for the difference surface generated between H12610 and H12608.

<u>H12609</u>

The western margin of H12610 borders the eastern margin of H12609 (Figure 3). Figure 5 shows statistical information for the junction between H12610 and H12609 generated with the CARIS Compute Statistics tool. The depth difference values between the two sheets show good agreement with 99% of depth difference values between ± 0.3 meters.



Figure 5. Statistical information and histogram output from CARIS Compute Statistics tool for the difference surface generated between H12610 and H12609.





B.2.4. Sonar QC Checks

An Odom Echotrac MK III single beam echosounder was continuously operated and monitored during the survey as an independent check on the multibeam bottom-detect.

B.2.5. Equipment Effectiveness

The angle of the multibeam sonars were occasionally modified in order to moderate the effects of factors such as increased sea state; these changes are documented in the acquisition logs. During post-processing, crosslines were filtered 60° from nadir on the port and starboard sides mainly due to motion artifacts, except for one area over a shoal 55-foot feature in the northern portion of the survey area; the tieline coverage was necessary to ensonify the feature.

B.2.6. Factors Affecting Soundings

Motion artifacts mainly associated with rough weather or unfavorable wind direction are evident in some of the data, particularly for data collected between September 26 and October 1, 2013 and between November 13 and 18, 2013. There is also evidence in some of the data of sound speed errors affecting the outer beams.

B.2.7. Sound Speed Methods

Sea Bird Electronics SBE19 CTDs were used for speed of sound measurements. Casts were conducted at least twice daily and more often as needed. The multibeam data was corrected for the water column sound speed in real-time using the SIS control software. An Endeco YSI sonde was used to determine the sound speed at the transducer. The sound speed data and confidence checks are located in Separates II Digital Data\Sound Speed Data Summary.

Mainlines were oriented north-south and were approximately a total of 13.375 km in length. The majority of lines were split in half in order to mitigate sound speed issues.

B.2.8. Coverage Equipment and Methods

Main survey lines were oriented north to south throughout the survey area. MBES data were acquired with a dual head configuration consisting of Kongsberg EM3002 echosounders. Complete MBES coverage with backscatter was acquired in the entire survey area; object detection coverage was acquired in areas less than 20 meters depth. Coverage was acquired in accordance with the requirements stated in the project instructions for this survey.

B.2.9. Density

According to section 5.2.2 of the HSSD (2013) for Object Detection and Complete Multibeam Coverage, at least 95% of all nodes on the surface will be populated with at least 5 soundings. The Compute Statistics tool in CARIS HIPS was used to generate statistics about the Density





child layer of the H12610_MB_2m_MLLW_Final and H12610_MB_50cm_MLLW_Final BASE surfaces.

A bin size of 1 was used and the data exported in ASCII format to determine the number of surface nodes that contain 4 or less soundings by adding the number of soundings in the first four bins. 3674 nodes of the H12610_MB_2m_MLLW_Final BASE surface are populated by 4 or less soundings. The total count of nodes within the surface is 20,064,276. 27,097 nodes of the H12610_MB_50cm_MLLW_Final BASE surface are populated by 4 or less soundings and the total count of nodes within the surface is 17,948,718. Therefore, greater than 99% of nodes contain at least 5 soundings for Object Detection and Complete MB coverage. Refer to Figures 6 and 7 for statistical information.



Figure 6. Statistical information about the density child layer of the H2610_MB_2m_MLLW BASE surface, generated from CARIS Compute Statistics tool.



Figure 7. Statistical information about the density child layer of the H2610_MB_50cm_MLLW BASE surface, generated from CARIS Compute Statistics tool.





B.3. Echo Sounding Corrections

B.3.1. Corrections to Echo Soundings

All corrections to echo sounding (instrument corrections, static and dynamic draft, speed of sound, and attitude corrections) follow the procedures outlined in the DAPR.

B.3.2. Calibrations

Prior to initiating survey operations, a patch test was performed to determine correctors for pitch, roll, and heading. A squat and settlement test was also performed. Refer to the Data Acquisition and Processing Report for additional information.

B.4. Backscatter

Backscatter was logged within each raw EM3002 file. This data was imported during CARIS conversion and reviewed. A backscatter mosaic was generated using C & C Technologies' proprietary Hydromap software and used as an additional QC tool. The tif image has been included in Data\Processed\Fieldsheets.

B.5. Data Processing

B.5.1. Software updates

Software updates are detailed in the DAPR. No further software updates occurred after the submission of the DAPR.

The following Feature Object Catalog was used: NOAA Extended Attribute Files V5_3_2.

B.5.2. Surfaces

The following CARIS surfaces were submitted.

Surface Name	Surface Type	Resolution	Depth Range (m)	Purpose
H12610_MB_2m_MLLW	Uncertainty	2 m	14.39 m – 31.66 m	Complete MBES
H12610_MB_2m_MLLW_Final	Uncertainty	2 m	20.00 m – 31.66 m	Complete MBES
H12610_MB_50cm_MLLW	Uncertainty	50 cm	14.32 m – 31.72 m	Objection Detection MBES
H12610_MB_50cm_MLLW_Final	Uncertainty	50 cm	14.32 – 20 m	Objection Detection MBES
H12610_MB_Crosslines_2m_MLLW	Uncertainty	2 m	14.39 m – 31.16 m	QC
H12610_MB_Mainlines_2m_MLLW	Uncertainty	2 m	14.82 m – 31.66 m	QC

 Table 9: CARIS surfaces





After initial data cleaning, the surfaces were reviewed a second time for fliers using the standard deviation layer. Higher standard deviation is generally associated with bathymetric features and/or areas of bathymetric change. However, higher standard deviation is also evident at the intersection of outer beams that contain motion and/or refraction artifacts. The maximum standard deviation of the H12610_MB_2m_MLLW BASE surface is 0.74 m, which corresponds to a feature on mainline 3063-1 (40.366N, 73.835W). Additional features that have high standard deviation of .70 cm correspond to features on lines 3019-1 and 3018-1 (40.365N, 73.888W), and lines 3035-1 and 3236-1 (40.347N, 73.870W).

C. Vertical and Horizontal Control

C.1. Vertical Control

The vertical datum for this survey is Mean lower low water (MLLW).

Standard Vertical Control Methods Used:

Discrete Zoning

The following National Water Level Observation Network (NWLON) stations served as datum control of this survey.

Station Name	Station ID
Sandy Hook	8531680

Table 10. Tide Stations

File Name	Status
8531680.tid	Verified Observed

 Table 11. Water Level Files (.tid)

File Name	Status
C319KR2013CORP.zdf	Final

Table 12: Tide Correctors (.zdf)

Preliminary zoning is accepted as the final zoning for project OPR-C319-KR-13 as outlined in the Tides and Water Levels Statement of Work section 1.5.1.

C.2. Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD83).





D. Results and Recommendations

D.1. Chart Comparison

D.1.1. Raster Charts

The following are the largest scale raster charts, which cover the survey area:

Chart	Scale	Edition	Edition Date	LNM Date	NM Date	
12326	80000	52	06/2013	04/15/2014	04/26/2014	

Table 13. Largest Scale Raster Charts

<u>12326</u>

No local notices to mariners were issued within the survey area subsequent to the date of the Hydrographic Survey Project Instructions (09/26/2013) and before the end of the survey (11/18/2013).

Surveyed water depths range from 14.39 to 31.66 feet. A shoal biased selected sounding layer for the H12610_MB_2m_MLLW BASE surface was generated in CARIS with a single-defined radius of 125 m (distance on the ground). Surveyed soundings generally agree with charted depths within 1 - 2 feet. However, more significant differences were observed, mainly in the northern portion of the survey area. Surveyed soundings are up to 16 feet shallower than the nearest charted depths. Soundings found to be shallower than the danger zone (66 feet) were submitted as Dangers to Navigation and were subsequently added to the chart (Blue circles in Figure 8). In the northeast there is also a shoal feature with a charted depth of 55 feet; this feature was observed within the survey data in the charted location with a depth that matches the charted depth.

The charted 60 foot contour extends mainly into the upper western portion of the survey area, although there are also three isolated contours within the survey area with charted depths of less than 60 feet. A user defined color range map was used with 0 - 18.288 meter depths in blue and 18.288 - 35 meter depths in green; 18.288 meters represents 60 feet (Figure 9). It is evident that surveyed soundings that are 60 feet or less are constrained within the charted 60-foot and isolated contours.

The charted 90-foot contour extends north-south within the eastern portion of the survey area. A user defined color range map was used with 0 - 27.432 meter depths in blue and 27.432 - 35 meter depths in green; 27.432 meters represents 90 feet (Figure 10). In several areas it is evident that there are surveyed soundings 90 feet or greater that extend well west of the currently charted contour.









Figure 9. Surveyed soundings that are 60 feet or less are constrained within the charted 60 foot contours. Depths of 0 – 18.288 meters are in blue and 18.288 – 35 meters are in green; 18.288 meters represents 60 feet.







Figure 10. In several areas it is evident that surveyed soundings 90 feet or greater extend west of the currently charted contour. 0 – 27.432 meter depths are in blue and 27.432 – 35 meter depths are in green; 27.432 meters represents 90 feet.





D.1.2. Electronic Navigational Charts

ENC Name	Scale	Edition	Update Application Date	Issue Date	Preliminary
US4NY1AM	80000	27	9/19/2013	20140318	No
		10			

Table 14. Largest Scale ENCs

US4NY1AM

US4NY1AM depths generally match those of RNC 12326 within 1 foot and the comparisons for the RNC are valid for the ENC.

D.1.3. AWOIS Items

Three (3) AWOIS items exist within the bounds of this survey. Two (1550 and 6310) are labeled as wrecks and assigned for full investigation with radii of 200 meters and one (8096) is a pair of steam locomotives and assigned for information only. Full multibeam coverage with backscatter was acquired over all AWOIS items. There is evidence of a feature with some relief within the southern portion of the AWOIS 6310 radius though it is unclear whether it is the wreck. Debris-like features are evident within and just outside the southern margin of the radius of AWOIS 1550, but there is no evidence of a wreck within the AWOIS item. There is a contact with a least depth of 71.775 feet (21.877 m; Dp TPU = 0.381 m and Hz TPU = 0.221 m) at the location of AWOIS 8096 from the PRF file, near the location of the OBSTRN in the CSF file; the backscatter indicates that there may be two features at this location. Refer to the Final Feature File for additional information.

D.1.4. Charted Features

There is one currently charted obstruction and two currently charted wrecks within the survey area that are AWOIS items; refer to D.1.3 and the Final Feature File for additional information. In the northern portion of the survey area there is a note: 'OBSTRNS (see note N)'. Note N refers to subsurface hydroacoustic arrays, which is also detailed in the CSF file. No features representative of the description of the hydroacoustic arrays were observed within the survey data. Refer to the Final Feature File for additional information.

D.1.5. Uncharted Features

There are several uncharted features observed within the survey data that did not warrant DtoN submission but were added to the Final Feature File with additional information. In addition, the northern portion of the survey area was delineated into several regions based on the bathymetry observed. The large blue and green regions appear to be part of or remnants of spoil areas whereas the purple, pink and yellow areas appear more natural. The region outlined in red is interpreted as a combination of natural and spoil features. Refer to the Final Feature File for additional information.







Figure 11. Delineation of northern region of H12610 based on bathymetry.

D.1.6. Dangers to Navigation

Four Dangers to Navigation were submitted for this survey. Details can be found in: Descriptive_Report\Appendices\II_Supplemental_Survey_Records_&_Correspondence and the Final Feature File.

D.1.7. Shoal and Hazardous Features

There are several previously uncharted shoal areas in the northern portion of the survey area where surveyed soundings are up to 16 feet shallower than nearest charted depths. Soundings found to be shallower than the danger zone (66 feet) were submitted as Dangers to Navigation. The charts have since been updated with these Dangers. Refer to section D.1 for additional chart comparisons.

D.1.8. Channels

No channels exist within the boundaries of the survey, but the survey area is just west of the Ambrose to Barnegat traffic lane and a precautionary area surrounding extends into the northern portion of the survey area. Refer to D.1.7 for information regarding depth differences between surveyed soundings and charted depths within the precautionary area.

D.2. Additional Results

D.2.1. Shoreline

Shoreline was not assigned for this survey.





D.2.2. Prior Surveys

No Prior Survey Features were identified from the .PRI file within the survey boundaries; one item is covered by survey data in the northern portion of the survey area, technically within the bounds of H12608. Although the feature is described as 'awash', there is no evidence of a feature at the position of the Obstruction. Submerged features shallower than surrounding depths do exist to the north and this item will be further addressed in H12608.

D.2.3. Aids to Navigation

No Aids to Navigation are currently charted within the survey limits, and none were found during survey operations.

D.2.4. Overhead Features

Overhead features do not exist for this survey.

D.2.5. Submarine Features

No submarine cables or pipelines are currently charted within the survey limits, and none were observed during survey operations.

D.2.6. Ferry Routes and Terminals

No ferry routes or terminals are currently charted within the survey limits, and none were observed during survey operations.

D.2.7. Platforms

No platforms exist for this survey.

D.2.8. Significant Features

No significant scientific features or anomalous environmental conditions were observed during the survey.

D.2.9. Construction and Dredging

There was no active construction within the survey limits during survey operations. However, active dredging occurred in adjacent survey areas of H12608 to the north and northwest and in H12609 to the west. At 05:56 UTC on October 15, 2013 while working in H12608, an approximate fix of a dredge boat dumping material within H12610 was taken. This fix is located in Separates/I_Acquisition_&_Processing_Logs/Detached_Positions.





D.3. Recommendations

D.3.1. New Survey Recommendations

No new surveys or investigations are recommended for this area.

D.3.2. Inset Recommendations

No new insets are recommended for this area.





E. Approval Sheet

LETTER OF APPROVAL

REGISTRY NUMBER H12610

This report is respectfully submitted.

Field operations contributing to the accomplishment of the survey H12610 were conducted under my direct supervision with frequent personal checks of progress and adequacy. This report and CARIS project have been closely reviewed and are considered complete and adequate as per the Statement of Work.

This report is accompanied by the Data Acquisition and Processing Report for project OPR-C319-KR-13.

Yan K den

Tara Levy Chief of Party C & C Technologies May 2014

Milol Lalloway

Nicole Galloway Geoscientist C & C Technologies May 2014

APPENDIX I

TIDE NOTE AND GRAPHICS

ABSTRACT OF TIMES OF HYDROGRAPHY

Project: OPR-C319-KR-13 Registry No.: H12610 Contractor Name: C & C Technologies, Inc. Date: May 2014 Sheet Number: 3 Inclusive Dates: September 26, 2013 - November 18, 2013 Field Work is Complete

Time (UTC)

Day	Julian Day	Start	End	Year
09/26/2013	269	21:45	24:00	2013
09/27/2013	270	00:00	06:47	2013
09/27/2013	270	07:11	07:20	2013
09/27/2013	270	07:38	08:30	2013
09/27/2013	270	10:09	10:20	2013
09/27/2013	270	10:41	16:19	2013
10/01/2013	274	00:42	02:16	2013
10/01/2013	274	03:13	18:07	2013
10/16/2013	289	07:40	07:52	2013
10/16/2013	289	08:31	09:27	2013
10/18/2013	291	09:03	09:51	2013
10/18/2013	291	10:41	22:28	2013
10/18/2013	291	23:12	24:00	2013
10/19/2013	292	00:00	11:10	2013
10/22/2013	294	02:59	11:20	2013
11/11/2013	315	08:28	24:00	2013
11/12/2013	316	00:00	11:26	2013
11/13/2013	317	11:42	24:00	2013
11/14/2013	318	00:00	15:08	2013
11/16/2013	320	04:51	13:06	2013
11/16/2013	320	13:25	14:29	2013
11/16/2013	320	15:06	21:21	2013
11/16/2013	320	22:08	24:00	2013
11/17/2013	321	00:00	05:37	2013
11/17/2013	321	05:52	05:55	2013
11/17/2013	321	06:12	06:18	2013
11/17/2013	321	06:33	06:35	2013
11/17/2013	321	06:57	07:00	2013
11/17/2013	321	07:14	07:16	2013
11/17/2013	321	07:37	07:43	2013
11/17/2013	321	07:52	08:14	2013
11/17/2013	321	08:23	09:12	2013
11/17/2013	321	09:27	09:35	2013
11/17/2013	321	10:02	10:34	2013
11/17/2013	321	10:43	10:47	2013
11/17/2013	321	11:02	16:00	2013
11/17/2013	321	16:13	16:16	2013

FINAL TIDE NOTE and FINAL TIDE ZONING CHART

DATE: May, 2014

HYDROGRAPHIC BRANCH: Atlantic HYDROGRAPHIC PROJECT: OPR-C319-KR-13 HYDROGRAHPIC SHEET: H12610

LOCALITY: 5 NM East of Long Branch

TIME PERIOD: September 26 - November 18, 2013

TIDE STATION USED: 853-1680 Sandy Hook, NJ Lat. 40° 28.0' N Lon. 74° 0.5' W PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.00 m HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 2.14 m

REMARKS: RECOMMENDED ZONING

Use zones identified as: SA2, SA14



Figure 1. Final Tidal Zoning Chart

Note 1: Provided time series data are six minute time series data in meters, relative to MLLW and Greenwich Mean Time (GMT).

Note 2: For final processing, tidal zoning correctors were applied to verified observed data, acquired from the NOAA Tides and Currents website.

Day	Julian Day	Start	End	Year
11/17/2013	321	16:32	17:04	2013
11/17/2013	321	21:47	24:00	2013
11/18/2013	322	00:00	01:35	2013

APPENDIX II

SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDENCE

Re H12610 Dton#1 Submission to NDB.txt Subject: Re: H12610 Dton#1 Submission to NDB From: OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> Date: 2/14/2014 9:32 AM To: Castle Parker - NOAA Federal <castle.e.parker@noaa.gov> CC Abigail Higgins <abigail.higgins@noaa.gov>, Michael Gonsalves - NOAA Federal <michael.gonsalves@noaa.gov>, Brent Pounds - NOAA Federal <brent.pounds@noaa.gov>, Nicole Kuenzel <nicole.kuenzel@cctechnol.com>, Lucy Hick - NOAA Federal <lucy.hick@noaa.gov>, Scott Croft <scott.croft@cctechnol.com>, Tara Levy <tara.levy@cctechnol.com>, _NOS OCS NSD Coast Pilot <coast.pilot@noaa.gov>, Allen Taylor - NOAA Federal <allen.taylor@noaa.gov>, Andrew Kampia - NOAA Federal <andrew.kampia@noaa.gov>, Benjamin K Evans - NOAA Federal

senjamin.k.evans@noaa.gov>, Brian Martinez <Brian.Martinez@noaa.gov> Craig Winn - NOAA Federal <craig.winn@noaa.gov>, Daniel Morrow - NOAA Federal <daniel.morrow@noaa.gov>, David Merke - NOAA Federal <david.merke@noaa.gov>, Gerald Koehl - NOAA Federal <gerald.koehl@noaa.gov>, James Crocker - NOAA Federal <james.m.crocker@noaa.gov>, Jenny Thacker - NOAA Federal <jenny_thacker@noaa.gov>, John Barber <John.Barber@noaa.gov>, Jon Swallow - NOAA Federal <jon.swallow@noaa.gov>, Ken Forster - NOAA Federal <ken.forster@noaa.gov>, Kevin Shaw - NOAA Federal <kevin.shaw@noaa.gov>, Matt Kroll - NOAA Federal <matt.kroll@noaa.gov>, Michael Gaeta - NOAA Federal <michael.gaeta@noaa.gov>, OCS NDB - NOĂA Service Account <ocs.ndb@noaa.gov>, Pramod Singh - NOAA Federal <pramod.singh@noaa.gov>, Richard Brennan - NOAA Federal <richard.t.brennan@noaa.gov>, Tara Wallace - NOAA Federal <tara.wallace@noaa.gov>, Travis Newman - NOAA Federal <travis.newman@noaa.gov> L-333/14 and DD-24287 have been registered by the Nautical Data Branch and directed to PBC for processing. The DtoNs reported are 4 shoal soundings in the Atlantic Ocean, 5 NM east of Long Branch, NJ. The following charts are affected: 12326 kapp 690 12300 kapp 666 13006 kapp 2155 13003 kapp 2156 The following ENCs are affected: US4NY1AM US3NY01M US2EC11M US2EC04M References: н12610 OPR-C319-KR-13 This information was discovered by a NOAA contractor and was submitted by AHB. On Fri, Feb 14, 2014 at 8:36 AM, Castle Parker - NOAA Federal <castle.e.parker@noaa.gov> wrote:

Good Day,

Re H12610 Dton#1 Submission to NDB.txt

Please find attached zip file related to post hurricane Sandy survey H12610 and DtoN Report #1. This Danger submission to Nautical Data Branch & Marine Chart Division contains four soundings that are intended for chart application.

The contents of the attached WinZip file were originally submitted by contract field unit C&C Technologies, Inc. The submitted Danger product was reviewed and generated at Atlantic Hydrographic Branch. The attached zip file contains a DtoN Letter (PDF), Pydro XML file, and image files.

If you have any questions, please direct them back to me; email me or call 757-441-6746 ext. 115.

Thank you, Gene Parker

Castle Eugene Parker Atlantic Hydrographic Branch Hydrographic Team Lead Physical Scientist, NOAA Office of Coast Survey castle.e.parker@noaa.gov office (757) 441-6746 x115

Attachments: H12610 Dton#1.zip 642 KB H12610 Dton#1 Submission to NDB.txt Subject: H12610 Dton#1 Submission to NDB From: Castle Parker - NOAA Federal <castle.e.parker@noaa.gov> Date: 2/14/2014 7:36 AM To: OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov> CC: Abigail Higgins <abigail.higgins@noaa.gov>, Michael Gonsalves - NOAA Federal <michael.gonsalves@noaa.gov>, Brent Pounds - NOAA Federal <breat.pounds@noaa.gov>, Nicole Kuenzel <nicole.kuenzel@cctechnol.com>, Lucy Hick - NOAA Federal <lucy.hick@noaa.gov>, Scott Croft <scott.croft@cctechnol.com>, Tara Levy <tara.levy@cctechnol.com>

Good Day,

Please find attached zip file related to post hurricane Sandy survey H12610 and DtoN Report #1. This Danger submission to Nautical Data Branch & Marine Chart Division contains four soundings that are intended for chart application.

The contents of the attached WinZip file were originally submitted by contract field unit C&C Technologies, Inc. The submitted Danger product was reviewed and generated at Atlantic Hydrographic Branch. The attached zip file contains a DtoN Letter (PDF), Pydro XML file, and image files.

If you have any questions, please direct them back to me; email me or call 757-441-6746 ext. 115.

Thank you,

Gene Parker

Castle Eugene Parker Atlantic Hydrographic Branch Hydrographic Team Lead Physical Scientist, NOAA Office of Coast Survey castle.e.parker@noaa.gov office (757) 441-6746 x115

Attachments: H12610 Dton#1.zip 642 KB H12610 Data Review.txt

Subject: H12610 Data Review From: Nicole Kuenzel <nicole.kuenzel@cctechnol.com> Date: 2/13/2014 5:05 PM TO: Gene Parker <Castle.E.Parker@noaa.gov> CC: Lucy Hick - NOAA Federal <lucy.hick@noaa.gov>, Mark Lathrop <Mark.T.Lathrop@noaa.gov>, Tara Levy <tara.levy@cctechnol.com> Good Afternoon, We are in the process of reviewing the data from Sandy Hook and have created a .000 file (with associated images) of features within H12610 that we would like to bring to your attention as well as get some feedback on DtoN submission. Please let me know if you have any questions or need any other information. Thank-you! Nikki PS: I hope the weather hasn't been too bad this time around! Nicole Kuenzel Geoscientist C&C Technologies, Inc. Lafayette, LA, USA, 70508 email: nicole.kuenzel@cctechnol.com 337-210-0000 (Ext. 3537)

Attachments: H12610_DataReview_02-13-2014.zip 659 KB Re Final feature file catagories.txt

Subject: Re: Final feature file catagories From: Nicole Kuenzel <nicole.kuenzel@cctechnol.com> Date: 4/23/2014 10:08 AM To: Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>, tara.levy@cctech.us CC: Lucy Hick - NOAA Federal <lucy.hick@noaa.gov>, Melissa Sampson - NOAA Federal <melissa.r.sampson@noaa.gov>

Good morning Gene,

Thank-you for the clarification, that makes sense for the individual objects, and we will proceed accordingly.

We do have a question about area objects, similar to the discussion we had about creating area objects from the SSS. There are several areas in the northern portion of Sheet 3 that are either distinct bathymetric areas (the 3 smaller polygons in the below images) or areas with many individual features that may be discontinued spoil areas. Instead of putting an examined sounding on each individual object, we felt that making polygons around the regions and selecting a few soundings within the polygons would be a more efficient method. If you agree, would it be best to add these polygons to the FFF with the soundings within?

we'd like to call you between now and 10:30 Central Time, if this works for you. Thanks! Nikki On 4/23/2014 6:25 AM, Castle Parker - NOAA Federal wrote: > Good morning, There would be only two categories for such benthic > Sure we can chat. > features.... one is obstruction, which would eventually be displayed as a chart scale sounding; the other would be SOUNDG. > The feature as you describe would not truly be an obstruction, but is a > method of showing an area object with spatial extents as defined by the bathy data (grid) or the side scan mosaic. One can define the limits by creating an area object (OBSTRN). > > > Or, in the case of the benthic mounds or rises on the sea floor, a SOUNDG > representing the least depth of shoalest depth on the mound would suffice. > Accompanying the SOUNDG, one can also create a \$CYSMB area object to > define the spatial limits. I would also attach or link SS and bathy images files to the sounding. > I will be in the office today so give me a call when you wish. > > Regards, Gene > > > ----Original Message-----> From: Tara Levy [mailto:tara.levy@cctechnol.com]
> Sent: Tuesday, April 22, 2014 6:53 PM > To: Castle Parker > Cc: Lucy Hick - NOAA Federal; Nikki Kuenzel
> Subject: Final feature file catagories > Hi Gene. > I was going over some areas in H12610 today with Nikki and we are unsure Page 1

Re Final feature file catagories.txt > how to categorize the individual contacts that are not DTONS. > > Some contacts we were looking at are clearly not rocks or anything > natural, but are distinct. For instance one is in the shape of an H, > however they have little relief or do not stick up 10% of the water depth. > when creating the S-57, what category would these fall under? We know that > they are not natural, and after reviewing the options available did not > see any that these would easily fit into. > > If you are available tomorrow can we give you a call? > > Thank you for your time, > > > Tara Levy > > C&C Technologies, Inc
> 730 E. Kaliste Saloom Rd. > Lafayette, LA, USA 70508
> 337-210-0000 (Ext. 3518)
> 337-210-0612 (direct line)
> 337-296-3029 (cell) > 337-261-0192 (Fax) > > tara.levy@cctech.us Nicole Kuenzel

Geoscientist C&C Technologies, Inc. Lafayette, LA, USA, 70508 email: nicole.kuenzel@cctechnol.com 337-210-0000 (Ext. 3537)

Castle Parker - NOAA Federal

From:	Lucy Hick - NOAA Federal
Sent:	Monday, July 28, 2014 10:59 AM
То:	Castle Parker - NOAA Federal
Cc:	Diane Melancon - NOAA Federal; Daniel Morrow - NOAA Federal; Matthew Jaskoski -
	NOAA Federal
Subject:	Re: Fwd: PBE Shoreline Request - Sandy Hook

I just wanted to update you that we granted an extension on the delivery date for this project. While I understand that the first two sheets, H12608 & H12609 have been received by AHB, C&C has until September 15 to deliver H12610.

This has been updated in Survey Tracker.

Best Regards, Lucy

On Tue, Jul 8, 2014 at 12:30 PM, Lucy Hick - NOAA Federal <<u>lucy.hick@noaa.gov</u>> wrote: The expected date for delivery of these contract surveys to AHB is 07/13/2014. This has been updated in Survey Tracker.

Lucy

On Wed, Jul 2, 2014 at 7:25 AM, Castle Parker - NOAA Federal <<u>castle.e.parker@noaa.gov</u>> wrote:

Good morning Diane,

HSD's May 2014 Operations Branch monthly report indicates that H12608 and H12609 are 60% processed by the contract field unit. HSD's Survey Tracker doesn't indicate a delivery date and does not include a survey completion date; this means the survey remains ongoing. Therefore to get an accurate estimate of delivery I have to defer to the survey's COR Lucy Hick.

From my viewpoint, I'd ask RSD for the common area of H12608 and H12609; by the time the survey arrives at AHB, MCD would have a GC for shoreline application.

Regards,

Gene

PS: AHB does have H12610 an adjoining survey, but it is located offshore with no common shoreline.

From: Diane Melancon - NOAA Federal [mailto:Diane.Melancon@noaa.gov]
Sent: Tuesday, July 01, 2014 5:17 PM
To: Castle Parker - NOAA Federal
Cc: Daniel Morrow - NOAA Federal
Subject: FW: Fwd: PBE Shoreline Request - Sandy Hook

Gene,

Are you able to provide an estimate of when H-12608 and H-12609 will be delivered to MCD? RSD is estimating new shoreline delivery in FY15, but if the surveys will be delivered much sooner than that, we can ask RSD to expedite the Sandy Hook area.

Thanks,

Diane

From: Mike Espey [mailto:mike.espey@noaa.gov]
Sent: Tuesday, July 01, 2014 3:39 PM
To: Diane Melançon; Daniel Morrow
Cc: Tara Wallace; Tim Blackford
Subject: Re: Fwd: PBE Shoreline Request - Sandy Hook

Dan / NDB,

RSD contractor(s) are currently in the process of acquiring/compiling the entire outer Atlantic Coast from Winyah Bay, SC to Montauk, NY from lidar + imagery as part of hurricane Sandy response. Delivery of shoreline products to MCD for chart update might begin sometime in FY15. Will this meet the stated need, or is something required in this particular area (Sandy Hook) sooner?

Thanks, Mike

On 6/30/2014 3:08 PM, OCS NDB - NOAA Service Account wrote:

RSD,

Please see the following message and attachment for a shoreline request that NDB is submitting on behalf of one of MCD's production branches.

Thanks,

Diane

------ Forwarded message ------From: **Daniel Morrow - NOAA Federal** <<u>daniel.morrow@noaa.gov</u>> Date: Fri, Jun 27, 2014 at 6:40 PM Subject: PBE Shoreline Request - Sandy Hook To: OCS NDB - NOAA Service Account <<u>ocs.ndb@noaa.gov</u>>

Greetings,

Attached is a document explaining shoreline needs along the Atlantic Coast of New Jersey to accommodate application of H-12608-12609.

I want to clarify that this request is separate from the recent Shoreline Discrepancy Request polygons. We are not requesting new data acquisition or bathymetry. GC-11057 for Charleston was recently processed by RSD using orthorectified WorldView satellite images. If applicable, this approach would meet PBE's expectations.

Please let me know if you need more information.

Thanks,

Dan Morrow

<u>301-713-2713 ext 133</u>

Lucy Hick

Physical Scientist / COR-II / Esri ELA Coordinator Hydrographic Surveys Division - Operations Branch Office of Coast Survey National Oceanic & Atmospheric Administration (301) 713-2702 x107 Lucy.Hick@noaa.gov

Lucy Hick

Physical Scientist / COR-II / Esri ELA Coordinator Hydrographic Surveys Division - Operations Branch Office of Coast Survey National Oceanic & Atmospheric Administration (301) 713-2702 x107 Lucy.Hick@noaa.gov

APPENDIX III

SURVEY FEATURES REPORT

DToNs - none AWOIS - three Wrecks - one Maritime Boundaries - none

H12610_Features Report

Registry Number: H12610

State: New Jersey

Locality: Southern Approaches to New York and Vicinity

Sub-locality: 5 NM East of Long Branch

Project Number: OPR-C319-KR-13

Survey Date: 09/26/213 - 11/18/2013

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
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: ?

Charts Affected

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

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	AWOIS #8096-Disproved	GP	[None]	40° 16' 31.1" N	073° 52' 16.3" W	8096
1.2	AWOIS #1550	Wreck	24.70 m	40° 19' 55.5" N	073° 51' 27.1" W	1550
1.3	AWOIS #6310	Wreck	27.32 m	40° 20' 56.9" N	073° 49' 56.7" W	6310
2.1	New Wreck - 73 ft non-dangerous	Wreck	22.40 m	40° 20' 35.2" N	073° 52' 09.1" W	

Features

1 - AWOIS Features

1.1) AWOIS #8096-Disproved

Feature for AWOIS Item #8096

Search Position:	40° 16' 31.1" N, 073° 52' 16.3" W
Historical Depth:	[None]
Search Radius:	[unknown]
Search Technique:	Type: OBSTRUCTION, Itemstatus: COMPLETED, Searchtype: INFORMATION, Technique: S2 ES MBES

Technique Notes:

History Notes:

History

" HISTORY FE331SS/89--OPR-C147-HE-89; CONTACT #2; DIVER INVESTIGATION ì REVEALED TWO STEAM RAILROAD LOCOMOTIVES RESTING UPRIGHT SIDE BY I SIDE ON THE BOTTOM; BOTH WERE COVERED WITH MARINE VEGETATION AND I CORAL; SHOALEST POINT OF THE TWO LOCOMOTIVES WAS APPROXIMATELY 18 I FT OFF A SANDY BOTTOM; LAT 40-16-29.16N LONG 73-52-20.25W ì (NAD83); LOCAL DIVERS STATED THAT THE LOCOMOTIVES WERE CARGO FROM ì THE TRANSPORT SHIP ARUNDO WHICH WAS TORPEDOED AND SUNK BY A Ì GERMAN U-BOAT U-297; EVALUATOR RECOMMENDED CHARTING A I NONDANGEROUS SUBMERGED OBSTRUCTION WITH A KNOWN DEPTH OF 69 FT AS I SHOWN ON PRESENT SURVEY. (ENTERED MSD 7/91) DESCRIPTION **** TELEVISION BROADCAST AIRED 9/20/04; HISTORY CHANNEL'S DEEP SEA DETECTIVES SERIES TITLED ""UNDERWATER TRAIN WRECK""; PRODUCED BY KPITV NEW YORK; DIVE OPS CONDUCTED BY THE ""NEW JERSEY HISTORICAL DIVERS ASSOCIATION""; WITH VIS OF 20 FEET VIDEO CLEARLY SHOWS BOTH LOCOMOTIVES STANDING UPRIGHT HEAVILY ENCRUSTED WITH MARINE GROWTH AND APPROX. 10 FEET APART FROM EACH OTHER. THE WHEEL ARRANGEMENT OF 2-2-2 AND PROFILE INDICATE THESE ARE ""PIONEER"" LOCOMOTIVES. AN ORIGINAL ""PIONEER"" LOCOMOTIVE IS PRESENTLY ON DISPLAY AT THE NATIONAL MUSEUM OF INDUSTRIAL HISTORY IN BETHLEHEM PA. HISTORICAL RESEARCH SUPPORTS THE PREMISE THAT THESE TWO LOCOMOTIVES WERE BUILT IN BOSTON MA CIRCA 1852. WHILE BEING SHIPPED FROM BOSTON TO PHILADELPHIA FOR SERVICE ON THE CUMBERLAND VALLEY RAIL ROAD IT IS SURMISED THAT THEY EITHER FELL OFF OR WERE JETTISONED IN A STORM. (UP 9/21/04 SJV)"

Survey Summary

Survey Position:	40° 16' 31.1" N, 073° 52' 16.3" W
Least Depth:	[None]
TPU (±1.96 თ):	THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp:	2013-322.00:00:00.000 (11/18/2013)
Dataset:	H12610_PYDRO Features.000
FOID:	0_0003165676 00001(FFFE00304DEC0001)
Charts Affected:	12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12610_PYDRO Features.000	0_0003165676 00001	0.00	000.0	Primary

Hydrographer Recommendations

Update position and least depth

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)

Attributes: NINFOM - Delete obstruction NTXTDS - ENC#US4NY1AM,Edition27,20130919 SORDAT - 20131118 SORIND - US,US,graph,H12610

Office Notes

SAR: OBSTRN position disproved via object detection multibeam. Reference feature approximately 114m to the SW.

COMPILATION: Concur. Consider AWOIS #8096 disproved. Delete charted non-dangerous obstruction, least depth 69 feet. Update the area with present survey depths and update the AWOIS database with the present survey findings.

1.2) AWOIS #1550

Feature for AWOIS Item #1550

Search Position:	40° 19' 56.1" N, 073° 51' 29.8" W
Historical Depth:	24.70 m
Search Radius:	200
Search Technique:	Type: WRECK, Itemstatus: ASSIGNED, Searchtype: FULL, Technique: S2 ES MBES
Tashuisuna Natasa	

Technique Notes:

History Notes:

History

HISTORY NM 50/21--WK ADDED TO CHART NM 26/22--WK DELETED FROM CHART DESCRIPTION 24 NO.1364; SUNK 1921 POSITION ACCURACY WITHIN 1 MILE; WD CLEARED TO 50 FT. (SOURCE UNK.) REPORTED THROUGH CGS SURVEY

Survey Summary

Survey Position:	40° 19' 55.5" N, 073° 51' 27.1" W
Least Depth:	24.70 m (= 81.05 ft = 13.508 fm = 13 fm 3.05 ft)
TPU (±1.96 თ):	THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp:	2013-322.00:00:00.000 (11/18/2013)
Dataset:	H12610_PYDRO Features.000
FOID:	0_0003165678 00001(FFFE00304DEE0001)
Charts Affected:	12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

OBSTRN/remrks: Debris-like features near sother margin of AWOIS item 1550.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12610_PYDRO Features.000	0_0003165678 00001	0.00	000.0	Primary

Hydrographer Recommendations

Chart new wreck area

Cartographically-Rounded Depth (Affected Charts):

81ft (12326_1)

13ft (12300_1, 13006_1, 13003_1, 14500_1)

24m (5161_1)

S-57 Data

Geo object 1: Wreck (distributed remains of wreck) Attributes: NINFOM - Add Wreck QUASOU - 6:least depth known SORDAT - 20131118 SORIND - US,US,graph,H12610 VALSOU - 24.704 m WATLEV - 3:always under water/submerged

Office Notes

SAR: Feature originally submitted as SBDARE with three soundings inside with the remarks that it was a debris-like feature. Feature's polygon limits were revised during office review to a wreck and appropriately attributed. Verified with 100% MBES data.

COMPILATION: Concur with conditions. Delete the charted non-dangerous sunken wreck, depth unknown to the north. Add AWOIS #1550 as a non-dangerous sunken wreck (distributed remains), least depth 81.05 feet, in the present survey position. Update AWOIS database.

Feature Images



Figure 1.2.1

1.3) AWOIS #6310

Feature for AWOIS Item #6310

Search Position:	40° 21' 00.1" N, 073° 49' 56.9" W
Historical Depth:	27.32 m
Search Radius:	200
Search Technique:	Type: VAL-DEE-JO, Itemstatus: ASSIGNED, Searchtype: FULL, Technique: S2 ES MBES
Technique Notes:	

.

History Notes:

History

HISTORY LNM44/73--3RD CGD; 10-17-73; 30FT CABIN CRUISER VAL-DEE-JO ì REPORTED SUNK IN APPROX. POSITION LAT. 30-21-00N LONG. ì 73-50-00W. RECOMMEND CHARTING. (ENT 1/88 MSM). LNM45/73-- LAT. CORRECTED TO 40-21-00N. (UP 5/20/96 SJV)

Survey Summary

Survey Position:	40° 20' 56.88" N, 073° 49' 56.71" W
Least Depth:	27.32 m (= 89.65 ft = 14.941 fm = 14 fm 5.65 ft)
TPU (±1.96 თ) :	THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp:	2013-322.00:00:00.000 (11/18/2013)
Dataset:	H12610_PYDRO Features.000
FOID:	0_0003165677 00001(FFFE00304DED0001)
Charts Affected:	12326_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

OBSTRN/remrks: Feature located 190 feet SE from currently charted wreck, although this item has features that distinguish it from the surrounding seafloor, it is unclear whether this is a wreck or not.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12610_PYDRO Features.000	0_0003165677 00001	0.00	000.0	Primary

Hydrographer Recommendations

Potentially update wreck symbol/location

Cartographically-Rounded Depth (Affected Charts):

89ft (12326_1)

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

27m (5161_1)

S-57 Data

Geo object 1: Wreck (distributed remains of wreck) Attributes: NINFOM - Add wreck QUASOU - 6:least depth known SORDAT - 20131118 SORIND - US,US,graph,H12610 VALSOU - 27.325 m WATLEV - 3:always under water/submerged

Office Notes

SAR: Concur with field unit in that the feature is not positively identified as a wreck. If anything, the sea floor texture could be interpret as distributed remains of a wreck. However, the range of the distrubtion far exceed the length of AWOIS 6310. The least depth has been verified via object detection multibeam. Recommend to not chart as a wreck and chart current survey depths.

AWOIS 6310 is described as a 30ft cabin cruiser VAL-DEE-JO;

COMPILATION: Concur with conditions. Delete charted dangerous sunken wreck PA, depth unknown. Add AWOIS #6310 as a non-dangerous wreck, (distributed remains), least depth 89.65 feet, in the present survey position. Update AWOIS database.



Feature Images

Figure 1.3.1



Figure 1.3.2

2 - Wreck Features

2.1) New Wreck - 73 ft non-dangerous

Survey Summary

Survey Position:	40° 20' 35.2" N, 073° 52' 09.1" W
Least Depth:	22.40 m (= 73.48 ft = 12.247 fm = 12 fm 1.48 ft)
TPU (±1.96 σ) :	THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp:	2013-322.00:00:00.000 (11/18/2013)
Dataset:	H12610_PYDRO Features.000
FOID:	0_0003165675 00001(FFFE00304DEB0001)
Charts Affected:	12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: Linear structure evident in bathymetry and backscatter. Feature has the shape of potential wreck. It is located 0.77 nm NW from AWOIS item 1550.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12610_PYDRO Features.000	0_0003165675 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

73ft (12326_1)

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

22m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS) Attributes: CATWRK - 1:non-dangerous wreck NINFOM - Add wreck QUASOU - 6:least depth known SORDAT - 20131118 SORIND - US,US,graph,H12610 TECSOU - 3:found by multi-beam VALSOU - 22.398 m WATLEV - 3:always under water/submerged

Office Notes

SAR: Wreck like object verified via object detection multibeam; wreck appears to be highly deteriorated. COMPILATION: Concur. Add a non-dangerous sunken wreck, least depth 73.48 feet in the present survey position.



Feature Images

Figure 2.1.1



Figure 2.1.2



Figure 2.1.3

APPROVAL PAGE

H12610

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

- H12610_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- H12610_GeoImage.pdf

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

Approved: _____

Lieutenant Commander Matthew Jaskoski, NOAA Chief, Atlantic Hydrographic Branch