

H12609

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Navigable Area

Project No. OPR-C319-KR-13

Registry No. H12609

LOCALITY

State New Jersey

General Locality Southern Approaches to New York and Vicinity

Sub-locality Vicinity of Shrewsbury Rocks

2014

CHIEF OF PARTY
Tara Levy

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DATE: _____

NOAA FORM 77-28 (11-72)		U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		REGISTRY No:	
HYDROGRAPHIC TITLE SHEET				H12609	
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 Jersey			
General Locality:		Southern Approaches to New York and Vicinity			
Locality:		Vicinity of Shrewsbury Rocks			
Scale:		1: 20000			
Date of Survey:		10/22/2014 - 05/12/2014			
Instructions Dated:		September, 2013			
Project Number:		OPR-C319-KR-13			
Vessels:		R/V Shearwater & R/V C-Wolf			
Chiefs of Party:		Tara Levy			
Surveyed by:		C&C Technologies Personnel			
Soundings by echosounder:		Simrad EM3002 and EM3002D Multibeam Echo Sounder			
Verification by:		Atlantic Hydrographic Branch			
Soundings in:		Feet: X Fathoms: Meters: at MLW: 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 H12609

Project: OPR-C319-KR-13

Locality: Southern Approaches to New York and Vicinity, NJ

Sublocality: Vicinity of Shrewsbury Rocks

Scale: 1:20000

October 2013 – May 2014

R/V Shearwater & R/V C-Wolf

Chief of Party: Tara Levy

A. Area Surveyed

The survey area is located in the vicinity of Shrewsbury Rocks.

A.1. Survey Limits

Data was acquired within the following survey limits:

Northeast Limit	Southwest Limit
40.376 N 73.905 W	40.253 N 73.990 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 charting products. It covers 23.56 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

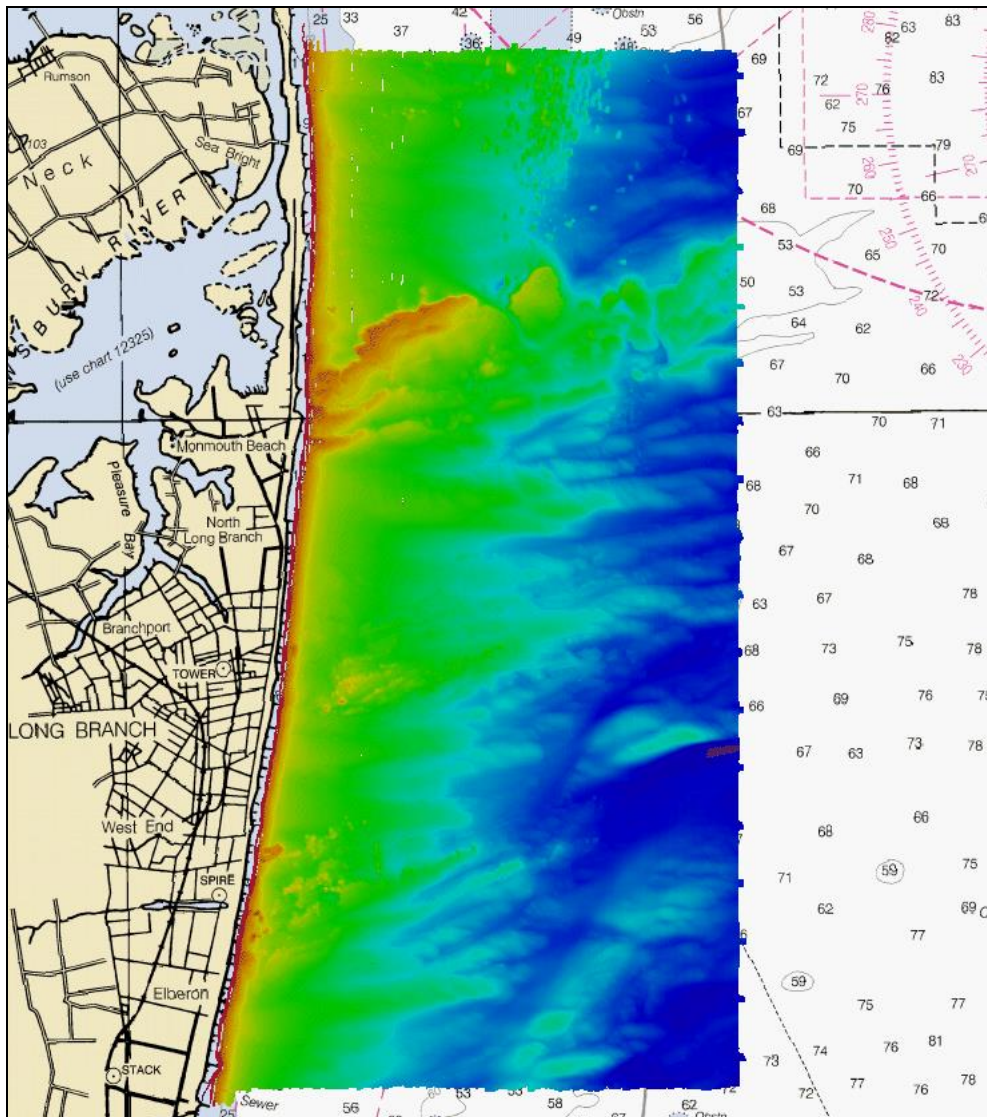


Figure 1. H12609 Survey Coverage

Survey Coverage was in accordance with the requirements in the Project Instructions and HSSD; 200% SSS with concurrent MBES or Object Detection MBES coverage with backscatter was acquired in the survey area.

Mainlines were oriented north-south and the majority of lines (beyond the nearshore) consisted of 107 shotpoints with 125 meters between shotpoints; each of these mainlines 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, several separate line plans were created in AutoCad where fill-ins were necessary to obtain 100% multibeam coverage. These are all included in the MBES processing spreadsheet.

A.5. Survey Statistics

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

	Hull ID	641188	JQN00027J708	Total
LNM	SBES Mainscheme	0	0	0
	MBES Mainscheme	364.68	0	364.68
	SSS Mainscheme	0	0	0
	SBES/MBES Combo Mainscheme	0	0	0
	SBES/SSS Combo Mainscheme	0	0	0
	MBES/SSS Combo Mainscheme	372.52	39.61	412.13
	SBES/MBES Combo Crosslines	0	0	0
	Lidar Crosslines	0	0	0
Number of Bottom Samples		10	0	10
Number of DPs		46	7	53
Number of Items Investigated by Dive OPs		0	0	0
Total Number of SNM		23.47	0.09	23.56

Table 2: Hydrographic Survey Statistics

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

<i>Survey Dates</i>
10/22/2013
10/23/2013
10/24/2013
10/25/2013
10/26/2013
10/27/2013
10/28/2013
10/29/2013
10/31/2013
11/03/2013
11/05/2013
11/06/2013
11/07/2013
11/08/2013
11/09/2013
11/10/2013
11/11/2013
11/17/2013
05/06/2014
05/07/2014
05/11/2014
05/12/2014

Table 3: Dates of Hydrography

A.6. Shoreline

Limited shoreline verification was accomplished using the composite source file (CSF). All features with the 'Assignment flag' populated with 'Assigned' were verified. Refer to the Final Feature File for additional information.

A.7. Bottom Samples

Ten (10) bottom samples were collected within the limits of H12609.

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	JQN00027J708
LOA	33.528 meters	9.144 meters
Draft	2.1336 meters	0.6096 meters

Table 4: Vessels Used

B.1.2. Equipment

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

Manufacturer	Model	Type
Kongsberg	EM3002	MBES
Edgetech	4200 P	SSS
Coda Octopus	F180	Vessel Attitude System
C-Nav	3050	Positioning System
C-Nav	2050	Positioning System
YSI Electronics	600R-BCR-C-T	Sound Speed System
Sea-Bird Electronics, Inc.	SBE 19 and SBE 19 Plus	Sound Speed System

Table 5: Major Systems Used

B.2. Quality Control

B.2.1. Crosslines

Crosslines were run across mainscheme lines at angles of 45 – 90 degrees so that quality control statistics could be performed on the data after completion of mainscheme survey lines. The total crossline miles were 66.1 nm and the total mainline miles (fill-in and investigation lines not included) were 776.81 nm; the crosslines comprise 8.5 percent of the total line miles. However, the survey area was divided into a MBES/SSS combo (Set Line Spacing) section and a MBES/Backscatter (Object Detection) section. According to section 5.2.4.3 of the HSSD (2013), for the crossline mileage should be at least 8% of mainscheme mileage for Set Line Spacing surveys and the crossline mileage should be at least 4% of mainscheme mileage for Object Detection surveys. The total mainline mileage was 364.68 nm and the tieline mileage was 29.15 in the Objection Detection section; the crossline mileage comprises 7.99 % of mainline mileage. Mainscheme line mileage was 372.52 nm and the tieline mileage was 34.53 nm in the Set Line Spacing section; the crossline mileage comprises 9.27% of mainscheme mileage.

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; note that the mainline BASE surface does not include fill-ins or investigations. 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. Greater than 99% of depth difference values are between -0.272 m and 0.228 m. This is well within the maximum allowable TVU (Total Vertical Uncertainty) which ranges from ± 0.50 to ± 0.60 m for the depth range of the survey (1.43 m – 23.95 m). Larger depth differences do exist, mainly around features and changes in bathymetry. Inspection of these areas does not necessarily indicate that there is erroneous data, instead the lines ensonified different portions or only partially ensonified features. Several areas with depth differences >1 m are located between H12609-TIE-201-1 and line 2070-1, H12609-TIE-202-1 and lines 2212-1 and 2213-1, H12609-TIE-203-2 and line 2074-1, H12609-214-2 and minelines 2045-2 and 2041-2, H09-TIE-519-1 and mainline 5016-1, H09-TIE-520-1 and mainline 5019-1 as well as several areas along H12609-TIE-215-2. The largest depth differences of -2.27 m and 1.83 m occur along this line (H12609-215-2) over a feature at mainlines 2039-3 and 2040-2.

Statistical crossline information was also generated by comparing each of the crosslines to the depth layer of the 1-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.

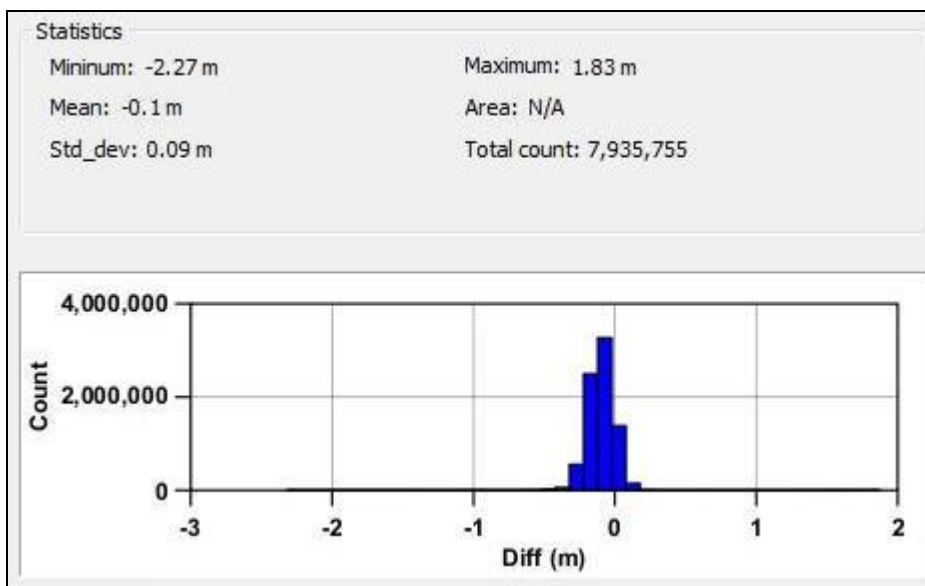


Figure 2. Crossline comparison statistical information and histogram output from CARIS compute statistics tool.

B.2.2. Uncertainty

CARIS HIPS was used to compute the Total Propagated Uncertainty (TPU) for each sounding. The uncertainty of surface of H12609_MB_SetLineSpacing_4m_MLLW ranges from 0.18 to

0.50 m, which does not exceed the maximum allowable TVU (total vertical uncertainty) for water depths of 0.98 – 20.01 m, which ranges from ± 0.50 - ± 0.57 m. The uncertainty of surface of H12609_MB_ObjectionDetection_50cm_MLLW ranges from 0.36 to 0.56 m, which does not exceed the maximum allowable TVU (total vertical uncertainty) for water depths of 8.47 – 23.98 m, which ranges from ± 0.51 - ± 0.60 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
JQN00027J708	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	S
H12610	1:20000	2013	C&C Technologies	E

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 H12609 borders the southwest margin of H12608 (Figure 3). Figure 4 shows statistical information for the junction between H12609 and H12608 generated with the CARIS Compute Statistics tool. Greater than 99% of depth difference values are between ± 0.3 meters. Depth differences occur only around features within the overlapping fish haven. Inspection of these areas does not necessarily indicate that there is erroneous data, instead the lines ensounded different portions or partially ensounded features.

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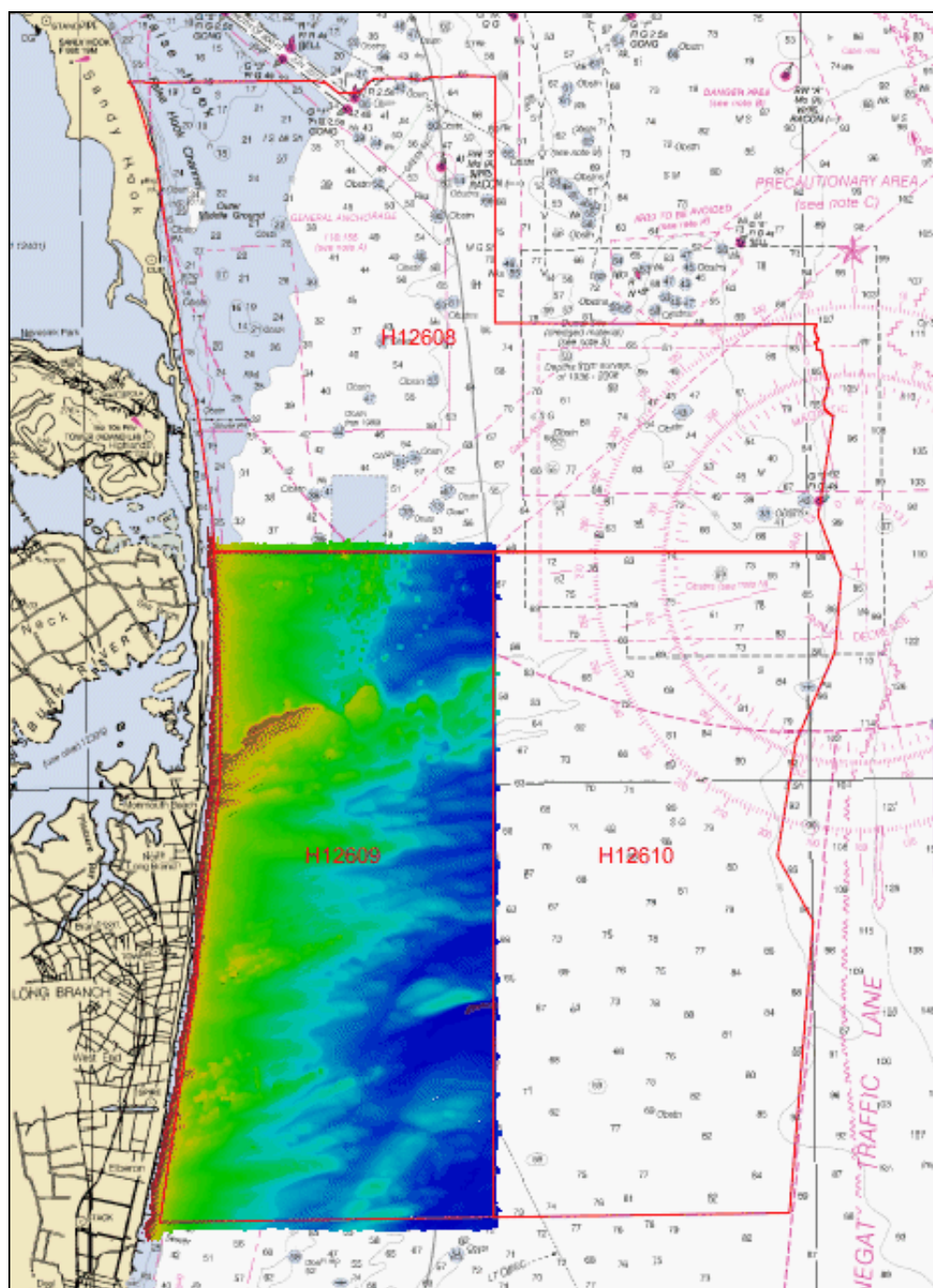


Figure 3. Junctions between H12609, H12608 and H12610.

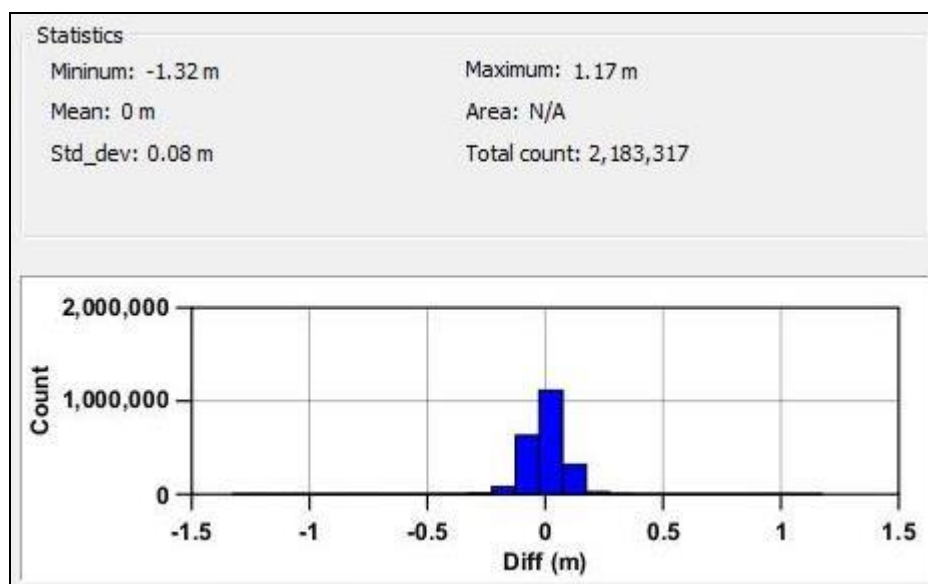


Figure 4. Statistical information and histogram output from CARIS Compute Statistics tool for the difference surface generated between H12609 and H12608.

H12610

The eastern margin of H12609 borders the western margin of H12610 (Figure 3). Figure 5 shows statistical information for the junction between H12609 and H12610 generated with the CARIS Compute Statistics tool. Greater than 99% of depth difference values are between ± 0.3 meters. There are three gaps in MB data between the two sheets over a large shoal area of seafloor. Due to time and weather constraints, these gaps were unable to be filled in.

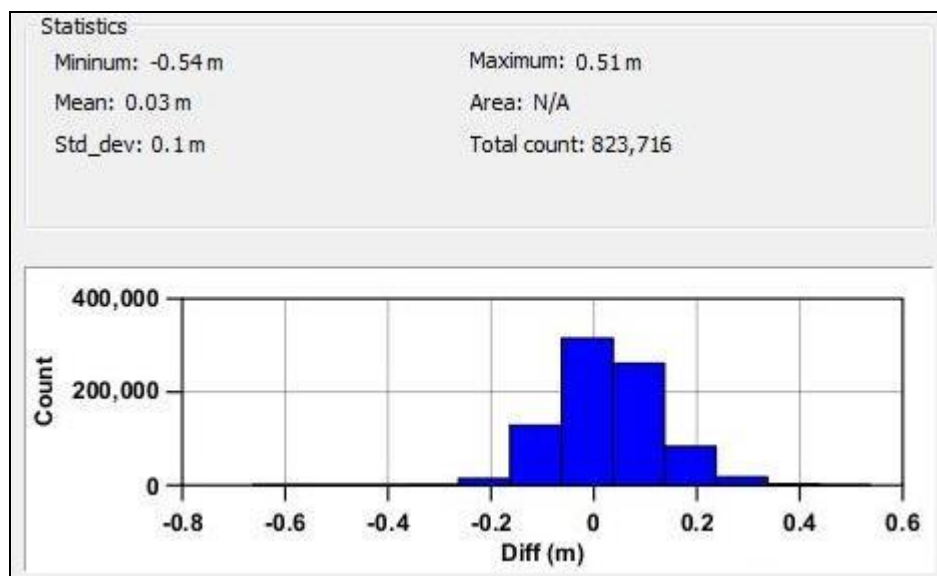


Figure 5. Statistical information and histogram output from CARIS Compute Statistics tool for the difference surface generated between H12609 and H12610.

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 or to increase coverage; these changes are documented in the acquisition logs. Temporary loss of positioning occurred several times during the beginning of the survey.

B.2.6. Factors Affecting Soundings

Weather, sea state, sound speed issues, thermoclines, and fish were all temporary factors that affected the data periodically throughout the duration of the survey; these are all noted in the acquisition and processing logs.

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 on the R/V *Shearwater*, once daily on the R/V *C-Wolf* and more often as needed. The multibeam data was corrected for the water column sound speed in real-time using the SIS control software. Endeco YSI sondes were used on both vessels to determine the sound speed at the transducers. 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. 200% SSS with concurrent MBES or Object Detection MBES coverage with backscatter was acquired in the survey area. 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 and for Set Line Spacing Multibeam Coverage, at least 95% of all nodes on the surface shall be populated with at least 3 soundings. The Compute Statistics tool in CARIS HIPS was used to

generate statistics about the Density child layer of the H12609_MB_SetLineSpacing_4m_MLLW and H12609_MB_ObjectDetection_50cm_MLLW BASE surfaces.

A bin size of 1 was used and the data exported in ASCII format. The number of nodes in the first 2 bins were added together to determine the number of nodes that contain less than 3 soundings and the nodes in the first 4 bins added together to determine the number of nodes that contain less than 5 soundings. 513 nodes of the H12609_MB_SetLineSpacing_4m_MLLW BASE surface are populated with less than 3 soundings and the total count of nodes within the surface is 2,789,040. Therefore, greater than 99% of nodes contain at least 3 soundings for Set Line Spacing coverage. 134,769 nodes of the H12609_MB_ObjectDetection_50cm_MLLW BASE surface are populated with less than 5 soundings and the total count of nodes within the surface is 185,288,906. Therefore, greater than 99% of nodes contain at least 5 soundings for Object Detection. Refer to Figures 6 and 7 for statistical information.

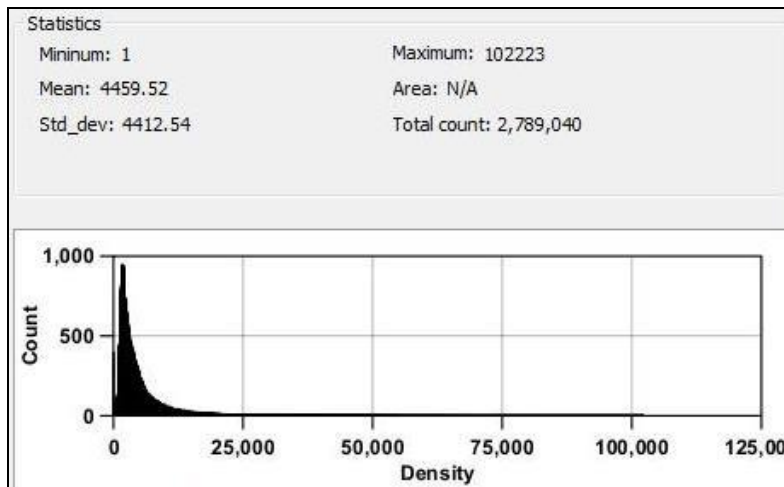


Figure 6. Statistical information about the density child layer of the H2609_MB_SetLineSpacing_4m_MLLW BASE surface, generated from CARIS Compute Statistics tool.

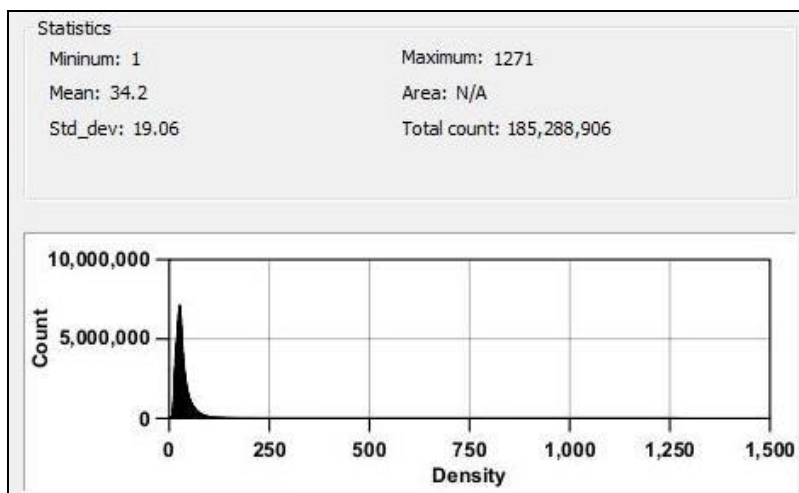


Figure 7. Statistical information about the density child layer of the H2609_MB_ObjectDetection_50cm_MLLW BASE surface, generated from CARIS Compute Statistics tool.

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, patch tests were performed for each vessel to determine correctors for pitch, roll, and heading. Squat and settlement tests were 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 when necessary. A backscatter mosaic was generated using C & C Technologies' proprietary Hydromap software and used as an additional QC tool. The 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. A 1 meter BASE surface of all the lines was generated for QC purposes as well as for junctions. Individual 1 meter BASE surfaces for crosslines and mainlines were also generated for the crossline comparison analysis. A 50 cm BASE surface of the investigations was generated, and some of these lines that were primarily run for fill-in purposes were added to the main BASE surfaces; refer to the processing log for additional information. Due to time, weather, and data quality constraints, half of the Sheet (near shore) was collected with Set Line Spacing MBES and 200% SSS while the deeper half of the Sheet was collected with Object Detection MBES and backscatter. Separate Fieldsheets and BASE surfaces were generated for each of these areas: H12609_MB_SetLineSpacing_4m_MLLW and H12609_MB_ObjectDetection_50cm_MLLW. For ease of processing and to ensure that lines such as tielines were included, rectangular Fieldsheets and BASE surfaces were generated, even though there is some SSS overlap for the Object Detection surface. A holiday layer was generated for the Object Detection surface with a search radius of 1 and the holiday minimum number of nodes 12 to determine if holidays exist on the surface. All holidays

observed are located in or around the Fish Haven in the northern portion of the survey where multibeam ‘shadows’ exist; the majority do not exceed 3 nodes in length.

Surface Name	Surface Type	Resolution	Depth Range (m)	Purpose
H12609_MB_SetLineSpacing_4m_MLLW	Uncertainty	4 m	0.98 m – 20.01 m	Set Line Spacing
H12609_MB_SetLineSpacing_4m_MLLW_Final	Uncertainty	4 m	0.98 m – 20.01 m	Set Line Spacing
H12609_MB_ObjectDetection_50cm_MLLW	Uncertainty	50 cm	8.47 m – 23.98 m	Objection Detection MBES
H12609_MB_ObjectDetection_50cm_MLLW_Final	Uncertainty	50 cm	8.40 m – 23.98 m	Objection Detection MBES
H12609_MB_Investigations_50cm_MLLW	Uncertainty	50 cm	3.22 m – 16.82 m	Objection Detection MBES
H12609_MB_Investigations_50cm_MLLW_Final	Uncertainty	50 cm	3.22 m – 16.82 m	Objection Detection MBES
H12609_MB_1m_MLLW	Uncertainty	1 m	0.94 m – 23.95 m	QC
H12609_MB_Crosslines_1m_MLLW	Uncertainty	1 m	1.43 m – 23.85 m	QC
H12609_MB_Mainlines_1m_MLLW	Uncertainty	1 m	1.58 m – 23.95 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, contacts and/or areas of bathymetric change. The maximum standard deviation of the H12609_MB_1m_MLLW BASE surface is 1.75 m, which corresponds to a wreck within the Fish Haven (40-21-25.993N, 073-56-10.119W).

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

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	06/24/2014	07/05/2014
12324	40000	35	03/2012	06/24/2014	07/05/2014
12325	15000	4	10/2008	06/24/2014	07/05/2014

Table 13. Largest Scale Raster Charts

12326

Fifteen (15) 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 (05/12/2014). These all correspond to DtoNs submitted for this survey.

Surveyed water depths range from 3.10 to 78.58 feet. A shoal biased selected sounding layer for the H12609_MB_1m_MLLW BASE surface was generated in CARIS with a single-defined radius of 115 m (distance on the ground). Surveyed soundings generally agree with charted depths within 1 – 2 feet. However, several more significant differences were observed:

East of the charted Fish Haven there are multiple spoil features that have shallower depths than the currently charted 54 foot depth (Figure 8); two of these features were submitted as DtoNs (refer to section D.1.6 for additional information).

In the vicinity of Shrewsbury Rocks (Figure 9), surveyed soundings were observed to be deeper than the 14 and 25 foot charted depths. However, surveyed soundings in the vicinity of the 17 foot charted depth were observed to be a foot shallower (Figure 9).

To the east of Shrewsbury Rocks within the enclosed shoal area (at the southern extent of the Fish Haven) the majority of the surveyed soundings are deeper than the currently charted 28 and 25 foot depths. However, a feature with an examined sounding of 26 feet exists and the hydrographer recommends retaining the shoal depth (Figure 9).

Several surveyed soundings were observed to be shallower than charted depths within the charted Rks southwest of Shrewsbury Rocks (Figure 10); the 22 foot depth was submitted as a DtoN (refer to section D.1.6 for additional information). To the southeast of the rocky area there is a charted 51 foot depth where surveyed soundings are at least 7 feet deeper than the charted depth (Figure 10).

There are some additional differences between charted depths and surveyed soundings near shore, which are explained in further detail in the 12324 chart comparison.

The charted 18 foot contour extends down the coast for the length of the Sheet. A user defined color range map was used with 0 – 5.4864 meter depths in green and >5.4864 meter depths in blue; 5.4864 meters represents 18 feet. In two areas surveyed soundings <18 feet extend beyond the 18 foot contour: a small area offshore of Monmouth Beach (Figure 11) and offshore of Sea Bright (Figure 12).

The charted 30 foot contour extends the length of the Sheet, encompassing Shrewsbury Rocks. A user defined color range map was used with 0 – 9.144 meter depths in green and >9.144 meter depths in blue; 9.144 meters represents 30 feet (Figure 13). The majority of surveyed depths are 30 feet or less and well within the currently charted 30 foot contour. However, in several areas (shown in blue boxes in Figure 13) the majority of surveyed soundings that are currently charted with depths of 30 feet or less were observed to be 30 feet or greater.

The charted 60 foot contour extends irregularly down the length of the Sheet in the eastern portion of the survey area. A user defined color range map was used with 0 – 18.288 meter depths in green and >18.288 meter depths in blue; 18.288 meters represents 60 feet (Figure 14). The majority of surveyed soundings that were observed to be 60 feet or less are located within the charted 60 foot contour. There are four charted obstructions and one charted wreck with charted least depths <60 feet in the northeast portion of the survey area. Several surveyed soundings in all but one area (yellow box in Figure 14) were observed to be less than 60 feet. There is one isolated area in the northeast portion of the survey area that is uncharted where surveyed soundings are less than 60 feet (blue box in Figure 14), but this area is in close proximity to a charted 52 foot wreck. There is an area in the south central portion of the survey area within the currently charted 60 foot contour where the majority of surveyed soundings are >60 feet, and an area in the southeast portion of the survey area where <60 foot surveyed sounding extend beyond the charted 60 foot contour. These areas are highlighted by blue boxes in Figure 14.

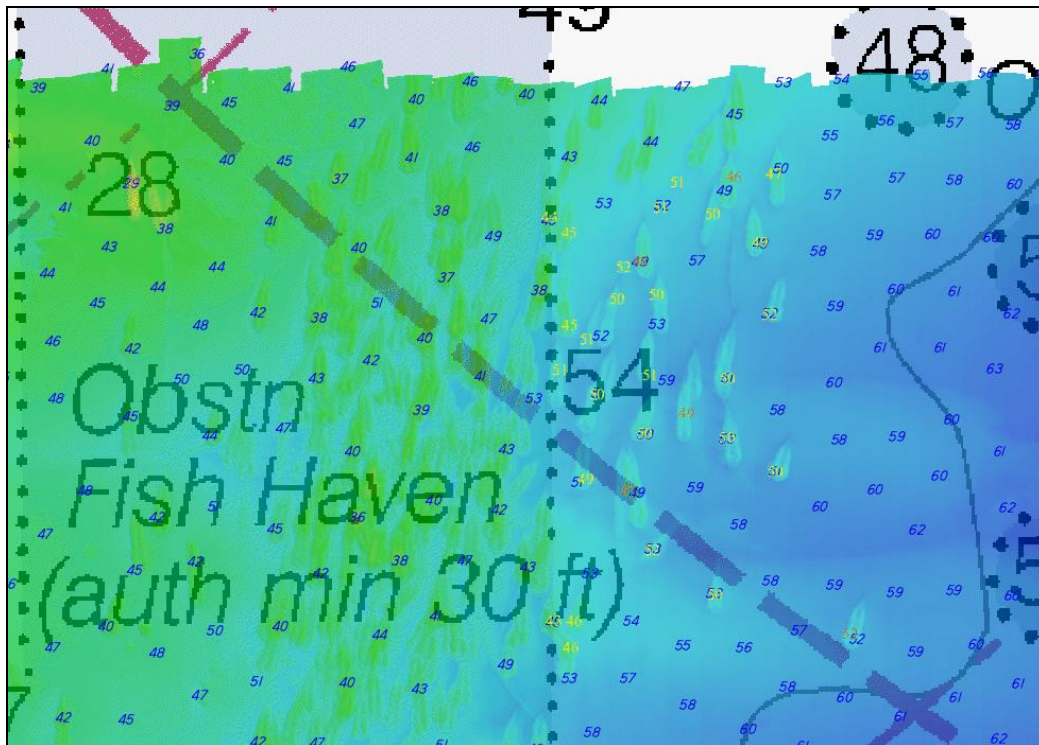


Figure 8. Spoil features east of charted Fish Haven that have shoaler depths than currently charted 54 foot depth. Blue numbers indicate the selected sounding layer, yellow numbers indicate examined soundings and orange numbers indicate designated soundings.

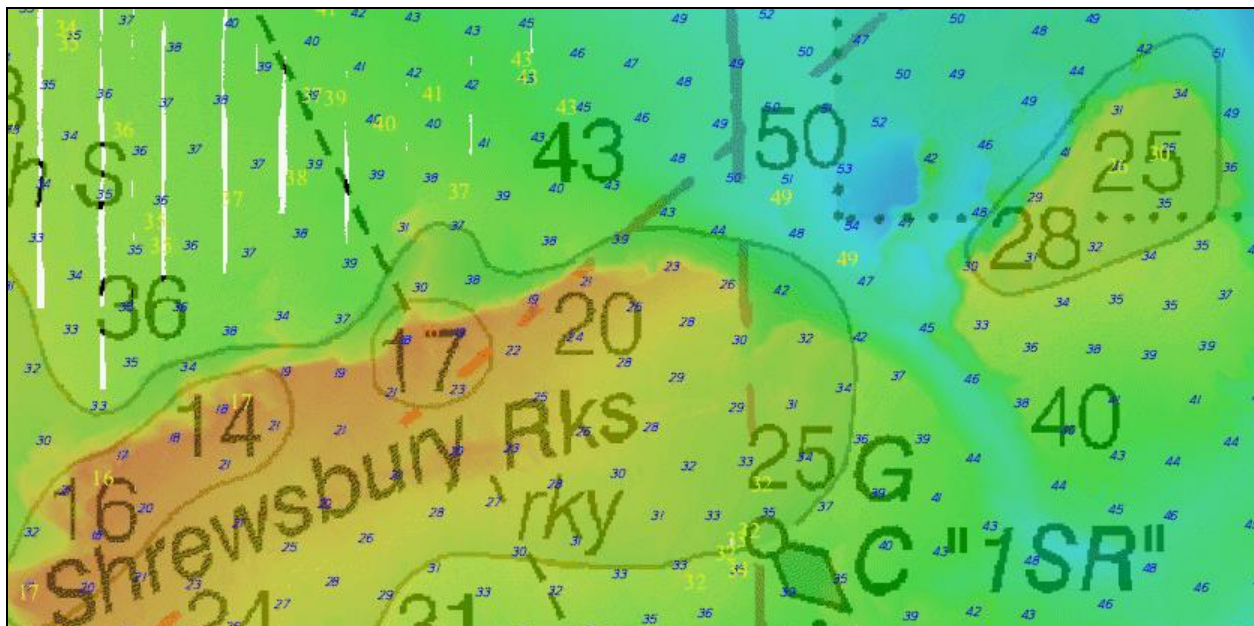


Figure 9. Surveyed soundings are deeper than the charted 14 and 25 foot depths within Shrewsbury rocks. There is a feature within the enclosed shoal to the east with a least depth of 26 feet and the hydrographer recommends retaining the shoal depth. Blue numbers indicate the selected sounding layer, yellow numbers indicate examined soundings and orange numbers indicate designated soundings.

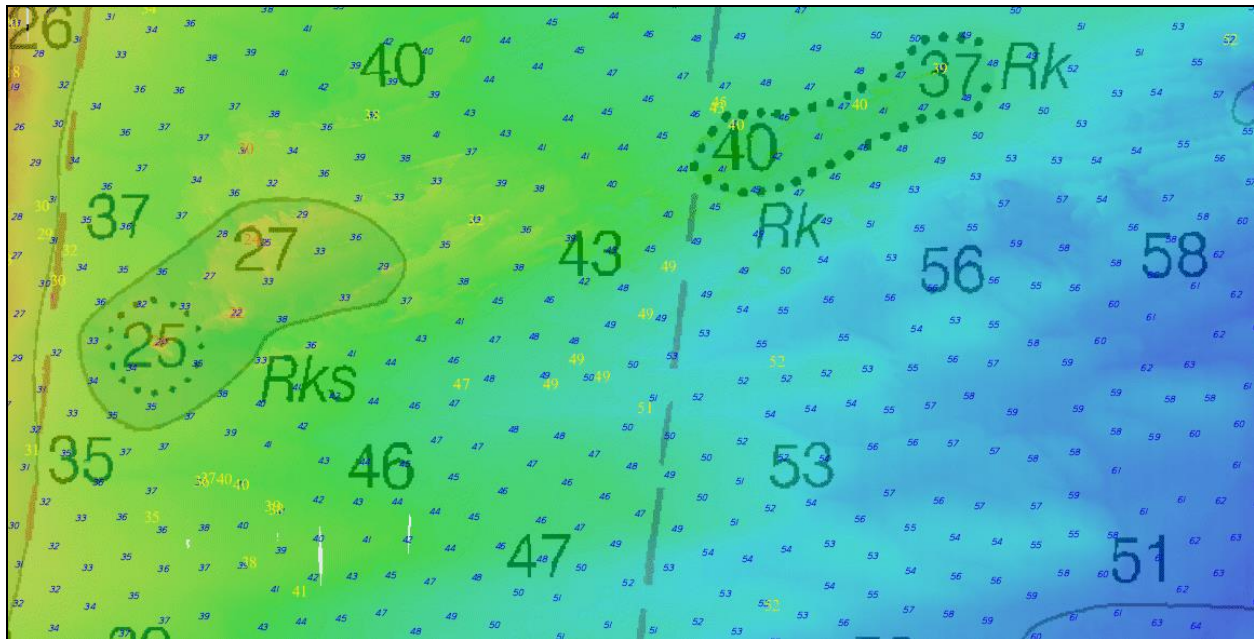


Figure 10. Several surveyed soundings shallower than charted depths were observed within the charted Rks to the west. Surveyed soundings are at least 8 feet deeper than the charted 51 foot depth to the southeast. Blue numbers indicate the selected sounding layer, yellow numbers indicate examined soundings and orange numbers indicate designated soundings.

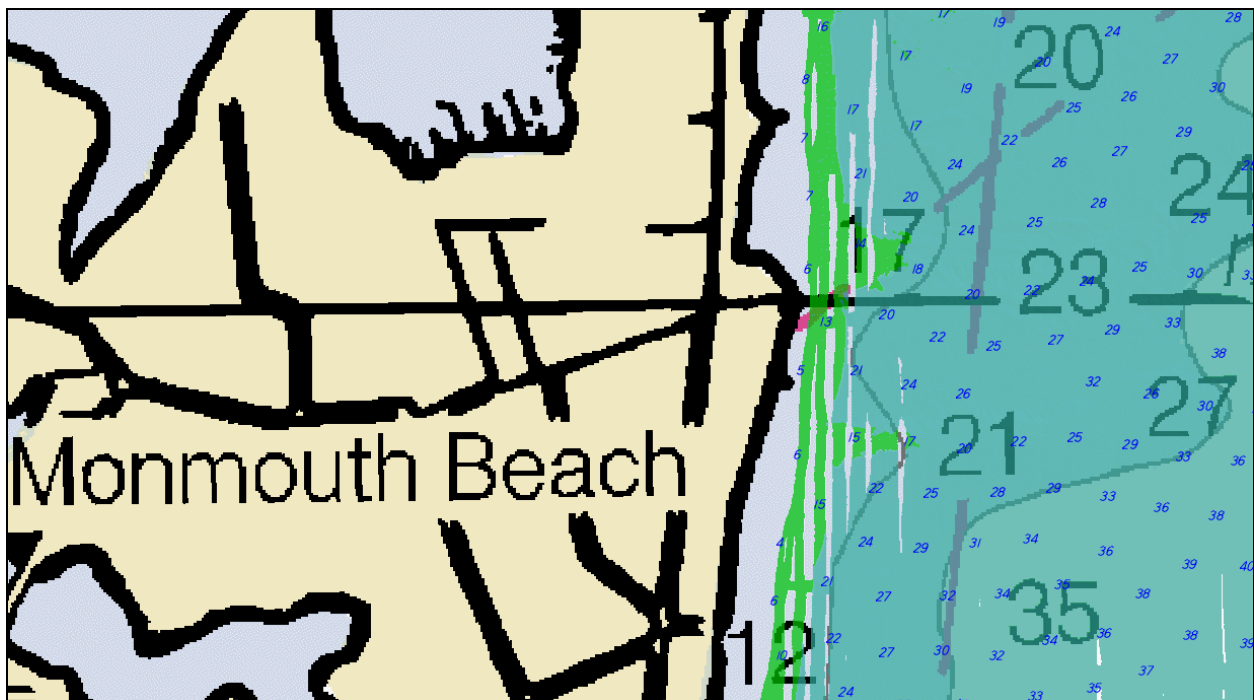


Figure 11. Several surveyed depths shallower than 18 feet extend beyond the 18 foot contour off of Monmouth Beach, NJ. 0 – 5.4864 meter depths in green and depths greater than 5.4864 meters in blue.

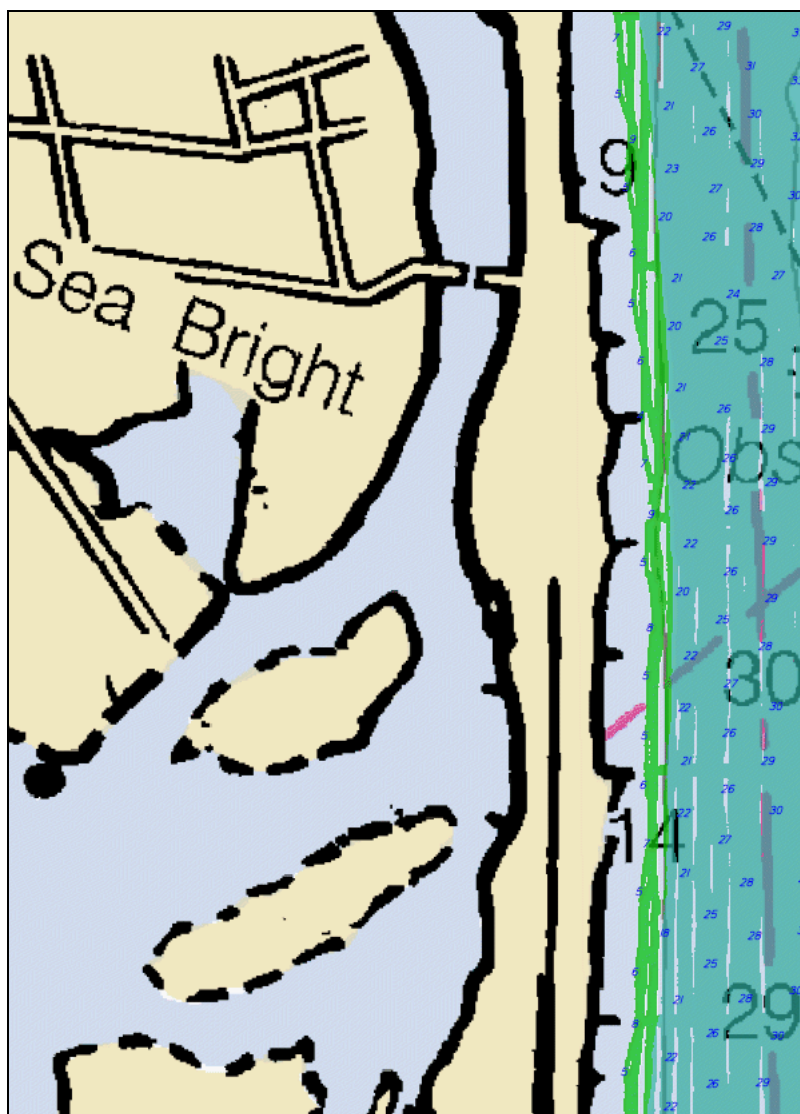


Figure 12. Surveyed depths shallower than 18 feet extend beyond the 18 foot contour off of Sea Bright, NJ. 0 – 5.4864 meter depths in green and depths greater than 5.4864 meters in blue.

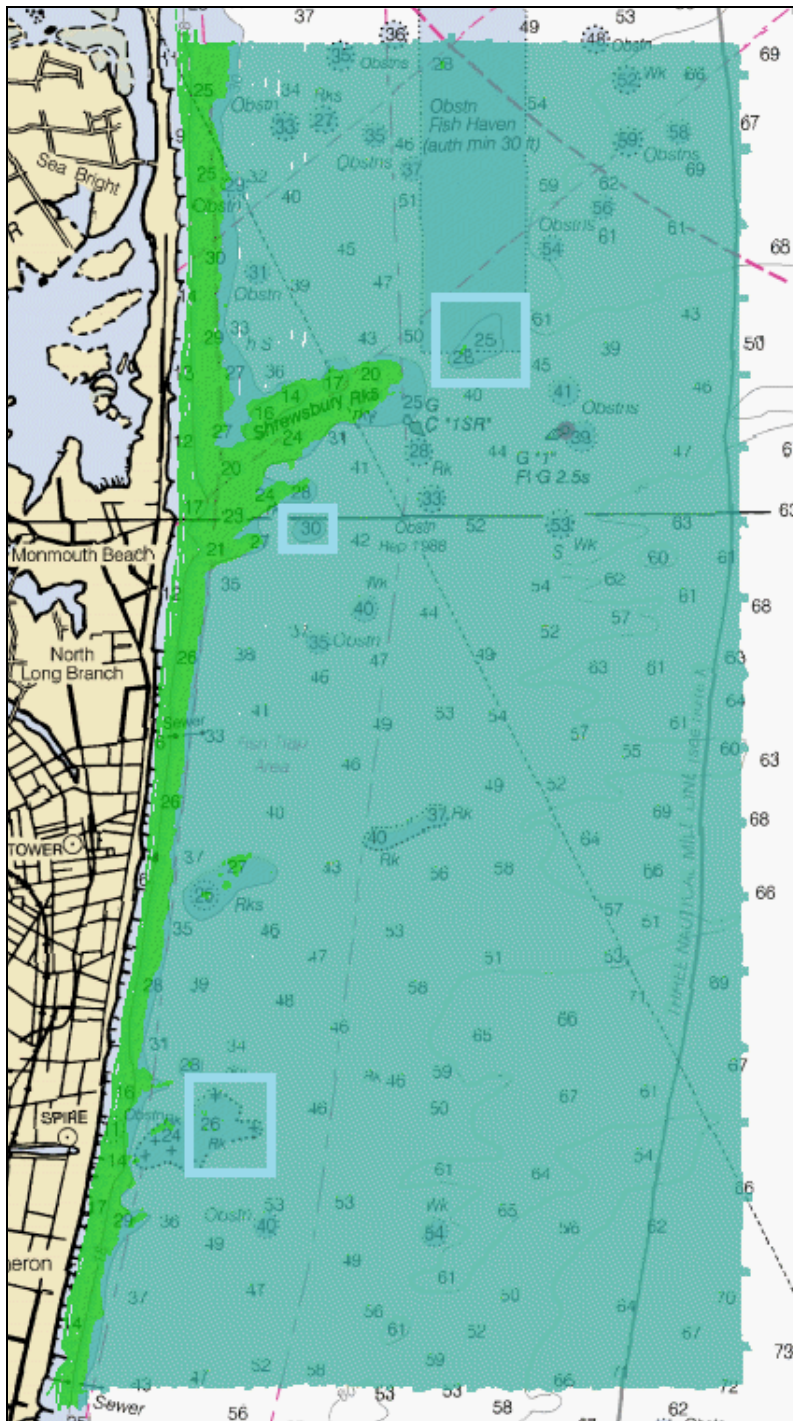


Figure 13. The majority of surveyed depths 30 feet or shallower are well within the currently charted 30 foot contour. A user defined color range map was used with 0 – 9.144 meter depths in green and >9.144 meter depths in blue; 9.144 meters represents 30 feet. Blue boxes indicate areas currently charted with depths 30 feet shallower where the majority of surveyed soundings are greater than 30 feet.

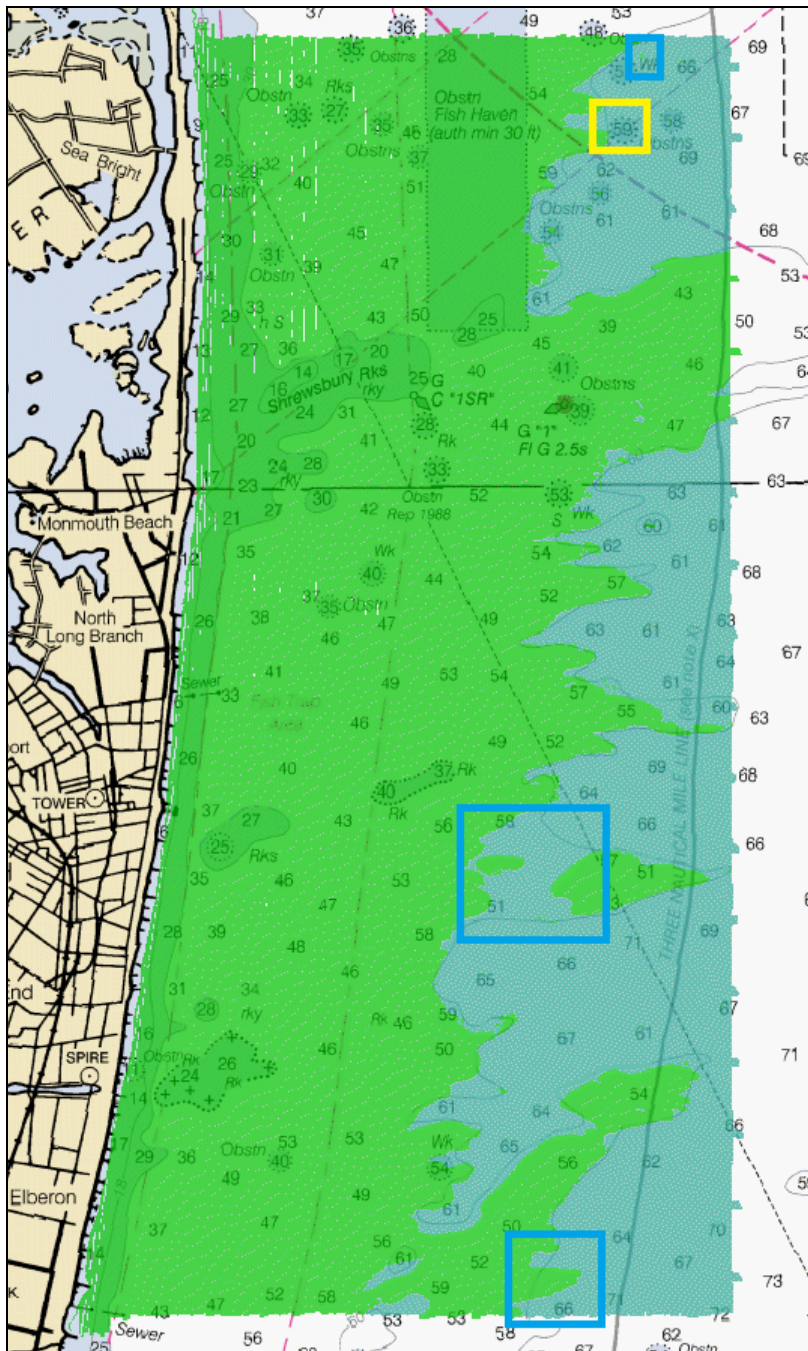


Figure 14. 0 – 18.288 meter depths in green and >18.288 depths in blue; 18.288 meters represents 60 feet. Areas of interest in blue and yellow boxes; refer to text.

12324

Fourteen (14) 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 (05/12/2014). These all correspond to DtoNs submitted for this survey.

The 12324_1.Kap is the only portion of this chart that covers a portion of H12609. Surveyed soundings generally agree with charted depths within 1 – 2 feet. The several more significant differences that were observed generally agree with those observed during the comparison with chart 12326 (east of the charted Fish Haven, vicinity of Shrewsbury Rocks, the shoal east of Shrewsbury Rocks and rocky area southwest of Shrewsbury Rocks). In addition to the 30 foot contour, the observations of which are comparable to the comparison with chart 12326, chart 12324 shows the nearshore in more detail, including the 6, 12 and 18 foot contours. There are significant differences between surveyed soundings and charted depths in the nearshore. Surveyed soundings indicate that the whole shoreline has migrated seaward, and much shallower surveyed depths as compared to charted depths are evident along the majority of the coastline. A selected sounding layer of nearshore depths was provided to NOAA prior to submission of this report; refer to Appendices\II_Supplemental_Survey_Records_&_Correspondence for additional information.

12325

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 (05/12/2014).

There are no depths on the Atlantic side of the NJ coast on this chart with which to compare H12609; refer to Final Feature File for information regarding charted jetties and piers.

D.1.2. Electronic Navigational Charts

ENC Name	Scale	Edition	Update Application Date	Issue Date	Preliminary
US4NY1AM	80000	27	9/19/2013	20140616	No
US5NJ30M	40000	17	12/31/2013	20140619	No

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.

US5NJ30M

US4NY1AM depths generally match those of RNC 12324 within 1 foot and the comparisons for the RNC are valid for the ENC.

D.1.3. AWOIS Items

Nine (9) AWOIS items exist within the bounds of this survey. AWOIS 9700 is a 33 foot charted obstruction with a ‘for information’ search type. AWOIS 8070 is a 27 foot charted obstruction with a ‘for information’ search type. AWOIS items 9700 and 8070 are in close proximity and bathymetry and imagery data indicates the two obstructions are part of a larger rocky area. Surveyed soundings match the 33 foot depth for AWOIS 9700 but are slightly deeper (29 feet) than the charted depth for AWOIS 8070 (27 feet). 8071 is a 52 foot charted wreck with a ‘for information’ search type. Bathymetry and backscatter confirm a contact at this location with debris-like characteristics, but with a least depth of 56 feet. 4293 is a 28 foot charted obstruction representing a larger shoal area with a ‘for information’ search type. Surveyed bathymetry and imagery indicate that AWOIS 4293 is part of a larger, rocky shoal area and though the length and width of the top of the feature match closely to the information provided (60 m x 25 m), the whole shoal is much bigger at 120 x 140 m. The surveyed least depth of the feature is 30 feet, slightly deeper than the currently charted 28 foot depth. 8069 is a 33 foot charted obstruction with a 200 m search radius. Complete multibeam and SSS were acquired within the radius and although bathymetry and imagery indicate the area is rocky, the surveyed least depth is 37 feet, which, although deeper than the currently charted depth, is still shallower than surrounding charted and surveyed depths. 8097 is a 40 foot charted wreck with a 200 m search radius. Complete multibeam and SSS were acquired within the radius and confirm a contact at this location with a least depth of 40 feet. 8074 is 39 foot obstruction, a large sunken buoy located by diver investigation; item has a ‘for information’ search type. Item is located between 41 and 39 foot obstructions on charts 12326 and 12324 near a charted buoy. Bathymetry and backscatter confirm a contact at this location, with a least depth of 42 feet. 8073 is charted as a 53 foot wreck; information indicates it was a large cylindrical object; item has a ‘for information’ search type. The bathymetry and backscatter confirms a contact at this location with a least depth of 52 feet. 1531 is a 54 foot charted wreck with a ‘for information’ search type. Bathymetry and backscatter indicate three linear contacts at the location of the AWOIS item with a least depth of 56 feet. Refer to the final feature file for additional information.

D.1.4. Charted Features

Chart 12326

There is a portion of a charted Fish Haven with an authorized depth of 30 feet in the north central section of the survey area. A shoaler depth of 28 feet within this area was submitted as a DtoN and subsequently added to the chart. A fish trap area with the warning that submerged pilings may exist is charted near the coastline that extends the length of the Sheet; refer to section D.1.5 for additional information on pilings. There are 11 individual charted obstructions, wrecks and rocks, 9 of which are AWOIS items (refer to D.1.3 for additional information). One of the AWOIS items (8074) is not specifically charted, but between 41 foot and 39 foot charted obstructions not associated with AWOIS items. Several features are located near the 41 foot charted depth, evident in the bathymetry and backscatter data; the least depth of these features is 42 feet. No features were observed at the location of the 39 foot charted obstruction. There is also a 59 foot charted obstruction not associated with an AWOIS item in the northeast portion of the survey area; no feature was observed in the

bathymetry or backscatter data. Several additional obstructions have been added to the chart, in accordance with the DtoNs submitted for this Sheet. In addition to the charted Shrewsbury rocks, there are 3 areas charted as shoal and rocky; refer to section D.1.7 for additional information. There is a charted cable area and one charted sewer pipe within the survey area and an additional sewer pipe is charted just outside the southwest survey boundary; refer to section D.2.5 for additional information. There are two charted buoys within the survey area; refer to section D.2.3 for additional information. Also refer to section D.2.1 for information regarding charted shoreline features. Refer to the Final Feature File for additional information.

Chart 12324

In addition to the charted features for Chart 12326, which are also charted on 12324, there are two additional charted obstructions. A 40 foot obstruction is attached to the Fish Haven on the upper west side. Bathymetry and side scan sonar imagery data confirm a rocky feature at this location with a least depth of 40 feet; a spoil feature is also located just to the southwest with a least depth of 38 feet. A 46 foot charted as Rk exists further down the sheet which this simply shows up as a charted depth on chart 12326. Bathymetry and side scan sonar imagery confirm a rocky feature at this location with a least depth of 45 feet. Several of the larger rocky areas of Chart 12326 are divided into individual obstructions on chart 12324 (Refer to section D.1.7 for additional information about rocky areas).

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. These include the spoil areas east and west of the fish haven, a group of uncharted submerged pilings and debris close to shore. Several areas with high concentrations of small contacts were delineated from the side scan sonar data (Figure 15). One representative contact was chosen when applicable and added to the side scan sonar contact list instead of picking each individual contact (Figure 15). Refer to the Final Feature File for additional information.

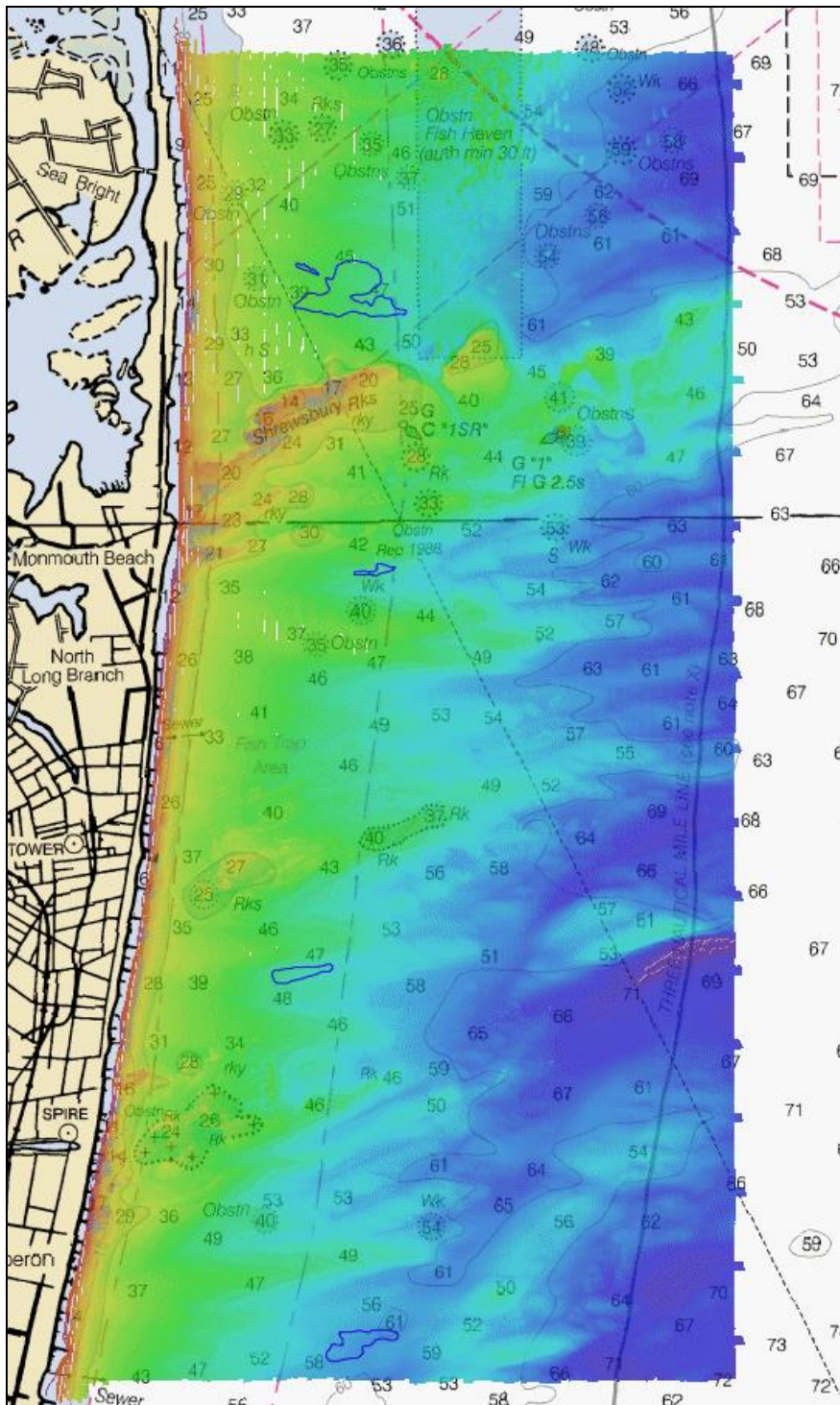


Figure 15. Areas containing more dense population of small contacts as delineated from the SSS data.

D.1.6. Dangers to Navigation

20 Dangers to Navigation were submitted for this survey. DtoNs 1 – 19 were submitted from the R/V *Shearwater* data. The original DtoN report received from NOAA states that it is for DtoNs 1 – 19, however, only 1 – 16 are listed. The S-57 file from NOAA with the 19 features is also included in the Appendices and the three not officially in the DtoN report are included in the Final Feature File. The three not included are Shoal features at 1) 40-22-27.60 N, 073-55-34.31 W, 2) 40-22-07.34 N, 073-55-43.61 W and 3) 40-20-03.59, 073-58-12.73W. The 20th DtoN was submitted from the R/V *C-Wolf* nearshore data. 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 charted rocky shoals within the survey area, including Shrewsbury Rocks. During processing, areas with rocky characteristics were delineated mainly from the side scan sonar data, but all datasets, including bathymetry and backscatter were also used, especially to complete the polygons where side scan sonar data was not collected. Figure 16 shows these polygons overlain on transparent bathymetry. Yellow polygons are shown in areas where the chart indicates that these areas are rocky and polygons are outlined in black where the chart does not specifically indicate rocks. Due to the dense population of contacts within these areas, specific contacts were not picked unless they appeared unusual or manmade. Several examined and/or designated soundings were chosen in these areas and added to the Final Feature File along with the polygons if applicable. Figure 17 shows the polygons overlain on the backscatter. Areas to the east of Shrewsbury Rocks are inferred to also be rocky, based on bathymetry and backscatter similarities, but were not delineated due to lack of side scan sonar data.

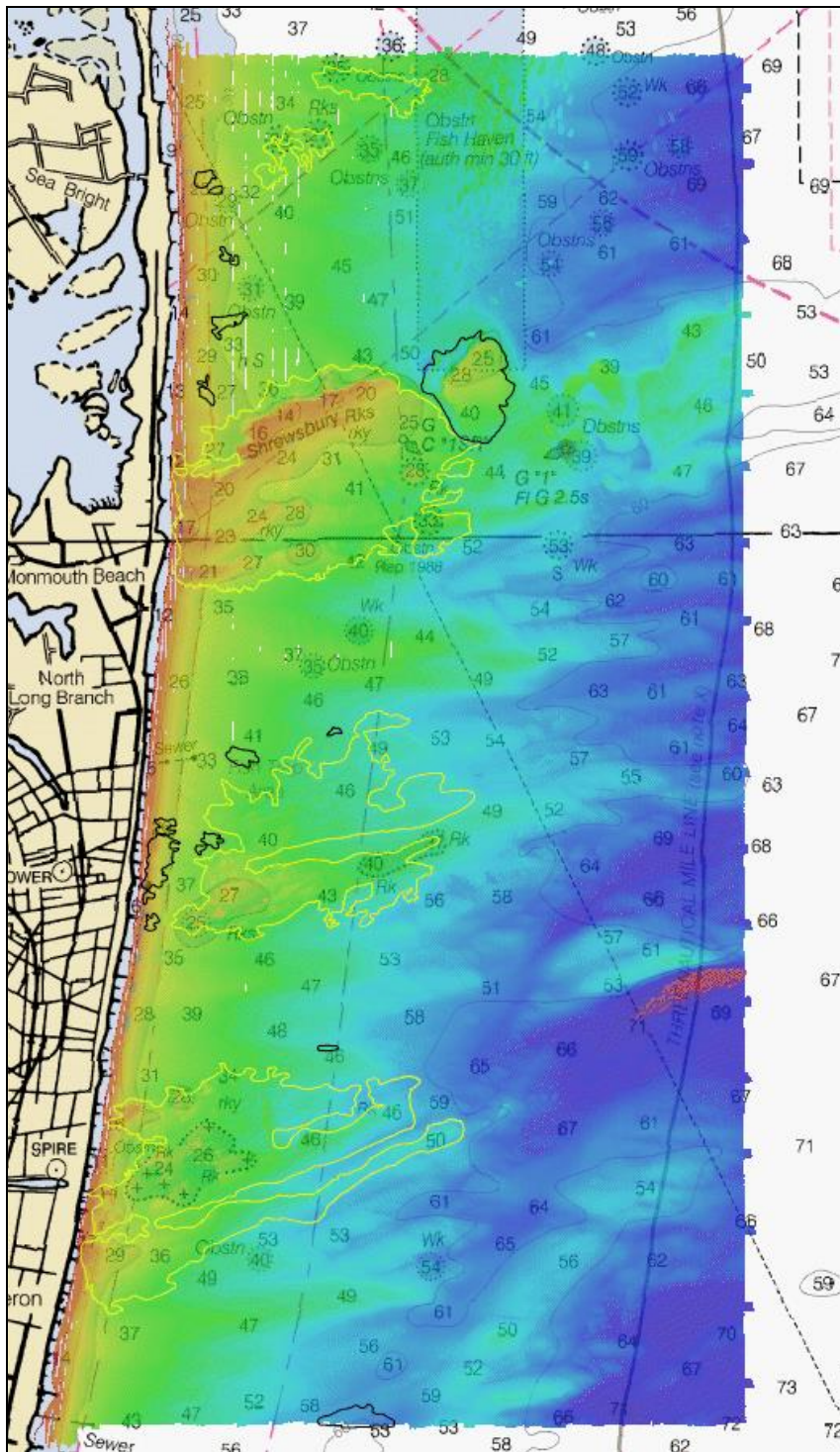


Figure 16. Delineation of areas with rocky characteristics based on side scan sonar, bathymetry, and backscatter with bathymetry in background.

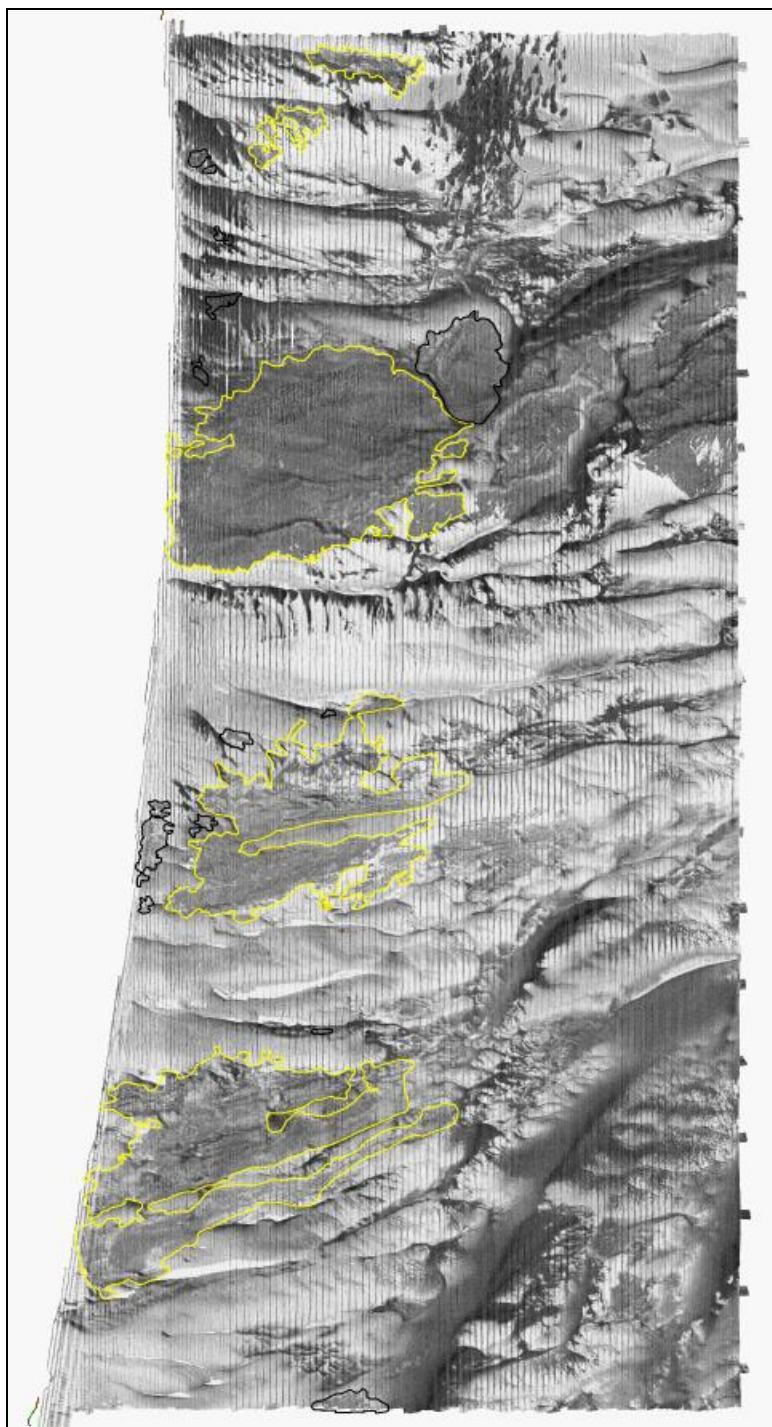


Figure 17. Delineation of areas with rocky characteristics based on side scan sonar, bathymetry, and backscatter with backscatter as the background.

D.1.8. Channels

No channels exist within the boundaries of the survey, but a precautionary area extends into the northeast portion of the survey area. Depths within this area generally agree with charted depths within 1 – 2 feet and several obstructions exist on chart 12326. Uncharted spoil areas are located in close proximity to the Fish Haven, some of which are shoaler than the charted 54 foot depths on charts 12326 and 12324.

D.2. Additional Results

D.2.1. Shoreline

Limited shoreline verification was accomplished using the composite source file (CSF). All features with attribute assigned populated with 'Assigned' were verified and updated in the Final Feature File.

D.2.2. Prior Surveys

Prior Survey Features were provided by NOAA in the form of a .PRI file. Features are from prior surveys H10284 (1988) and H06190 (1936). The majority of features correspond to items within the Fish Haven, or currently charted rocks, wrecks, obstructions and AWOIS items. Three features within the PRI file do not correspond with any feature within the CSF file or with charted features. One described as a wreck in the PRI file is located at 40-16-51.1576 N, 073-56-24.1296 W. This area appears rocky, but no feature with wreck-like characteristics is observed. Another obstruction is located at 40-19-53-8979 N, 073-56-12.5016 W but collected data does not indicate a feature at this location. The last obstruction is located at 40-20-15.1993 N, 073-56-02.2992 W shows a feature in the bathymetry and backscatter data of this survey with a least depth of 48 feet at this location.

D.2.3. Aids to Navigation

Two Aids to Navigation are currently charted within the survey limits: Shrewsbury Rocks Buoy 1SR and Shrewsbury Rocks Lighted Buoy. The two buoys were observed in their charted locations. Refer to the Final Feature File for additional information.

D.2.4. Overhead Features

Overhead features do not exist for this survey.

D.2.5. Submarine Features

A submarine cable area is charted within northern portion of the survey area. Several linear features were observed within survey area and one within the submarine cable area that has characteristics of an exposed pipeline or cable. There is one charted sewer pipeline within the survey area that was observed in the bathymetry and SSS data. An additional sewer pipeline is

charted outside the southwest boundary of the survey area. The vessel followed this pipeline until it split, and followed one section up into the survey area with a combination of MB and SSS data. Refer to the Final Feature File for additional information.

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 anomalous environmental conditions were observed during the survey. However, there are numerous semi-linear features of low reflectivity backscatter and SSS imagery that correspond to anomalous bathymetry. In several lines these areas appear to be depressions, but in other areas it appears to be subsurface penetration of the multibeam, but not necessarily a depression. Data was not entirely removed from these areas due to the ambiguity of the type of seafloor.

D.2.9. Construction and Dredging

There was active dredging in the survey area during survey operations. Fixes were obtained as close to the dredging operation as a possible and are 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

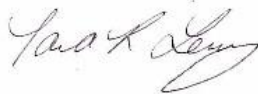
LETTER OF APPROVAL

REGISTRY NUMBER H12609

This report is respectfully submitted.

Field operations contributing to the accomplishment of the survey H12609 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.



Tara Levy
Chief of Party
C & C Technologies
July 2014



Nicole Galloway
Geoscientist
C & C Technologies
July 2014

APPENDIX I

TIDE NOTE AND GRAPHICS

ABSTRACT OF TIMES OF HYDROGRAPHY

Project: OPR-C319-KR-13 Registry No.: H12609

Contractor Name: C & C Technologies, Inc.

Date: July 2014

Sheet Number: 2

Inclusive Dates: October, 2013 - May, 2014

Field Work is Complete

Time (UTC)

Day (yy/mm/dd)	Julian Day	Start	End	Year
13/10/22	295	12:05	12:20	2013
13/10/22	295	13:02	19:57	2013
13/10/22	295	20:26	24:00	2013
13/10/23	296	00:00	00:22	2013
13/10/23	296	00:51	01:00	2013
13/10/23	296	01:14	08:17	2013
13/10/23	296	14:48	15:52	2013
13/10/24	297	02:24	02:35	2013
13/10/24	297	03:00	13:35	2013
13/10/24	297	13:51	14:02	2013
13/10/24	297	14:37	23:22	2013
13/10/24	297	23:41	24:00	2013
13/10/25	298	00:02	00:46	2013
13/10/25	298	00:58	02:55	2013
13/10/25	298	03:40	03:50	2013
13/10/25	298	04:16	15:21	2013
13/10/25	298	15:37	15:45	2013
13/10/25	298	16:00	24:00	2013
13/10/26	299	00:00	01:59	2013
13/10/26	299	02:09	14:00	2013
13/10/26	299	14:09	15:16	2013
13/10/26	299	15:24	22:48	2013
13/10/26	299	23:01	23:48	2013
13/10/27	300	12:47	12:55	2013
13/10/27	300	13:13	24:00	2013
13/10/28	301	00:00	00:32	2013
13/10/28	301	01:03	04:16	2013
13/10/28	301	04:34	13:55	2013
13/10/28	301	14:09	14:47	2013
13/10/28	301	14:55	15:04	2013
13/10/28	301	15:15	24:00	2013
13/10/29	302	00:00	05:26	2013
13/10/29	302	05:54	06:16	2013
13/10/29	302	06:27	06:49	2013
13/10/31	304	00:33	12:56	2013
13/10/31	304	13:06	19:29	2013
13/11/03	307	02:17	02:24	2013
13/11/03	307	02:34	04:19	2013

Day (yy/mm/dd)	Julian Day	Start	End	Year
13/11/03	307	05:26	05:37	2013
13/11/03	307	06:03	14:25	2013
13/11/05	309	07:00	07:08	2013
13/11/05	309	07:24	12:55	2013
13/11/05	309	13:04	20:15	2013
13/11/05	309	20:36	24:00	2013
13/11/06	310	00:00	03:36	2013
13/11/06	310	04:14	07:05	2013
13/11/06	310	07:33	13:42	2013
13/11/06	310	13:54	24:00	2013
13/11/07	311	00:00	03:32	2013
13/11/07	311	04:36	14:09	2013
13/11/07	311	15:01	16:24	2013
13/11/07	311	17:17	21:46	2013
13/11/07	311	22:28	24:00	2013
13/11/08	312	00:00	03:51	2013
13/11/08	312	04:00	14:31	2013
13/11/08	312	14:43	24:00	2013
13/11/09	313	00:00	02:00	2013
13/11/09	313	02:22	05:52	2013
13/11/09	313	06:12	12:26	2013
13/11/09	313	12:46	12:55	2013
13/11/09	313	13:02	15:08	2013
13/11/09	313	15:33	24:00	2013
13/11/10	314	00:00	01:16	2013
13/11/10	314	01:27	10:03	2013
13/11/10	314	10:22	11:37	2013
13/11/10	314	11:45	15:19	2013
13/11/10	314	15:34	20:10	2013
13/11/10	314	20:30	24:00	2013
13/11/11	315	00:00	04:22	2013
13/11/11	315	05:06	05:10	2013
13/11/11	315	05:26	06:15	2013
13/11/11	315	06:49	08:10	2013
13/11/17	321	17:17	17:40	2013
13/11/17	321	17:58	18:36	2013
13/11/17	321	18:56	19:10	2013
13/11/17	321	19:20	19:26	2013
13/11/17	321	19:40	21:29	2013
14/05/06	126	13:50	21:17	2014
14/05/07	127	12:10	12:47	2014
14/05/07	127	14:04	18:59	2014
14/05/11	131	19:30	20:56	2014
14/05/12	132	12:01	17:22	2014

FINAL TIDE NOTE and FINAL TIDE ZONING CHART

DATE: July, 2014

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-C319-KR-13

HYDROGRAPHIC SHEET: H12609

LOCALITY: Vicinity of Shrewsbury Rocks

TIME PERIOD: October 22, 2013 – May 12, 2014

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: 2.364 m

REMARKS: RECOMMENDED ZONING

Use zones identified as: SA2, SA14

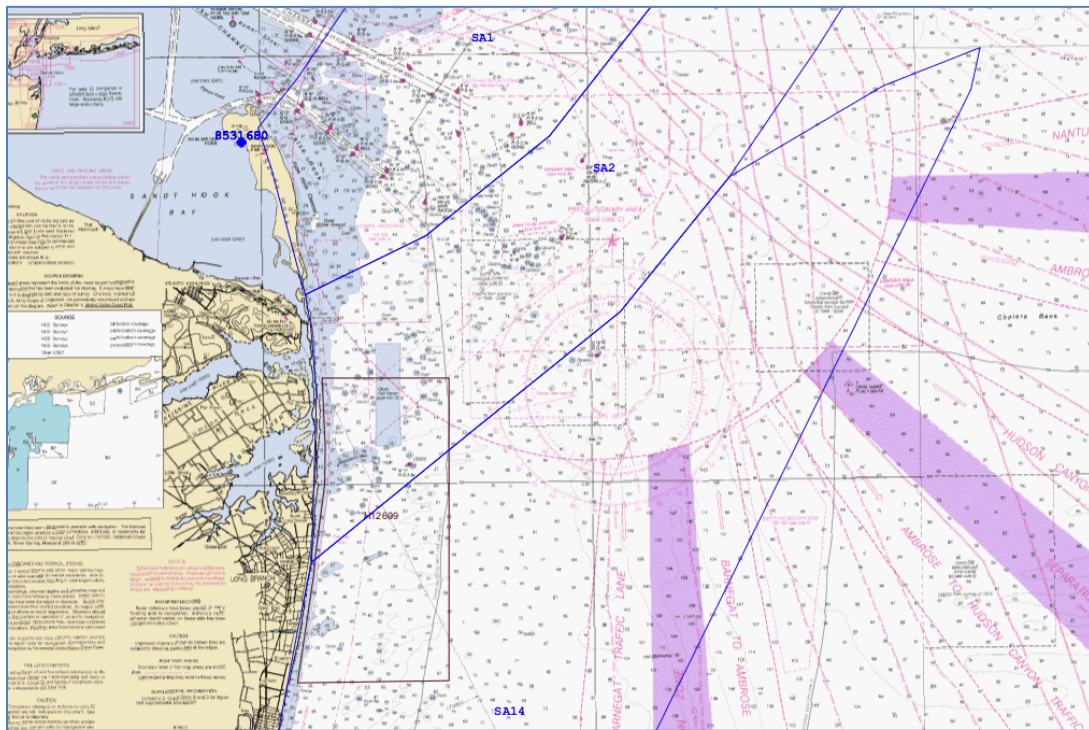


Figure 1. Final Tidal Zoning Chart

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.

APPENDIX II

SUPPLEMENTAL SURVEY RECORDS
AND CORRESPONDENCE

Re Post Sandy Survey H12608 and H12609.txt

Subject:

Re: Post Sandy Survey H12608 and H12609

From:

Tara Wallace - NOAA Federal <tara.wallace@noaa.gov>

Date:

6/19/2014 5:09 AM

To:

Daniel Morrow - NOAA Federal <daniel.morrow@noaa.gov>

CC:

John Barber - NOAA Federal <john.barber@noaa.gov>, Matthew Jaskoski - NOAA Federal <matthew.jaskoski@noaa.gov>, Lucy Hick - NOAA Federal <lucy.hick@noaa.gov>, Nicole Galloway <nicole.galloway@cctechnol.com>, Michael Gonsalves - NOAA Federal <michael.gonsalves@noaa.gov>, Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>

Thanks Dan -

We will process for you. Just FYI, next time also send to ocs.ndb@noaa.gov.

Tara

On Wed, Jun 18, 2014 at 3:44 PM, Daniel Morrow - NOAA Federal <daniel.morrow@noaa.gov> wrote:

Greetings Tara,

Requesting that NDB process the attached .000 ss files derived from H-12608 and H-12609 as a DTON. The email thread explains the situation. The source will most likely result in a shoaling note, instead of multiple point features....

Please let me know if you need more info or if I'm not navigating through proper channels.

Thanks,

Dan Morrow

On Wed, Jun 18, 2014 at 12:31 PM, Castle Parker - NOAA Federal <castle.e.parker@noaa.gov> wrote:

Good day,

Reference the attached S57 format file with selected soundings in the near shore area; sounding interval is approximately 40m spacing. If you need something else, we'll have to go back to the field unit.

Let me know if the attached files will provide the perspective you need.

Regards,

Gene

Castle Eugene Parker

Atlantic Hydrographic Branch

Hydrographic Team Lead

Re Post Sandy Survey H12608 and H12609.txt

Physical Scientist, NOAA Office of Coast Survey

castle.e.parker@noaa.gov

office (757) 441-6746 x115

From: Daniel Morrow - NOAA Federal [mailto:daniel.morrow@noaa.gov]
Sent: Wednesday, June 18, 2014 12:25 PM
To: John Barber - NOAA Federal
Cc: Castle Parker - NOAA Federal; Matthew Jaskoski - NOAA Federal; Edward Owens - NOAA Federal; Lucy Hick - NOAA Federal; Nicole Galloway; Michael Gonsalves - NOAA Federal
Subject: Re: Post Sandy Survey H12608 and H12609

Greetings,

Appreciate the information and consideration. PBE is requesting SS survey data so the area can be evaluated. Considering the size, and analysis from AHB, I am in agreement that a note will most likely be the best charting action. I'd like to have the SS data to inform the decision.

Thanks,

Dan Morrow

On Tue, Jun 17, 2014 at 3:10 PM, John Barber - NOAA Federal
<john.barber@noaa.gov> wrote:

Gene,

I just did a quick read and look of your e-mail and graphics. I think what you are advising is the proper way to go. A note and maybe a few soundings if they any are seaward of the NALL. I need to consult with Dan Morrow, the Acting Chief of PBE. PBE now has the responsibility of NJ south to NC.

Thanks for the headsup Gene!

JB

On Tue, Jun 17, 2014 at 3:04 PM, Castle Parker - NOAA Federal
<castle.e.parker@noaa.gov> wrote:

Good Day John,

AHB has recently received sounding data from one of our contract field units surveying H12608 and H12609, covering an area that begins at Sandy Hook, NJ at the north end of H12608 and continues to Deal, NJ just north of Ashbury Park, NJ at the south end of H12609. The surveys are ongoing in 2014 and not completed. The sounding data was reviewed at AHB and bearing in mind the shoaler

Re Post Sandy Survey H12608 and H12609.txt
near shore depths are migrating sea ward, AHB is hesitant to submit as Dangers to Navigation based upon the number of shoal depths and the fact that the shoreline also requires updating. The other thought was that if someone is navigating in this area, the vessel draft would have to be shallow and therefore when navigating near shore, caution is always necessary.

Our thoughts and hesitancy to submit as Dtons was that the shoal depths range between 3ft and 7ft and in relation to the proximity to shore, the mariner is most likely navigating in an area where the depths are charted a deeper, but they would be navigating within a 100m +/- m 25m from the shoreline. Considering the recent past Dton submissions and this present situation, I am providing this information to you. Discussions with Ed Owens and AHB Chief Matt Jaskoski, it was more prudent to provide information to you and then the charting action can be decided by you and your team.

The submitted soundings are shoaler than the depth areas of which they are located in comparison to the charted depths and depth curves; many are located on or seaward of the 12ft depth curve.

The depths are located from 40-27-34.346N 073-59-14.926W at the north end of H12608 to 40-15-17.222N 073-59-18.741W at the south end of H12609. I have included several screen images below.

Based upon AHB's recent Dton submission in Jamaica Bay, it was recommended that maybe a note should be added to the chart that details that the shoreline has migrated seaward and exercise caution in the near shore areas. Discussion with you recently and the many changes related to post Hurricane Sandy surveys, a chart note or warning is sufficient to apply to the chart till the survey has been verified and the HCell submitted to Marine Chart Division. Therefore, this email passing this current situation to you for action as you see fit. AHB would be negligent if we didn't inform you of what the field unit has found. If you wish to have S57 files delivered from the sounding data provided by the field unit, I can and will do at your request.

Thanks for your consideration. Do not hesitate to contact me for additional information or to discuss.

Regards,

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

Re Post Sandy Survey H12608 and H12609.txt

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Tara Wallace, Branch Chief
Nautical Data Branch, Marine Chart Division
Office of Coast Survey, National Ocean Service
(301) 713-2737 ext. 123

Re Post Sandy Survey H12608 and H12609_images.txt

Subject:

Re: Post Sandy Survey H12608 and H12609

From:

Daniel Morrow - NOAA Federal <daniel.morrow@noaa.gov>

Date:

6/27/2014 4:26 PM

To:

Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>

CC:

John Barber - NOAA Federal <john.barber@noaa.gov>, Matthew Jaskoski - NOAA Federal <matthew.jaskoski@noaa.gov>, Lucy Hick - NOAA Federal <lucy.hick@noaa.gov>, Nicole Galloway <nicole.galloway@cctechnol.com>, Michael Gonsalves - NOAA Federal <michael.gonsalves@noaa.gov>, OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov>

Greetings,

I wanted to follow up with AHB regarding the data provided from H-12608 and H-12609. As mentioned in the initial email, applying the hydro poses a problem considering the dated shoreline. PBE is requesting shoreline from RSD from 40°25'29.37" to 073°58'55.29"W 40°16'10.69"N 073°59'04.37"W. Based on satellite imagery, it appears there has been extensive beach replenishment in the area, occurring sometime between 1995 and 2002 (screen shots).

Once PBE receives the requested shoreline from RSD, the survey data will be applied to the chart. At that point we will determine the best plan of action for release to the public, most likely a new edition.

Comments welcome.

Thanks,
Dan Morrow

On Wed, Jun 18, 2014 at 2:24 PM, Daniel Morrow - NOAA Federal <daniel.morrow@noaa.gov> wrote:

These files are more than enough. Thank you.

Dan Morrow

On Wed, Jun 18, 2014 at 12:31 PM, Castle Parker - NOAA Federal <castle.e.parker@noaa.gov> wrote:

Good day,

Reference the attached S57 format file with selected soundings in the near shore area; sounding interval is approximately 40m spacing. If you need something else, we'll have to go back to the field unit.

Let me know if the attached files will provide the perspective you need.

Regards,

Gene

Castle Eugene Parker

Re Post Sandy Survey H12608 and H12609_images.txt
Atlantic Hydrographic Branch

Hydrographic Team Lead

Physical Scientist, NOAA Office of Coast Survey

castle.e.parker@noaa.gov

office (757) 441-6746 x115

From: Daniel Morrow - NOAA Federal [mailto:daniel.morrow@noaa.gov]
Sent: Wednesday, June 18, 2014 12:25 PM
To: John Barber - NOAA Federal
Cc: Castle Parker - NOAA Federal; Matthew Jaskoski - NOAA Federal; Edward Owens - NOAA Federal; Lucy Hick - NOAA Federal; Nicole Galloway; Michael Gonsalves - NOAA Federal
Subject: Re: Post Sandy Survey H12608 and H12609

Greetings,

Appreciate the information and consideration. PBE is requesting SS survey data so the area can be evaluated. Considering the size, and analysis from AHB, I am in agreement that a note will most likely be the best charting action. I'd like to have the SS data to inform the decision.

Thanks,

Dan Morrow

On Tue, Jun 17, 2014 at 3:10 PM, John Barber - NOAA Federal
<john.barber@noaa.gov> wrote:

Gene,

I just did a quick read and look of your e-mail and graphics. I think what you are advising is the proper way to go. A note and maybe a few soundings if they any are seaward of the NALL. I need to consult with Dan Morrow, the Acting Chief of PBE. PBE now has the responsibility of NJ south to NC.

Thanks for the headsup Gene!

JB

On Tue, Jun 17, 2014 at 3:04 PM, Castle Parker - NOAA Federal
<castle.e.parker@noaa.gov> wrote:

Good Day John,

AHB has recently received sounding data from one of our contract field units surveying H12608 and H12609, covering an area that begins at Sandy Hook,
Page 2

Re Post Sandy Survey H12608 and H12609_images.txt
NJ at the north end of H12608 and continues to Deal, NJ just north of Ashbury Park, NJ at the south end of H12609. The surveys are ongoing in 2014 and not completed. The sounding data was reviewed at AHB and bearing in mind the shoaler near shore depths are migrating sea ward, AHB is hesitant to submit as Dangers to Navigation based upon the number of shoal depths and the fact that the shoreline also requires updating. The other thought was that if someone is navigating in this area, the vessel draft would have to be shallow and therefore when navigating near shore, caution is always necessary.

Our thoughts and hesitancy to submit as DtoNs was that the shoal depths range between 3ft and 7ft and in relation to the proximity to shore, the mariner is most likely navigating in an area where the depths are charted a deeper, but they would be navigating within a 100m +/- m 25m from the shoreline. Considering the recent past DtoN submissions and this present situation, I am providing this information to you. Discussions with Ed Owens and AHB Chief Matt Jaskoski, it was more prudent to provide information to you and then the charting action can be decided by you and your team.

The submitted soundings are shoaler than the depth areas of which they are located in comparison to the charted depths and depth curves; many are located on or seaward of the 12ft depth curve.

The depths are located from 40-27-34.346N 073-59-14.926W at the north end of H12608 to 40-15-17.222N 073-59-18.741W at the south end of H12609. I have included several screen images below.

Based upon AHB's recent DtoN submission in Jamaica Bay, it was recommended that maybe a note should be added to the chart that details that the shoreline has migrated seaward and exercise caution in the near shore areas. Discussion with you recently and the many changes related to post Hurricane Sandy surveys, a chart note or warning is sufficient to apply to the chart till the survey has been verified and the HCell submitted to Marine Chart Division. Therefore, this email passing this current situation to you for action as you see fit. AHB would be negligent if we didn't inform you of what the field unit has found. If you wish to have S57 files delivered from the sounding data provided by the field unit, I can and will do at your request.

Thanks for your consideration. Do not hesitate to contact me for additional information or to discuss.

Regards,

Gene Parker

Castle Eugene Parker

Atlantic Hydrographic Branch

Hydrographic Team Lead

Physical Scientist, NOAA Office of Coast Survey

castle.e.parker@noaa.gov

Re Post Sandy Survey H12608 and H12609_images.txt
office (757) 441-6746 x115

-

--
John Barber
Chief Products Branch C
NOAA
National Ocean Service
Marine Chart Division
Tel. work 301-713-2714 Ext. 138

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Dan Morrow
301-713-2713 ext 133

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Dan Morrow
301-713-2713 ext 133

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Dan Morrow
301-713-2713 ext 133

1995_image.JPG

2013_image.JPG

Attachments:
1995_image.JPG 70.9 KB
2013_image.JPG 80.2 KB

Re Post Sandy Survey H12608 and H12609_images2.txt

Subject:

Re: Post Sandy Survey H12608 and H12609

From:

Daniel Morrow - NOAA Federal <daniel.morrow@noaa.gov>

Date:

6/27/2014 4:28 PM

To:

Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>

CC:

John Barber - NOAA Federal <john.barber@noaa.gov>, Matthew Jaskoski - NOAA Federal <matthew.jaskoski@noaa.gov>, Lucy Hick - NOAA Federal <lucy.hick@noaa.gov>, Nicole Galloway <nicole.galloway@cctechnol.com>, Michael Gonsalves - NOAA Federal <michael.gonsalves@noaa.gov>, OCS NDB - NOAA Service Account <ocs.ndb@noaa.gov>

Wrong screen grab. Here is the correct 2013 image.

On Fri, Jun 27, 2014 at 5:26 PM, Daniel Morrow - NOAA Federal <daniel.morrow@noaa.gov> wrote:

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Regards,

Gene

Re Post Sandy Survey H12608 and H12609_images2.txt

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

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Sent: Wednesday, June 18, 2014 12:25 PM
To: John Barber - NOAA Federal
Cc: Castle Parker - NOAA Federal; Matthew Jaskoski - NOAA Federal;
Edward Owens - NOAA Federal; Lucy Hick - NOAA Federal; Nicole Galloway; Michael
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Thanks for your consideration. Do not hesitate to contact me for additional information or to discuss.

Regards,

Gene Parker

Castle Eugene Parker

Re Post Sandy Survey H12608 and H12609_images2.txt
Atlantic Hydrographic Branch

Hydrographic Team Lead

Physical Scientist, NOAA Office of Coast Survey

castle.e.parker@noaa.gov

office (757) 441-6746 x115

-

--
John Barber
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301-713-2713 ext 133

2013_image.JPG Re Post Sandy Survey H12608 and H12609_images2.txt

Attachments:

2013_image.JPG 54.4 KB

Re OPR-C319-KR-13 Nearshore Review.txt

Subject:

RE: OPR-C319-KR-13 Nearshore Review

From:

Castle Parker - NOAA Federal <castle.e.parker@noaa.gov>

Date:

6/9/2014 3:05 PM

To:

nicole.galloway@cctechnol.com

CC:

Lucy Hick - NOAA Federal <lucy.hick@noaa.gov>, Mark Lathrop - NOAA Federal <mark.t.lathrop@noaa.gov>, Tara Levy <tara.levy@cctechnol.com>, Vanessa Miller - NOAA Federal <Vanessa.Miller@noaa.gov>

Nicole,

Here is a response regarding Dton selections.

H12608:

-Feature 1: not a Danger based upon 14ft depth that resides on the 12ft depth curve. Add to feature file and will handle this feature via the HCell process. Include in the survey's feature file.

-Feature 2: not a Danger based upon the location is on the danger circle for charted Obstruction. Include in the survey's feature file.

Linear object: the depths are not considered a danger as the depth values are in line with charted depths. Yes, the sewer is not charted in the correct location, but does not pose a hazard to surface navigation. Will handle this feature via the HCell process. Include in the survey's feature file.

H12609:

-Pipeline feature: not a danger based upon current charted disposition of sewer. Will handle this feature via the HCell process. Include in the survey's feature file.

-Feature 1: depending on the scale of the chart, the depth value falls in line with the charted depth curves. The smaller scale charts locate this feature too close to shore and thus not navigationally significant. Include in the survey's feature file.

-Feature 2: depth value located at the seaward end of a charted pier. Even if the charted pier is not currently present, the fact that a charted feature is displayed would mean that the depth submitted is not a hazard to survey navigation.

Feature 3: Will submit as a Danger. The 11ft depth is seaward of the 12ft depth curve.

Feature 4: Located on charted pier. Will handle this feature via the HCell
Page 1

Re OPR-C319-KR-13 Nearshore Review.txt
process. Include in the survey's feature file.

Feature 5: The feature depth value falls in line with charted depth curves. No a hazard to surface navigation. will handle this feature via the HCell process. Include in the survey's feature file.

Thanks for prelim review, we have images and will process the Danger and submit to Marine Chart Division.

Regards,

Gene

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

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

From: Nicole Galloway [mailto:nicole.galloway@cctechnol.com]
Sent: Monday, June 09, 2014 12:50 PM
To: Gene Parker
Cc: Lucy Hick - NOAA Federal; Mark Lathrop; Tara Levy
Subject: OPR-C319-KR-13 Nearshore Review

Good morning,

I am in the process of reviewing the nearshore data collected in H12608 and H12609. I've attached two zip files (one for each sheet) containing a .hob, .000 and associated images for review. I added details specific to particular contacts in the remarks sections. To summarize:

H12608 has three items for review - additional data for the potential sewer pipe, MB data collected over a previously submitted DtoN and information regarding an additional charted OBSTRN.

H12609 has six items for review - one is a potential update to a charted sewer pipe and several are submitted for review to obtain additional information on how they should be addressed in the FFF. Ex: being so close to the shore, some

Re OPR-C319-KR-13 Nearshore Review.txt
potentially significant contacts are significant on one end of the contact in deeper water, but not significant at the other end due to the seafloor shoaling toward shore.

Please let me know if you have any questions.

Thank-you!

Nikki

--

Nicole Galloway

Geoscientist

C&C Technologies, Inc.

Lafayette, LA, USA, 70508

email: nicole.galloway@cctechnol.com

337-210-0000 (Ext. 3537)

APPENDIX III

SURVEY FEATURES REPORT

DToNs - two
AWOIS - nine
Wrecks - four

Maritime Boundaries - none

H12609_Features

Registry Number: H12609

State: New Jersey

Locality: Southern Approaches to New York and Vicinity

Sub-locality: Vicinity of Shrewsbury Rocks

Project Number: OPR-C319-KR-13

Survey Dates: 10/22/2014 - 05/12/2014

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12324	33rd	03/01/2008	1:40,000 (12324_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	AWOIS 9700 - Delete charted 33 ft dangerous obstruction	GP	[None]	40° 22' 06.8" N	073° 57' 33.9" W	9700
1.2	AWOIS 8070 - Delete charted 27 ft dangerous underwater rock	GP	[None]	40° 22' 09.2" N	073° 57' 19.5" W	8070
1.3	AWOIS 8097 - Dangerous 40 ft sunken wreck	Wreck	12.16 m	40° 19' 29.2" N	073° 57' 01.8" W	8097
1.4	AWOIS 4293 - Add dangerous rock, least depth 31.0 ft.	Rock	9.45 m	40° 20' 21.8" N	073° 56' 37.5" W	4293
1.5	AWOIS 1531 - Add dangerous sunken wreck 56.39 ft.	Wreck	17.19 m	40° 16' 08.3" N	073° 56' 34.6" W	1531
1.6	AWOIS 8069 - Delete charted 38ft dangerous obstruction	GP	[None]	40° 20' 06.1" N	073° 56' 30.8" W	8069
1.7	AWOIS 8073 - Dangerous 52ft sunken wreck	Wreck	15.80 m	40° 19' 58.2" N	073° 55' 37.2" W	8073
1.8	AWOIS 8074 Disproved uncharted obstruction	GP	[None]	40° 20' 39.5" N	073° 55' 35.5" W	8074
1.9	AWOIS 8071 - Add dangerous sunken wreck, least depth 58.38 ft.	Wreck	17.80 m	40° 22' 21.1" N	073° 55' 07.4" W	8071
2.1	DTON 1.7 - Add Dangerous 39.66 ft obstruction	Obstruction	12.09 m	40° 16' 10.5" N	073° 57' 45.7" W	---

2.2	DTON 1.8- Add Dangerous 29.99 ft obstruction	Obstruction	9.14 m	40° 21' 20.5" N	073° 57' 44.7" W	---
3.1	AWOIS 8097 - Dangerous 40 ft sunken wreck	Wreck	12.16 m	40° 19' 29.2" N	073° 57' 01.8" W	---
3.2	AWOIS 1531 - Add dangerous sunken wreck 56.39 ft.	Wreck	17.19 m	40° 16' 08.3" N	073° 56' 34.6" W	---
3.3	AWOIS 8073 - Dangerous 52ft sunken wreck	Wreck	15.80 m	40° 19' 58.2" N	073° 55' 37.2" W	---
3.4	AWOIS 8071 - Add dangerous sunken wreck, least depth 58.38 ft.	Wreck	17.80 m	40° 22' 21.1" N	073° 55' 07.4" W	---

1.1) AWOIS 9700 - Delete charted 33 ft dangerous obstruction

Feature for AWOIS Item #9700

Search Position: 40° 22' 06.8" N, 073° 57' 33.9" 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 H10284/88-- OPR-C147-WH; SIDE SCAN SONAR CONTACT WITH AN ì ESTIMATED DEPTH OF 37 FEET. CHARTED AS A 37-FOOT OBSTN REP 1988 ì IN LAT. 40-22-06N LONG. 73-57-35W. (ENT 3/22/96 SJV) FE440/97-- OPR-C399-RU; OBSTRUCTION LOCATED. SEABAT LD OF 33 FEET IN LAT. 40-22-07.662N LONG. 73-57-33.878W. EVALUATOR RECOMMENDS DELETING CHARTED 37 OBSTN REP 1988 AND CHARTING A 33 OBSTN AS SURVEYED. (UP 12/20/04 SJV)

Survey Summary

Survey Position: 40° 22' 06.8" N, 073° 57' 33.9" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_ 0004528345 00001(FFFE004518D90001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

\$CSYMB/remrks: Feature (likely rocky) located in charted position; feature is part of larger rocky area

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_ 0004528345 00001	0.00	000.0	Primary

Hydrographer Recommendations

retain as charted

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: NINFOM - Delete obstruction
NTXTDS - US5NJ30M, Edition19, Update4
SORDAT - 20140512
SORIND - US, US, graph, H12608

Office Notes

SAR: Object verified via MBES

COMPILATION: AWOIS 9700

Delete charted dangerous obstruction, least depth 33 feet. Present survey depths 37 feet in vicinity. Present survey found a 33 foot sounding inside a new obstruction area. Feature is insignificant compared to present survey depths. Chart as depth instead of obstruction. Consider obstruction disproven. Update AWOIS database with present survey findings.

Feature Images

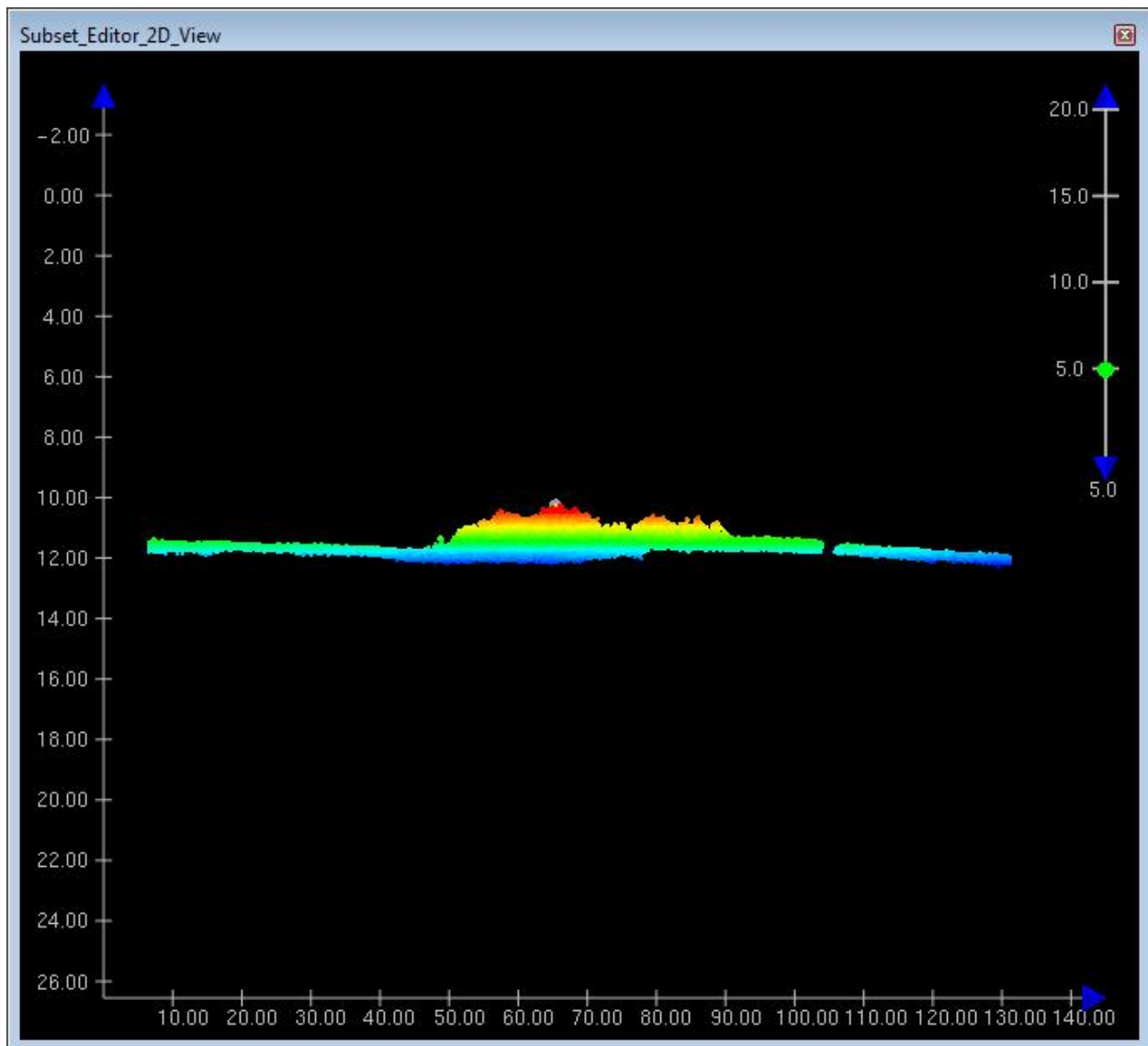


Figure 1.1.1

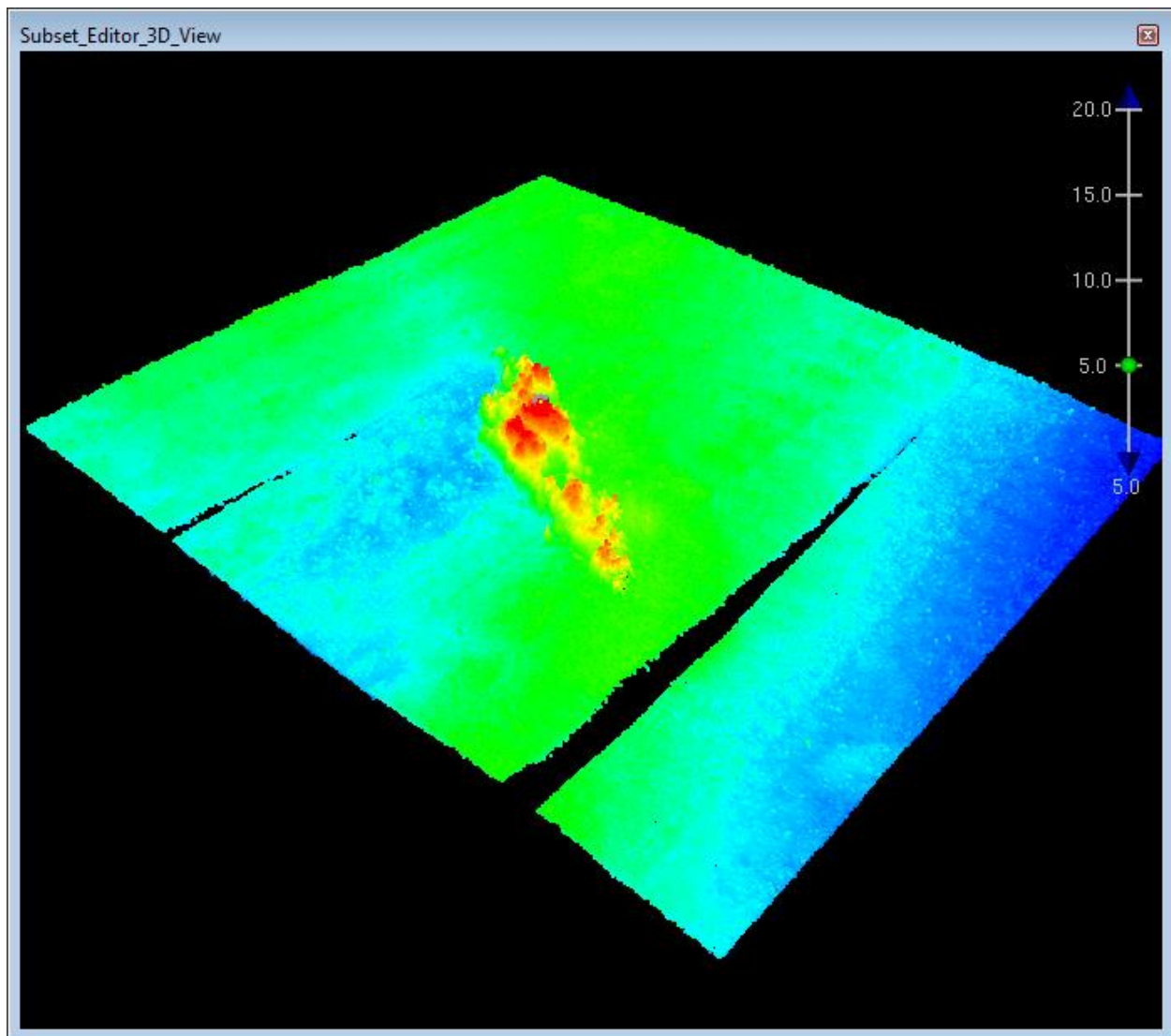


Figure 1.1.2

1.2) AWOIS 8070 - Dangerous 29 ft underwater rock

Feature for AWOIS Item #8070

Search Position: 40° 22' 09.2" N, 073° 57' 19.5" 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 H10284/88--OPR-C147-WH-88; AN UNCHARTED OBSTRUCTION WAS FOUND 1 IN LAT 40-22-09N LONG 73-57-18W (NAD83) WITH A LEAST DEPTH OF 1 26.9 FT IN 40 FT OF WATER; EVALUATOR RECOMMENDED CHARTING 27 1 OBSTR(A). (ENTERED MSD 6/91)

Survey Summary

Survey Position: 40° 22' 09.2" N, 073° 57' 19.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_ 0004528343 00001(FFFE004518D70001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

\$CSYMB/remrks: feature located at charted position with a slightly deeper least depth. Appears to be part of a larger rocky area.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_ 0004528343 00001	0.00	000.0	Primary

Hydrographer Recommendations

update charted depth

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: NINFOM - Delete underwater rock
NTXTDS - US5NJ30M, Edition19, Update4
SORDAT - 20140512
SORIND - US, US, graph, H12608

Office Notes

SAR: recommend to keep charted feature as UWTROC and update charted depth

COMPILATION: AWOIS 8070

Delete charted dangerous underwater rock, least depth 27 feet. Present survey depths 34-36 feet in vicinity.
Present survey found a 29 foot rock inside a new obstruction area. Add 29 foot rock. Update AWOIS database with present survey findings.

Feature Images

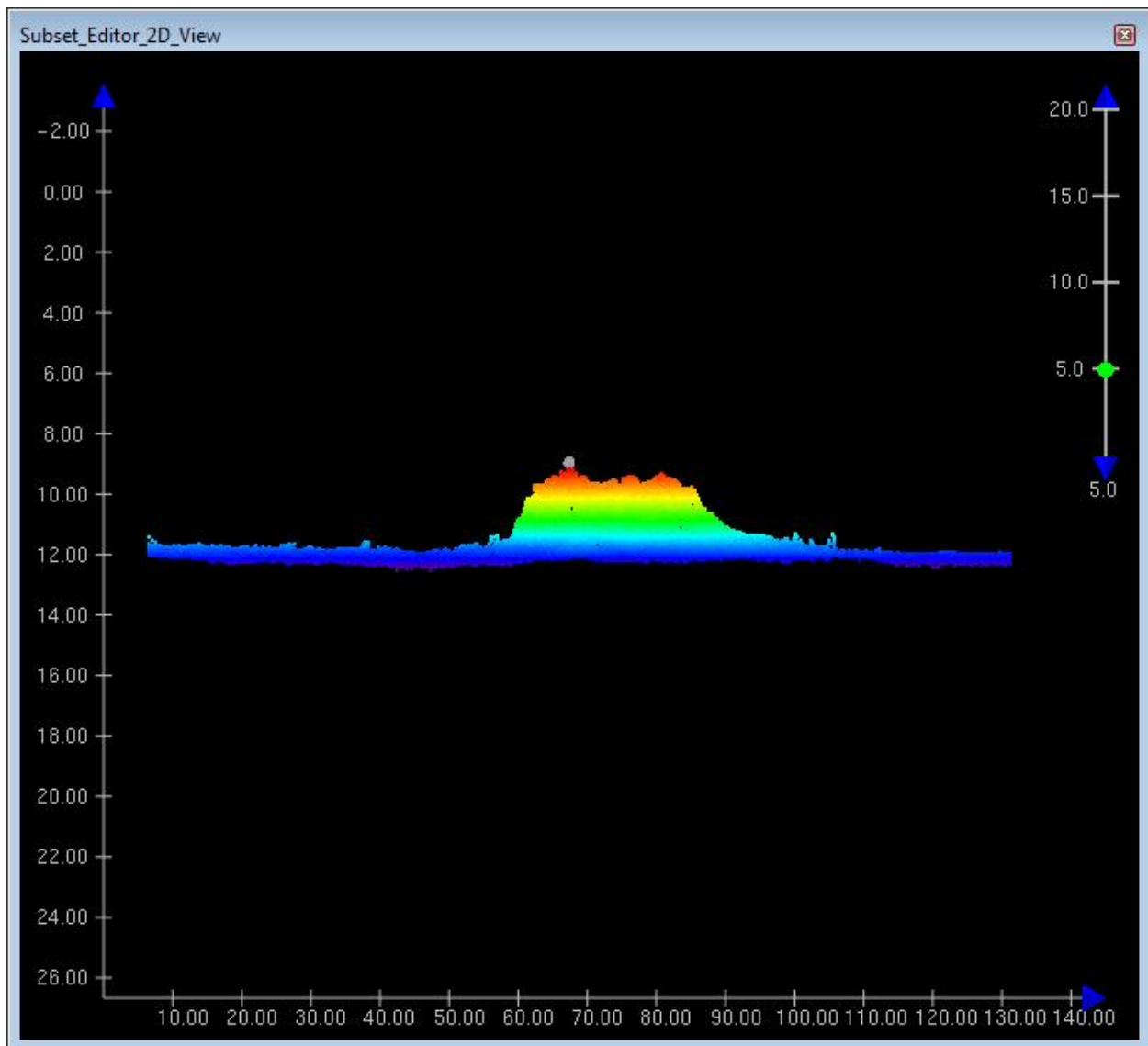


Figure 1.2.1

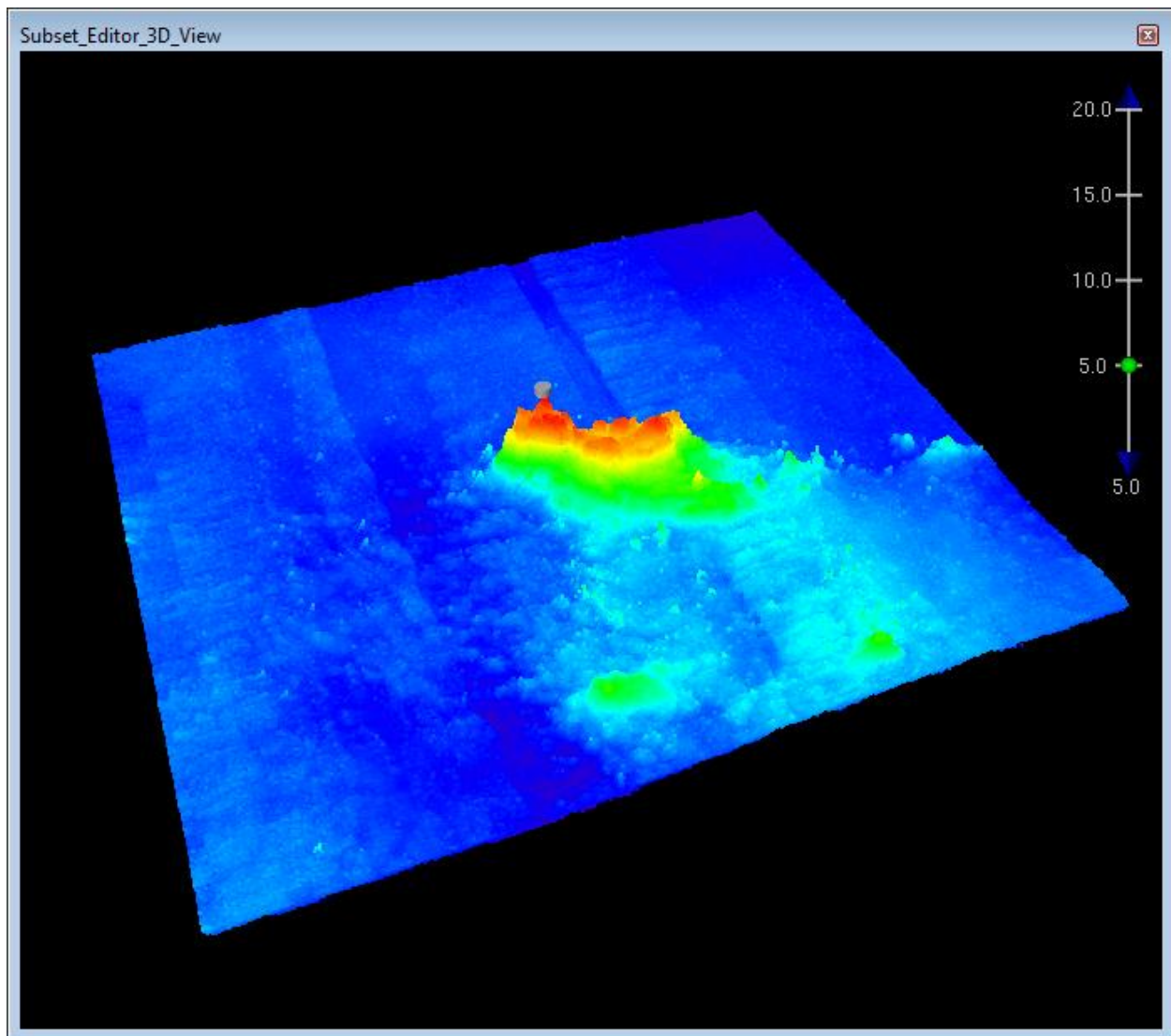


Figure 1.2.2

1.3) AWOIS 8097 - Dangerous 40 ft sunken wreck

Feature for AWOIS Item #8097

Search Position: 40° 19' 29.2" N, 073° 57' 01.8" W
Historical Depth: 12.16 m
Search Radius: 200
Search Technique: Type: UNKNOWN, Itemstatus: ASSIGNED, Searchtype: FULL, Technique: S2 ES MBES

Technique Notes:

History Notes:

History

HISTORY FE331SS/89--OPR-C147-HE-89; CONTACT #19 FROM SURVEY H-10285/88; ì DIVERS LOCATED AN OVERTURNED 50 FT STEEL HULLED BOAT WHICH ROSE ì APPROXIMATELY 5 FT OFF OF A SANDY BOTTOM; LEADLINE LEAST DEPTH OF ì 40 FT IN LAT 40-19-28.98N LONG 73-57-01.61W (NAD 83); EVALUATOR ì RECOMMENDED CHARTING 40 WK AS SHOWN ON SURVEY AND NOT CHARTING ì THE 42 OBSTR FROM SURVEY H-10285/88. (ENTERED MSD 7/91)

Survey Summary

Survey Position: 40° 19' 29.2" N, 073° 57' 01.8" W
Least Depth: 12.16 m (= 39.90 ft = 6.651 fm = 6 fm 3.90 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_ 0004528457 00001(FFFE004519490001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: Complete multibeam and SSS were acquired within the radius and confirm a contact at this location with a least depth of 40 feet

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_ 0004528457 00001	0.00	000.0	Primary

Hydrographer Recommendations

Retain as charted

Cartographically-Rounded Depth (Affected Charts):

40ft (12324_1, 12326_1)

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

12.1m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

NINFOM - Add wreck

OBJNAM - AWOIS 8097

QUASOU - 6:least depth known

SORDAT - 20140512

SORIND - US,US,graph,H12609

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

VALSOU - 12.163 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Field had AWOIS 8097 designated as an obstruction; recommend retain as a wreck. Side scan imagery validates the feature as a wreck.

COMPILATION: AWOIS 8097 - Delete charted dangerous sunken wreck, least depth 40 feet. Add dangerous sunken wreck, least depth 39.9 ft in the present survey position. Update the AWOIS database with present survey findings.

Feature Images

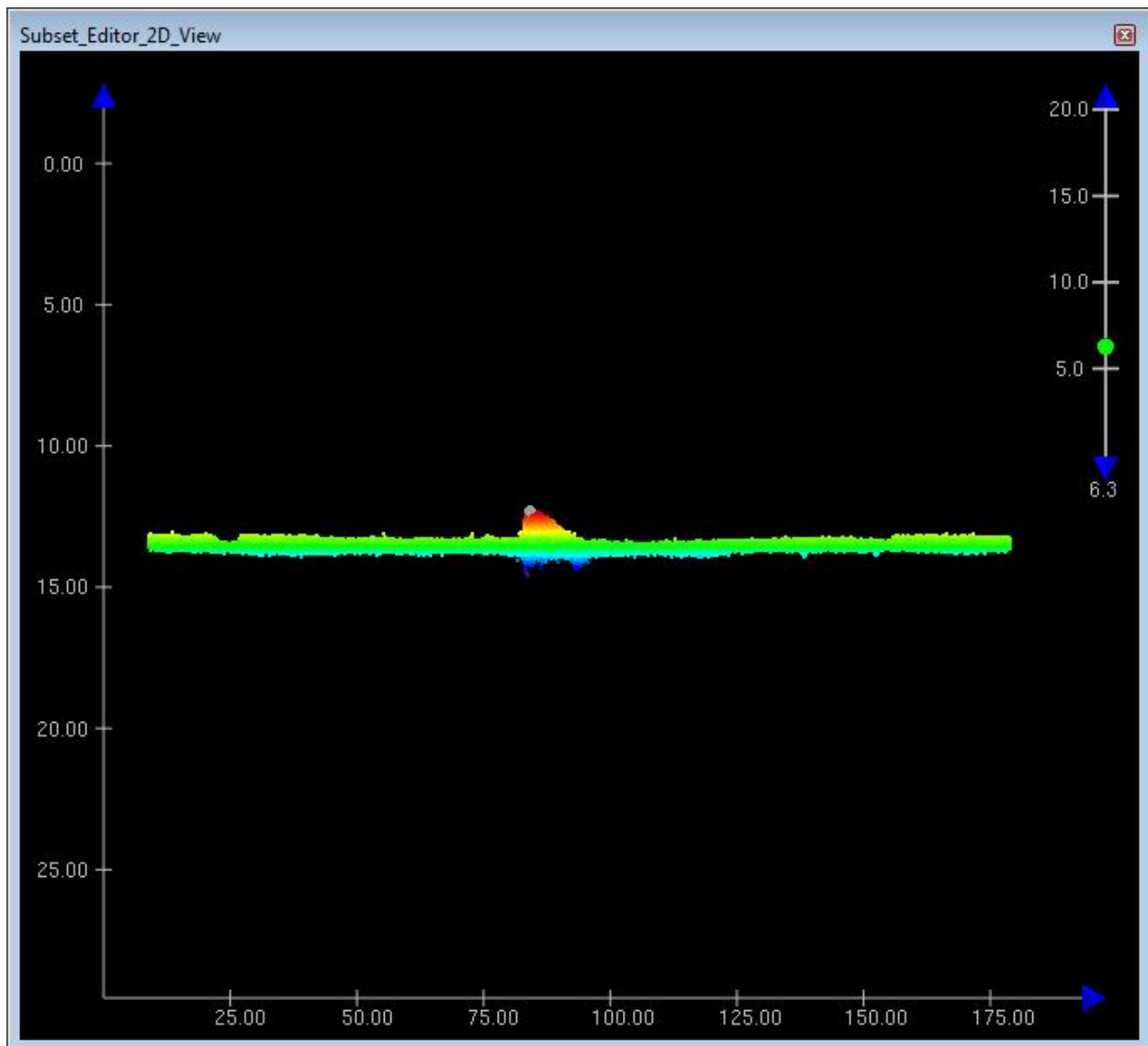


Figure 1.3.1

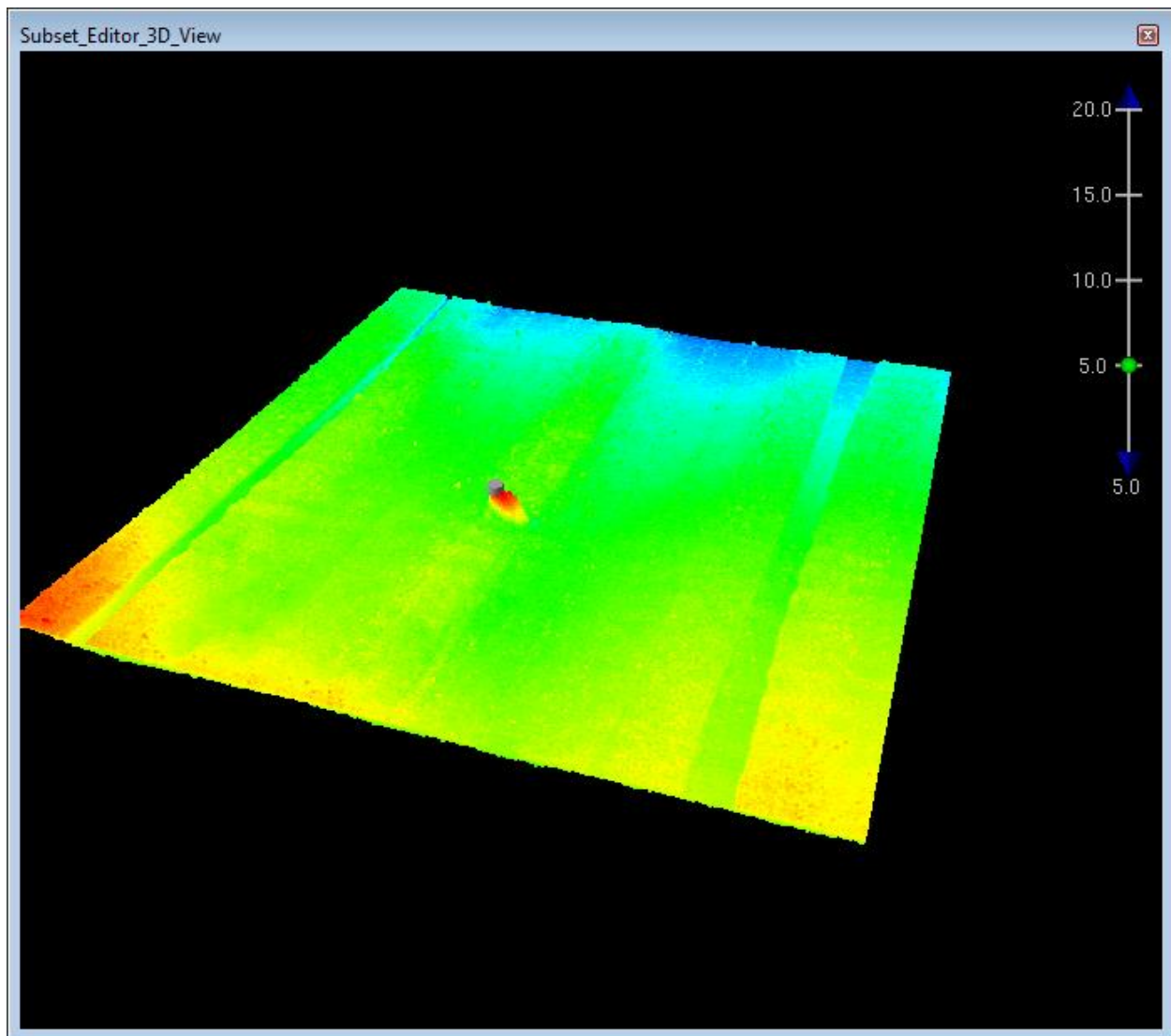


Figure 1.3.2

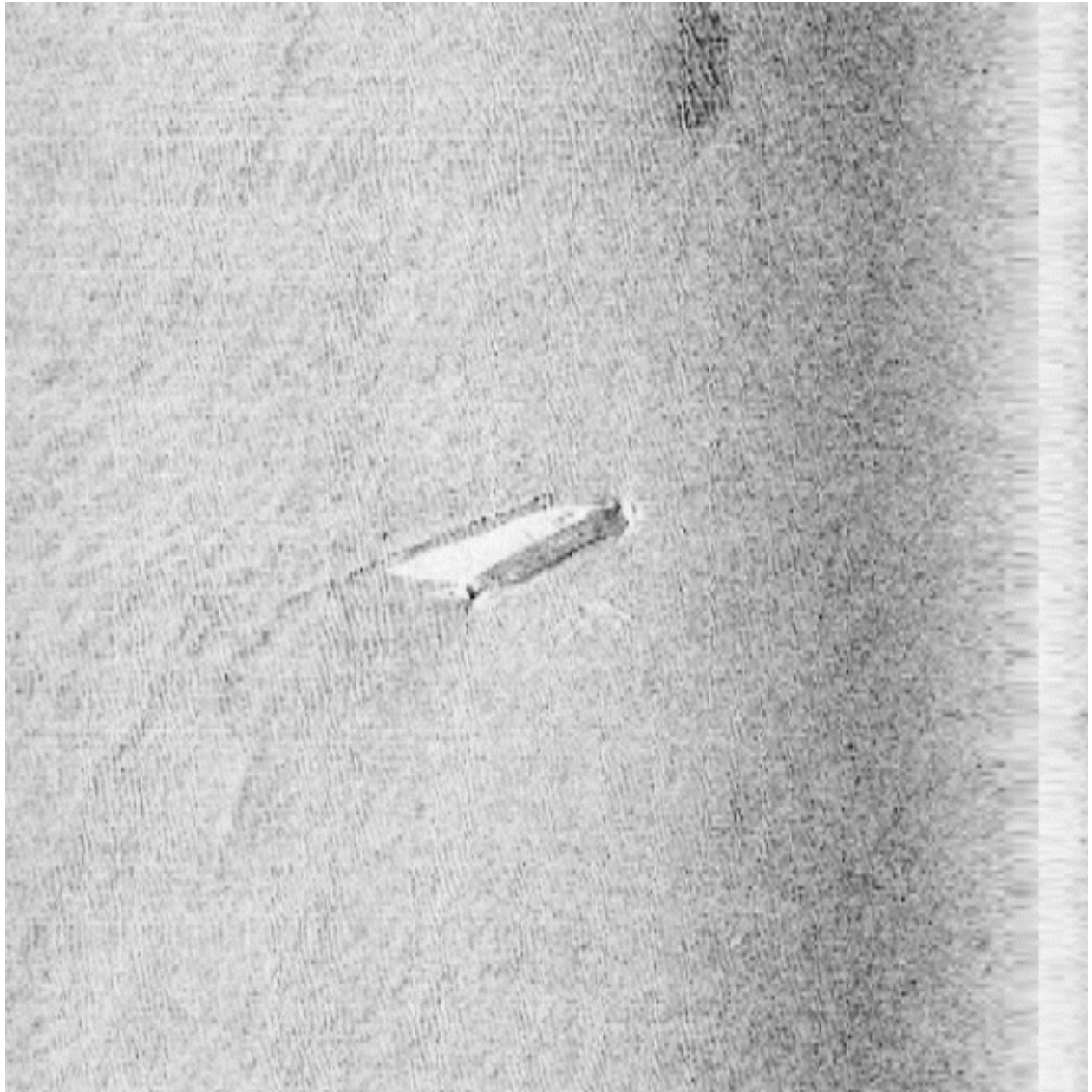


Figure 1.3.3

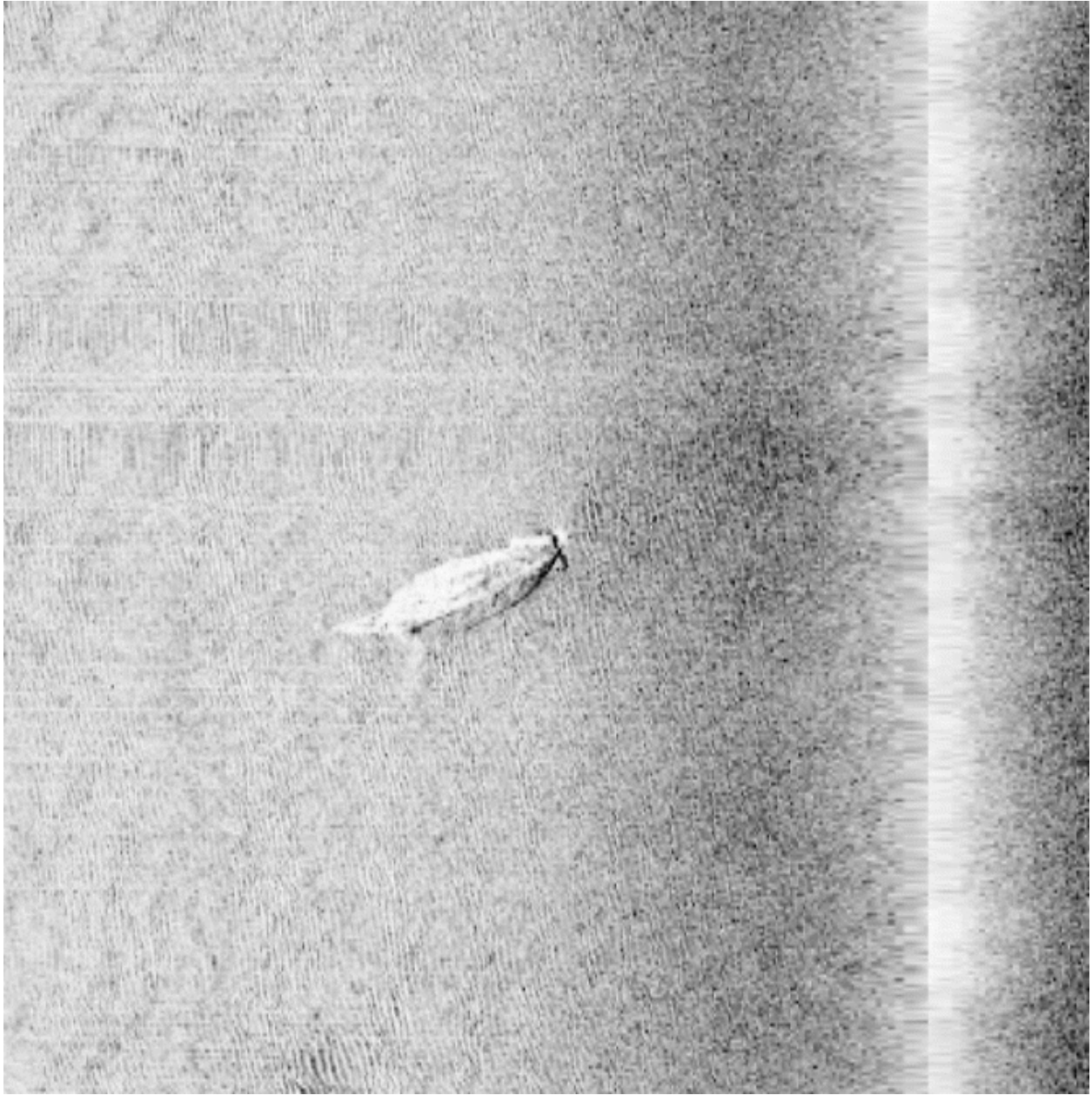


Figure 1.3.4

1.4) AWOIS 4293 - Dangerous 31 ft underwater rock

Feature for AWOIS Item #4293

Search Position: 40° 20' 21.8" N, 073° 56' 37.5" W
Historical Depth: 9.45 m
Search Radius: [unknown]
Search Technique: Type: OBSTRUCTION, Itemstatus: COMPLETED, Searchtype: INFORMATION, Technique: S2 ES MBES

Technique Notes:

History Notes:

History

HISTORY H6190/39--31 FT SHL SDG FOUND IN LAT 40-16-45.6N LONG 73-58-04.8W; ì ADDITIONAL WORK RECOMMENDED. H6463/39WD--ITEM 31; A 28 FT SNDG WAS TAKEN ON A ROCK IN LAT 40-20-24N ì LONG 73-56-36W; CLEARED BY 25 FT. (ENTERED MSM 1/86) H10284/88--OPR-C147-WH-88; PRESENT SURVEY DID NOT LOCATE ANY ì OBSTRUCTIONS IN THE VICINITY OF THE CHARTED FEATURE BUT THIS ì FEATURE IS IN THE AREA OF A SHOAL THAT WAS DEVELOPED BY THIS ì SURVEY; SHOALEST DEPTH FOUND BY THIS SURVEY IS 30 FT IN THE ì VICINITY OF LAT 40-20-20.41N LONG 73-56-38.57W (NAD83) HOWEVER THE LINE ì SPACING USED DURING THE DEVELOPMENT OF THE SHOAL DID NOT INSONIFY ì 100% OF THE BOTTOM SO IT IS NOT CERTAIN THAT THE ABSOLUTE SHOALEST DEPTH ì WAS FOUND; THE 30 FT FOUND ON THIS SURVEY IS 156M SW OF THE ì CHARTED AWOIS ITEM; EVALUATOR RECOMMENDED RETAINING ITEM AS ì CHARTED. (UPDATED MSD 6/91) FE330SS/89--OPR-C147-HE-89; SIDE SCAN SONAR INVESTIGATION ì REVEALED THAT THE CONTACT IS A SHOAL AREA APPROXIMATELY 25M LONG ì BY 60M WIDE; PROBABLY MADE UP OF CORAL OR ROCK TYPICAL OF OTHER ì CONTACTS IN THE AREA; ECHOSOUNDER DEPTH OF 28 FOUND IN LAT ì 40-20-21.59N LONG 73-56-37.95W (NAD83); EVALUATOR RECOMMENDED ì DELETING CHARTED 25 FT CLEARED DEPTH AND CHART AREA USING ì INFORMATION FROM THIS SURVEY AND H-10284. (UPDATED MSD 7/91)

Survey Summary

Survey Position: 40° 20' 21.8" N, 073° 56' 37.5" W
Least Depth: 9.45 m (= 30.99 ft = 5.166 fm = 5 fm 0.99 ft)
TPU (±1.96σ): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_ 0004528416 00001(FFFE004519200001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

UWTROC/remrks: part of a larger, rocky shoal area and though the length and width of the top of the feature match closely to the information provided (60 m x 25 m), the whole shoal is much bigger at 120 x 140 m

Hydrographer Recommendations

update charted depth

Cartographically-Rounded Depth (Affected Charts):

31ft (12324_1, 12326_1)

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

9.4m (5161_1)

S-57 Data

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

Attributes: NINFOM - Add rock

OBJNAM - AWOIS 4293

QUASOU - 6:least depth known

SORDAT - 20140512

SORIND - US,US,graph,H12609

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

VALSOU - 9.447 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Rock verified via MBES

COMPILATION: Concur. Delete charted dangerous underwater rock, least depth 28 feet. Add dangerous underwater rock, least depth 31 feet in the present survey position. Update AWOIS database with present survey findings.

Feature Images

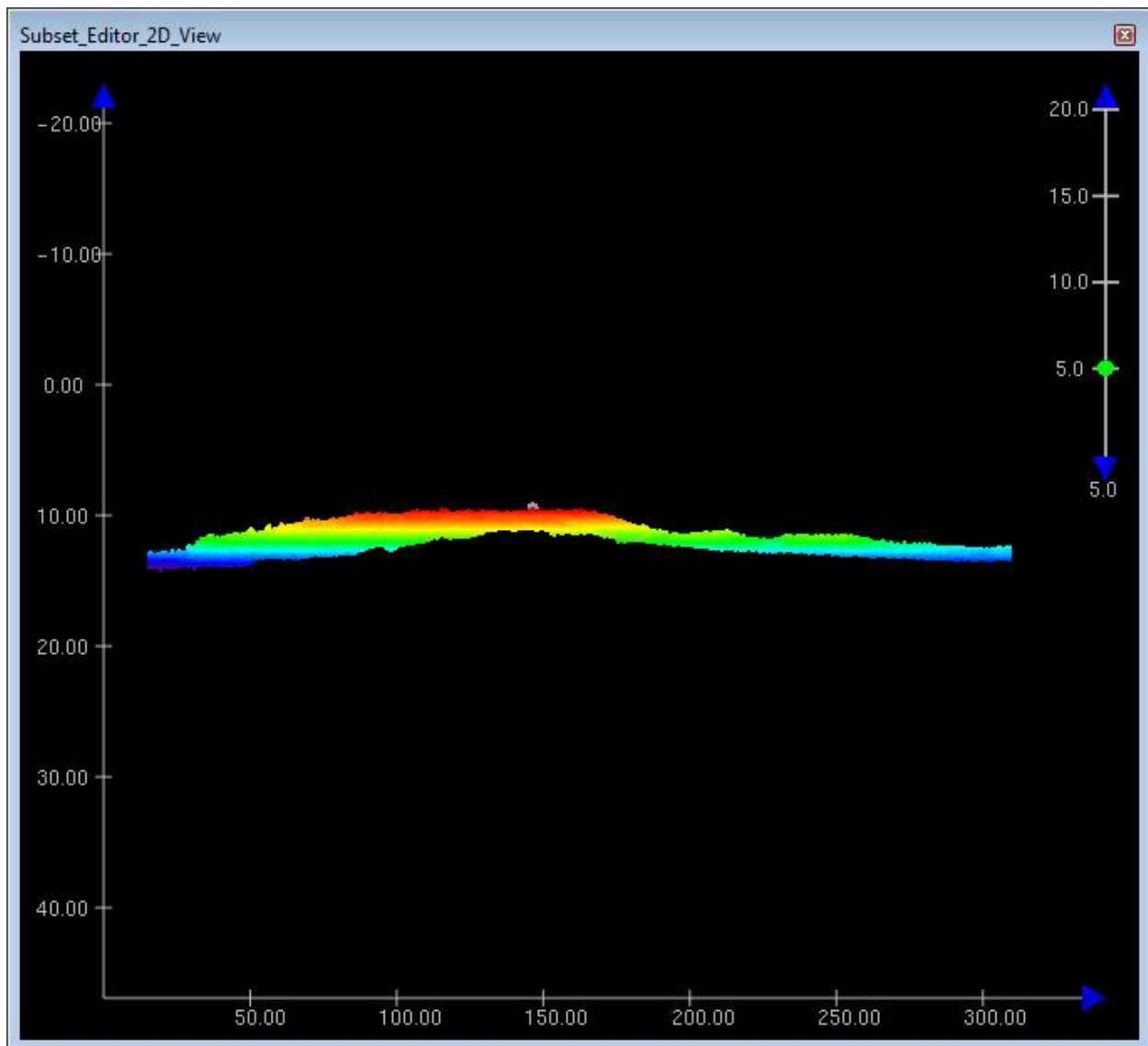


Figure 1.4.1

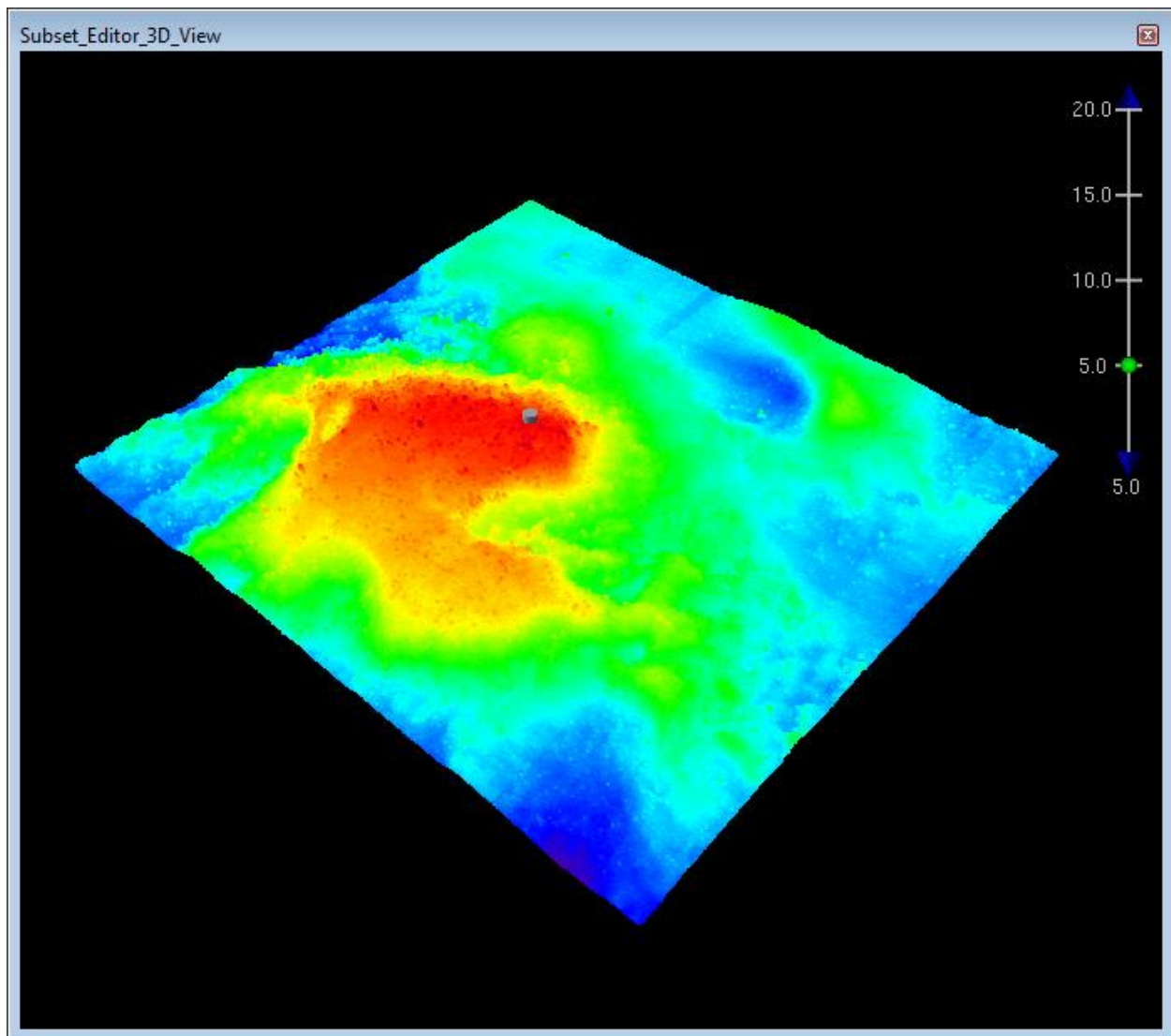


Figure 1.4.2

1.5) AWOIS 1531 - Dangerous 56 ft sunken wreck

Feature for AWOIS Item #1531

Search Position: 40° 16' 08.3" N, 073° 56' 34.6" W
Historical Depth: 17.19 m
Search Radius: [unknown]
Search Technique: Type: UNKNOWN, Itemstatus: COMPLETED, Searchtype: INFORMATION, Technique: S4 DI SD

Technique Notes:

History Notes:

History

HISTORY H6463/39WD--ITEM 27; WHILE DRAGGING FOR THE WK OF THE PROGRESS (ITEM 1534) ì AN OBSTR WAS LOCATED IN LAT 40-16-12N LONG 73-56-30W; 44 FT SNDG WAS TAKEN ì OVER OBSTR; FELT LIKE WRECKAGE AND WHILE SOUNDING IT THE LEAD WAS CUT UP AND ì COVERED WITH RUST; CLEARED BY 42 FT; CHARTED AS 42 FT BASKET SNDG; ALSO ì REFERENCE ITEMS 1537 AND 1538.(ENTERED MSM 1/86) H10285/88--OPR-C147-WH-88; DURING HYDROGRAPHY AND SIDE SCAN ì INVESTIGATION NO INDICATION OF ITEM AT CHARTED POSITION; A SIDE ì SCAN CONTACT WITH WRECK-LIKE CHARACTERISTICS AND AN ESTIMATED ì DEPTH OF 55 FT WAS FOUND 143 METERS SOUTHWEST OF AWOIS POSITION; ì LAT 40-16-07.913N LONG 73-56-34.198W (NAD83); EVALUATOR BELIEVES THIS IS ì THE AWOIS ITEM; RECOMMENDS DELETING CHARTED AWOIS ITEM 1531 ì CHARTING A SUBM OBSTR AND ASSIGNED THIS ITEM FOR FURTHER ì INVESTIGATION. (UPDATED MSD 3/91) FE331SS/89--OPR-C147-HE-89; CONTACT #9; SIDE SCAN SONAR CONTACT ì FOUND ON ABOVE SURVEY INVESTIGATED BY DIVERS; LOCATED THE REMAINS ì OF A LARGE SUNKEN WOODEN SHIP; APPEARED TO HAVE SETTLED KEEL DOWN ì AND TO ONE SIDE; ONLY ONE SHEER STRAKE RUNNING 40 M LONG AND SOME ì DECK PLANKS WERE EXPOSED; MOST OF THE SHIP WAS BURIED IN THE ì SAND; CURRENT SCOUR ALONG THE OUTBOARD SIDE OF THE WRECK ì ACCOUNTED FOR THE DIVERS MAXIMUM DEPTH OF 64 FT; SHOALEST POINT ì ROSE APPROXIMATELY 3 FT OFF A SANDY BOTTOM; PNEUMATIC DEPTH GAUGE ì LEAST DEPTH OF 54 FT; LAT 40-16-08.50N LONG 73-56-34.18W ì (NAD83); LORAN C RATES: 9960-W 15503.4 9960-X 26931.8 9960-Y ì 43592.8 9960-Z 59809.8; EVALUATOR RECOMMENDED CHARTING A 54 WK ì IN SURVEY POSITION DELETING CHARTED CLEARED 42 FT DEPTH AND NOT ì CHARTING 55 OBSTR FROM SURVEY H-10285/88. (UPDATED MSD 7/91) DESCRIPTION 24 NO 361; SUNK 1939 CGS WD CLEARED TO 42 FT IN 1939 27 NO.644; LOCATED BY U.S.C. G.S. IN SEPT. 1939 CLEARED TO 42 FT.

Survey Summary

Survey Position: 40° 16' 08.3" N, 073° 56' 34.6" W
Least Depth: 17.19 m (= 56.39 ft = 9.399 fm = 9 fm 2.39 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_ 0004528406 00001(FFFE004519160001)

Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: Bathymetry and backscatter indicate three linear contacts at the location of the AWOIS item with a least depth of 56 feet

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_0004528406 00001	0.00	000.0	Primary

Hydrographer Recommendations

Update charted depth

Cartographically-Rounded Depth (Affected Charts):

56ft (12324_1, 12326_1)

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

17.2m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

NINFOM - Add wreck

OBJNAM - AWOIS 1531

QUASOU - 6:least depth known

SORDAT - 20140512

SORIND - US,US,graph,H12609

TECSOU - 3:found by multi-beam

VALSOU - 17.189 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Field had AWOIS 1531 designated as an obstruction; recommend retain as a wreck

COMPILATION: AWOIS 1531. Delete charted dangerous sunken wreck, least depth 54 feet. Add dangerous sunken wreck, least depth 56 feet in present survey position. Update AWOIS database with present survey findings.

Feature Images

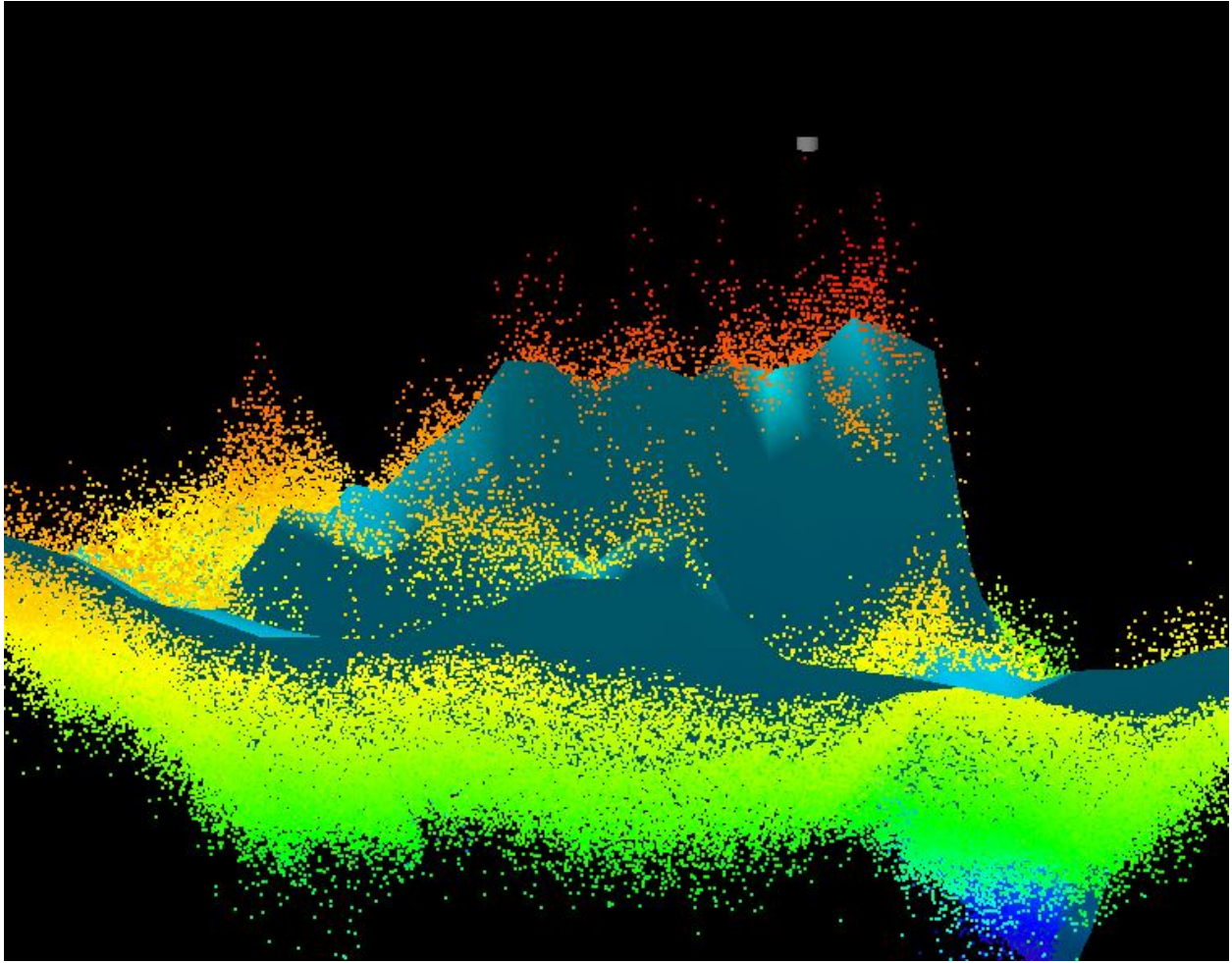


Figure 1.5.1

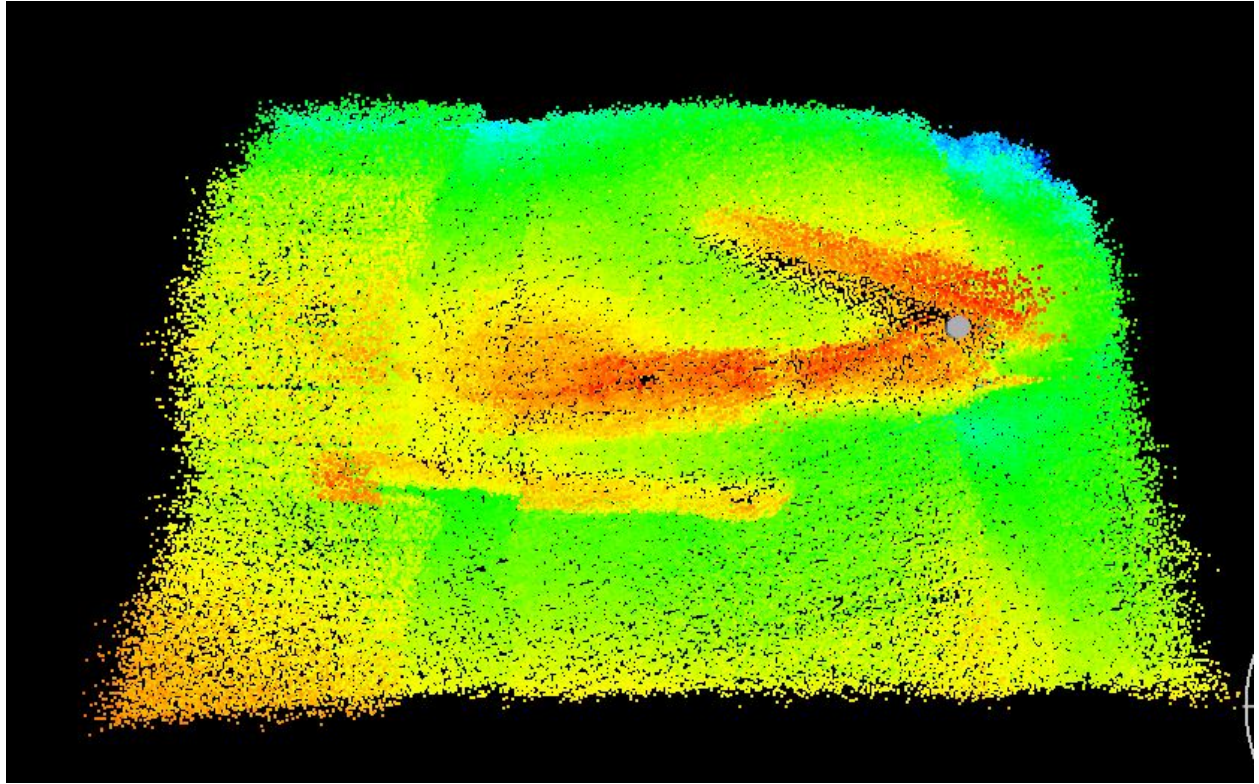


Figure 1.5.2

1.6) AWOIS 8069 - Delete charted 38ft dangerous obstruction

Feature for AWOIS Item #8069

Search Position: 40° 20' 06.1" N, 073° 56' 30.8" W
Historical Depth: [None]
Search Radius: 200
Search Technique: Type: OBSTRUCTION, Itemstatus: ASSIGNED, Searchtype: FULL, Technique: S2 ES MBES

Technique Notes:

History Notes:

History

HISTORY H10284/88--OPR-C147-WH-88; AN OBSTRUCTION WITH AN ECHOSOUNDER ì DEPTH OF 33 FT WAS LOCATED IN LAT 40-20-04.85N LONG 73-56-32.00W ì (NAD83); IT IS 59M EAST OF THE NORTHERNMOST OF THREE BOULDER ì FOUND ON PRIOR SURVEY H6463WD/39 AND IS BELIEVED TO BE THAT ì OBJECT; NO INDICATION OF BOULDERS OR ROCK OUTCROPS ON SONARGRAMS ì OR ECHOGRAMS; EVALUATOR RECOMMENDED CHARTING 33 OBSTR IN SURVEY ì POSITION.
(ENTERED MSD 6/91)

Survey Summary

Survey Position: 40° 20' 06.1" N, 073° 56' 30.8" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_ 0004528455 00001(FFFE004519470001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: NINFOM - Delete obstruction
NTXTDS - US5NJ30M, Edition19, Update4
SORDAT - 20140512
SORIND - US, US, graph, H12609

Office Notes

SAR: AWOIS/OBSTRUCTION disproved during office review using MBES and SSS coverage. No indication that an obstruction is present in the area.

COMPILATION: AWOIS 8069 - Consider dangerous obstruction, least depth 38 feet disproved. Present survey depths in the vicinity are 38-42 feet. Feature is insignificant compared to present survey depths. Chart depth. Update area with present survey depths. Update AWOIS database with present survey findings.

1.7) AWOIS 8073 - Dangerous 52ft sunken wreck

Feature for AWOIS Item #8073

Search Position: 40° 19' 58.2" N, 073° 55' 37.2" W
Historical Depth: 15.80 m
Search Radius: [unknown]
Search Technique: Type: OBSTRUCTION, Itemstatus: COMPLETED, Searchtype: INFORMATION, Technique: S2 ES MBES

Technique Notes:

History Notes:

History

HISTORY FE330SS/89--OPR-C147-HE-89; CONTACT #5 FROM SURVEY H-10284/88; ì LOCATED BY SIDE SCAN SONAR SEARCH AND DIVER INVESTIGATED; FOUND A ì LARGE CYLINDRICAL OBJECT WHICH APPEARED TO HAVE BEEN A SHIP'S ì BOILER; NO OTHER EVIDENCE OF WRECKAGE WAS FOUND; METAL WAS ì HEAVILY WEATHERED AND RISES 5 FT OFF A SANDY BOTTOM; ECHOSOUNDER ì DEPTH OF 53 FT TAKEN IN LAT 40-19-57.86N LONG 73-55-37.00W ì (NAD83); SINCE THIS IS SHOALER THAN DIVER LEADLINE LEAST DEPTH OF ì 55 FT THE EVALUATOR RECOMMENDED CHARTING THE 53 FT DEPTH; ì LORAN C RATES: 9960-W 15496.1 9960-X 26934.9 9960-Y ì 43630.9 9960-Z 59828.5; EVALUATOR RECOMMENDED CHARTING A ì DANGEROUS SUBMERGED OBSTRUCTION 53 OBSTR AS SHOWN ON SURVEY. ì (ENTERED MSD 6/91)

Survey Summary

Survey Position: 40° 19' 58.2" N, 073° 55' 37.2" W
Least Depth: 15.80 m (= 51.83 ft = 8.638 fm = 8 fm 3.83 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_ 0004528427 00001(FFFE0045192B0001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: The bathymetry and backscatter confirm a contact at this location

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_ 0004528427 00001	0.00	000.0	Primary

Hydrographer Recommendations

update charted depth

Cartographically-Rounded Depth (Affected Charts):

52ft (12324_1, 12326_1)

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

15.8m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

NINFOM - Add wreck

OBJNAM - AWOIS 8073

QUASOU - 6:least depth known

SORDAT - 20140512

SORIND - US,US,graph,H12609

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

VALSOU - 15.798 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Field had AWOIS 8073 designated as an obstruction; do not recommend to retain as a wreck as the MB data does not validate a wreck. No side scan imagery exists within the common area. Defer charting decision to AHB Compiler.

COMPILATION: AWOIS 8073 - Concur with conditions. Delete charted dangerous sunken wreck, least depth 53 feet. Add dangerous sunken wreck, least depth 52 feet in the present survey position. Update AWOIS database with present survey findings.

Feature Images

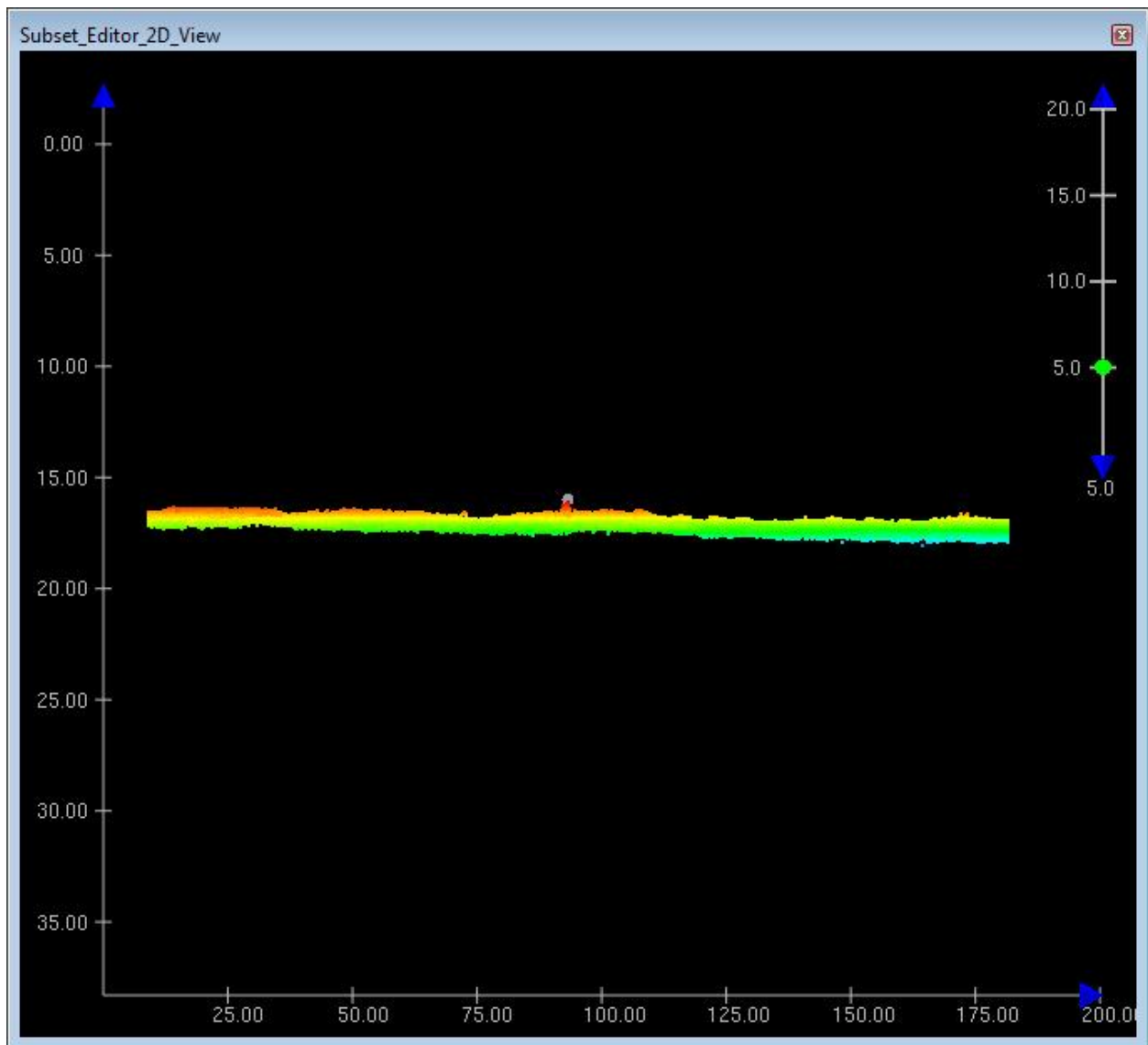


Figure 1.7.1

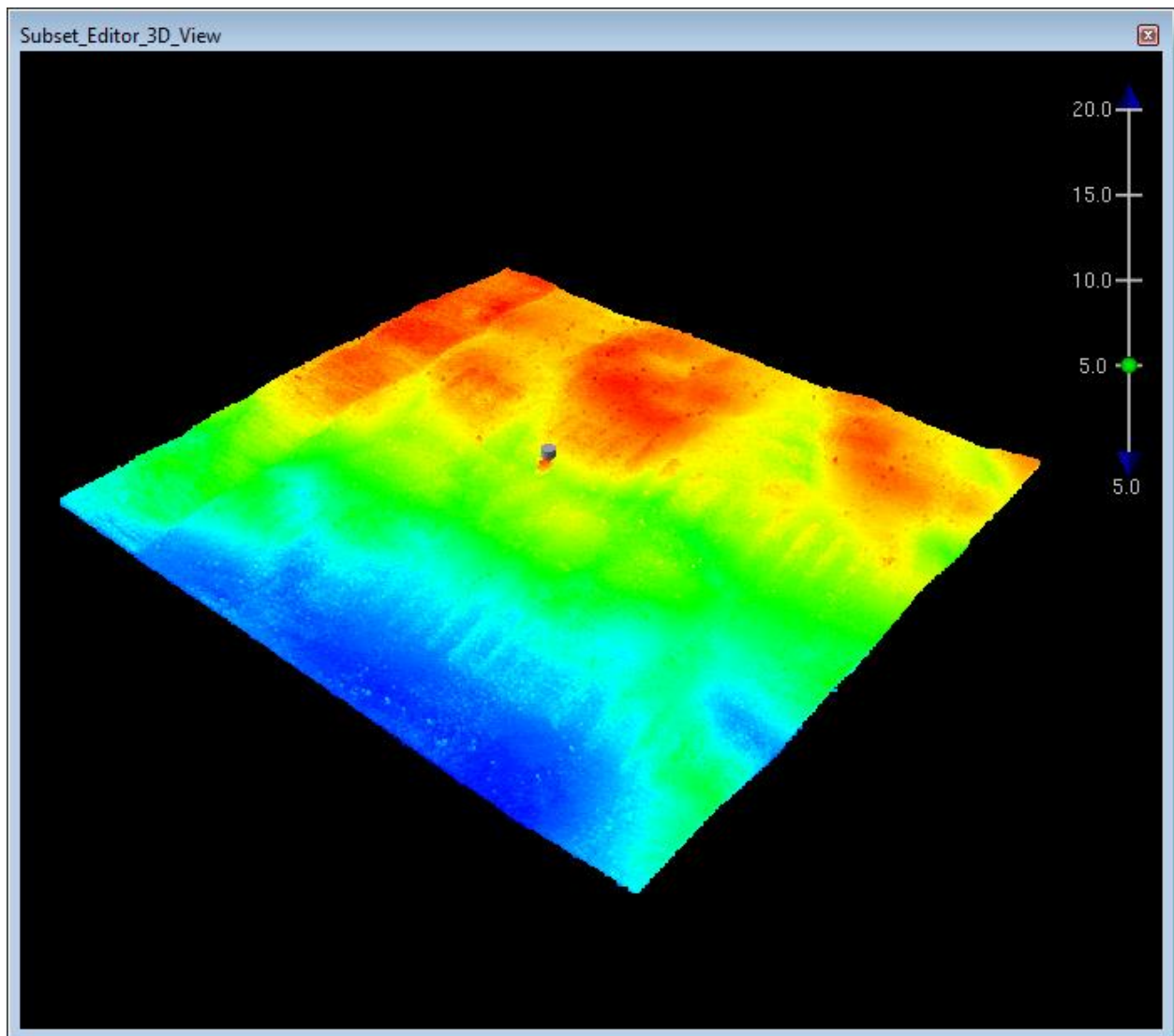


Figure 1.7.2

1.8) AWOIS 8074 Disproved uncharted obstruction

Feature for AWOIS Item #8074

Search Position: 40° 20' 39.5" N, 073° 55' 35.5" 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 FE330SS/89--OPR-C147-HE-89; CONTACT #6 ON SURVEY H-10284/88; ì SIDE SCAN SONAR SEARCH AND DIVER INVESTIGATION FOUND A LARGE ì USCG SEA BUOY WITH A LARGE HOLE IN IT AND A HEAVY ANCHOR CHAIN ì ATTACHED TO IT; LEADLINE LEAST DEPTH OF 39 FT TAKEN ON HIGHEST ì POINT DETERMINED BY VISUAL INSPECTION; BUOY IS SIMILAR TO THE ""I"" ì BUOY LOCATED NEARBY AND APPARENTLY SANK WHEN A VESSEL COLLIDED ì WITH IT; RISES 10 FT OFF THE BOTTOM; LORAN C RATES: 9960-W ì 15495.7 9960-X 26936.3 9960-Y 43636.6 9960-Z 59831.0; ì HYDROGRAPHER AND EVALUATOR RECOMMENDED CHARTING 39 OBSTR AT ì SURVEY POSITION. (ENTERED MSD 6/91) "

Survey Summary

Survey Position: 40° 20' 39.5" N, 073° 55' 35.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_ 0004528430 00001(FFFE0045192E0001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

\$CSYMB/remrks: Item is located between 41 and 39 foot obstructions on charts 12326 and 12324 near a charted buoy. Bathymetry and backscatter confirm a contact at this location, with a least depth of 42 feet.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_ 0004528430 00001	0.00	000.0	Primary

Hydrographer Recommendations

Add to chart

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: NINFOM - Delete obstruction
NTXTDS - US5NJ30M, Edition19, Update4
SORDAT - 20140512
SORIND - US, US, graph, H12609

Office Notes

SAR: Object verified via MBES

COMPILATION: AWOIS 8074 - Concur with conditions. Consider AWOIS item disproved because it is no longer a danger. Shoaler depths are in the vicinity of this uncharted feature. Update the chart with present survey depths. Update AWOIS database with present survey results.

Feature Images

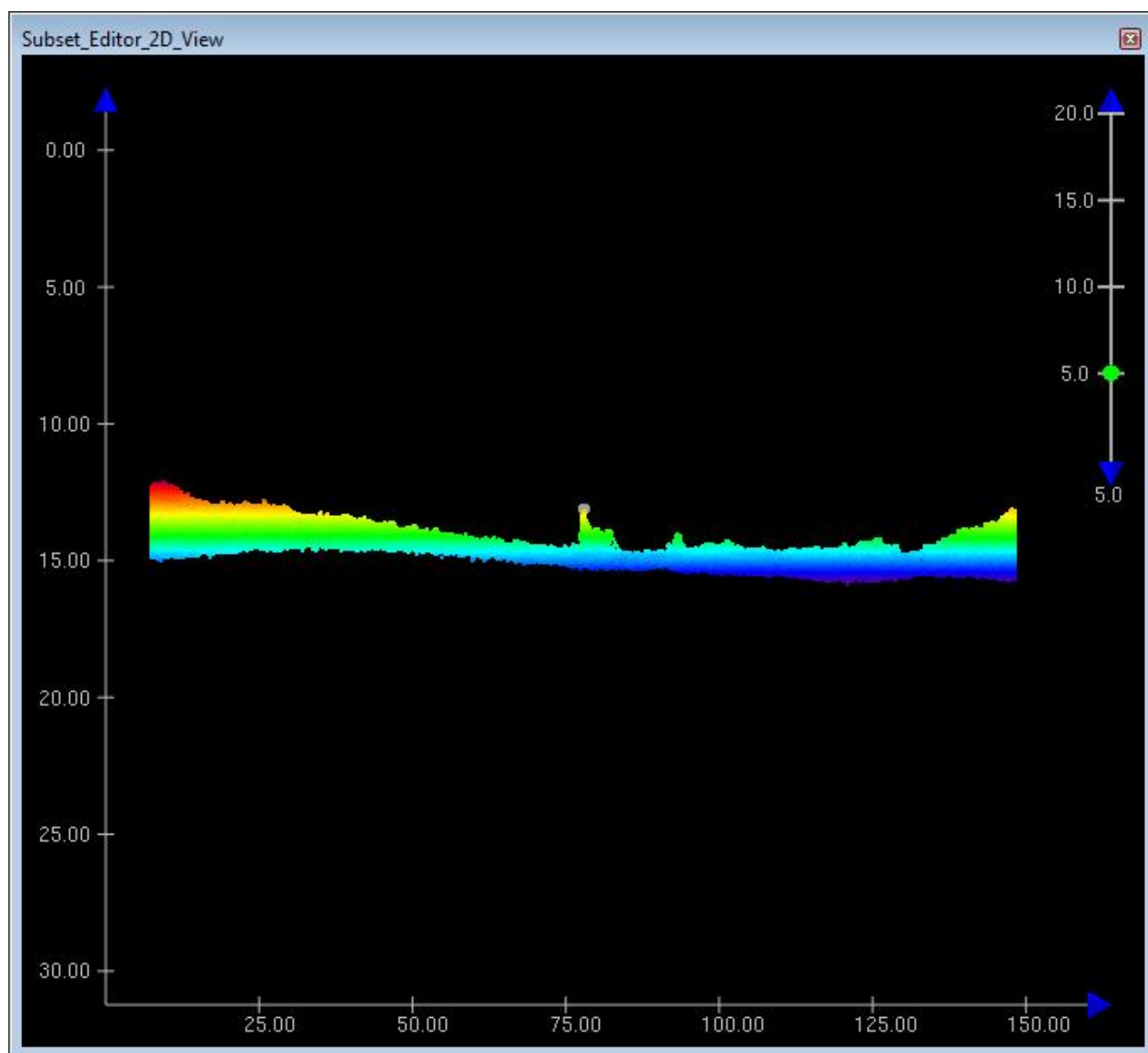


Figure 1.8.1

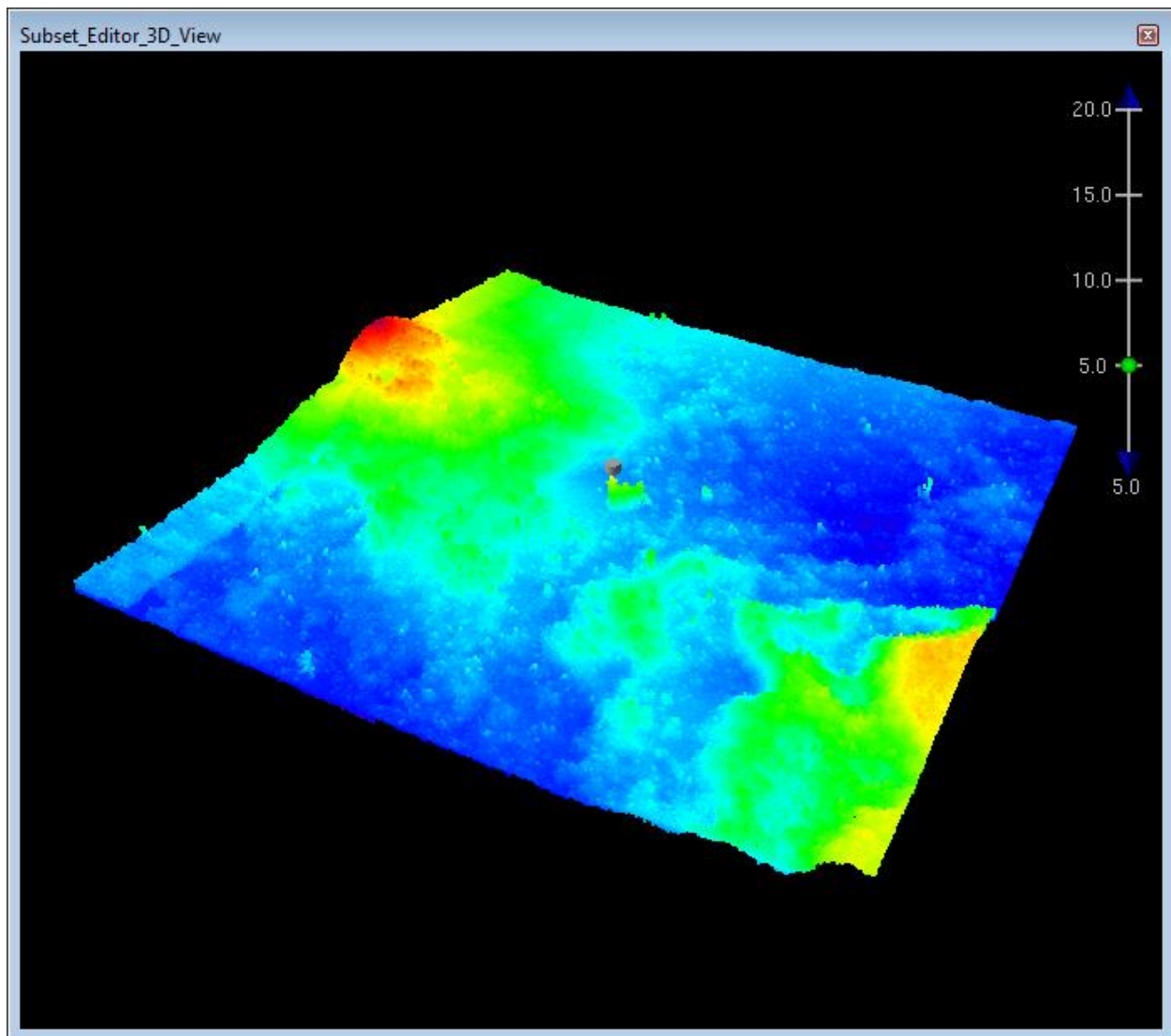


Figure 1.8.2

1.9) AWOIS 8071 - Add dangerous sunken wreck, least depth 58.38 ft.

Feature for AWOIS Item #8071

Search Position: 40° 22' 21.1" N, 073° 55' 07.4" W
Historical Depth: 17.80 m
Search Radius: [unknown]
Search Technique: Type: UNKNOWN, Itemstatus: COMPLETED, Searchtype: INFORMATION, Technique: S2 ES MBES

Technique Notes:

History Notes:

History

HISTORY H10284/88--OPR-C147-WH-88; SIGNIFICANT CONTACT WITH WRECK-LIKE CHARACTERISTICS WAS LOCATED IN LAT 40-22-20.928N LONG 73-55-07.573W (NAD83); FOUND 675M FROM AWOIS ITEM 1570; CALCULATED LEAST DEPTH OF 47 FT; RECOMMENDED FOR ADDITIONAL WORK ON A FUTURE SURVEY. FE330SS/89--OPR-C147-HE-89; CONTACT 1 FROM SURVEY H-10284/88; DIVERS INVESTIGATION FOUND A LARGE MASS OF WOOD AND STEEL WRECKAGE OF UNDETERMINED TYPE; WRECKAGE WAS BADLY DETERIORATED AND ROSE TO ABOUT 10FT OFF THE BOTTOM; VISIBILITY WAS VERY GOOD AND THE DIVERS WERE CONFIDENT THAT THE MEASUREMENT WAS MADE ON THE HIGHEST POINT; 52 FT DIVER LEADLINE LEAST DEPTH; LAT 40-22-20.93N LONG 73-55-07.12W (NAD83); LORAN C RATES: 9960-X 26937.5 9960-Y 43654.5 9960-Z 59840.0; DETERMINED THAT THIS IS NOT THE TUG IN AWOIS ITEM 1570; EVALUATOR RECOMMENDED CHARTING 52 WK IN SURVEY POSITION. (ENTERED MSD 6/91)

Survey Summary

Survey Position: 40° 22' 21.1" N, 073° 55' 07.4" W
Least Depth: 17.80 m (= 58.38 ft = 9.730 fm = 9 fm 4.38 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_0004528418 00001(FFFE004519220001)
Charts Affected: 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: Bathymetry and backscatter confirm a contact at this location with debris-like characteristics, but with a least depth of 56 feet

COMPILATION: AWOIS 8071 - Concur. Delete charted dangerous sunken wreck, least depth 52 feet. Add dangerous sunken wreck, least depth 56 feet in the present survey position. Update AWOIS database with present survey findings.

Hydrographer Recommendations

update depth

Cartographically-Rounded Depth (Affected Charts):

58ft (12326_1)

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

17.8m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck
NINFOM - Add wreck
OBJNAM - AWOIS 8071
QUASOU - 6:least depth known
SORDAT - 20140512
SORIND - US,US,graph,H12609
TECSOU - 3:found by multi-beam
VALSOU - 17.795 m
WATLEV - 3:always under water/submerged

Office Notes

SAR: Wreck verified via MBES

COMPILATION: AWOIS 8071

Delete charted dangerous sunken wreck, least depth 52 feet. Add dangerous sunken wreck, least depth 58 feet in present survey position. Update AWOIS database with present survey findings.

Feature Images

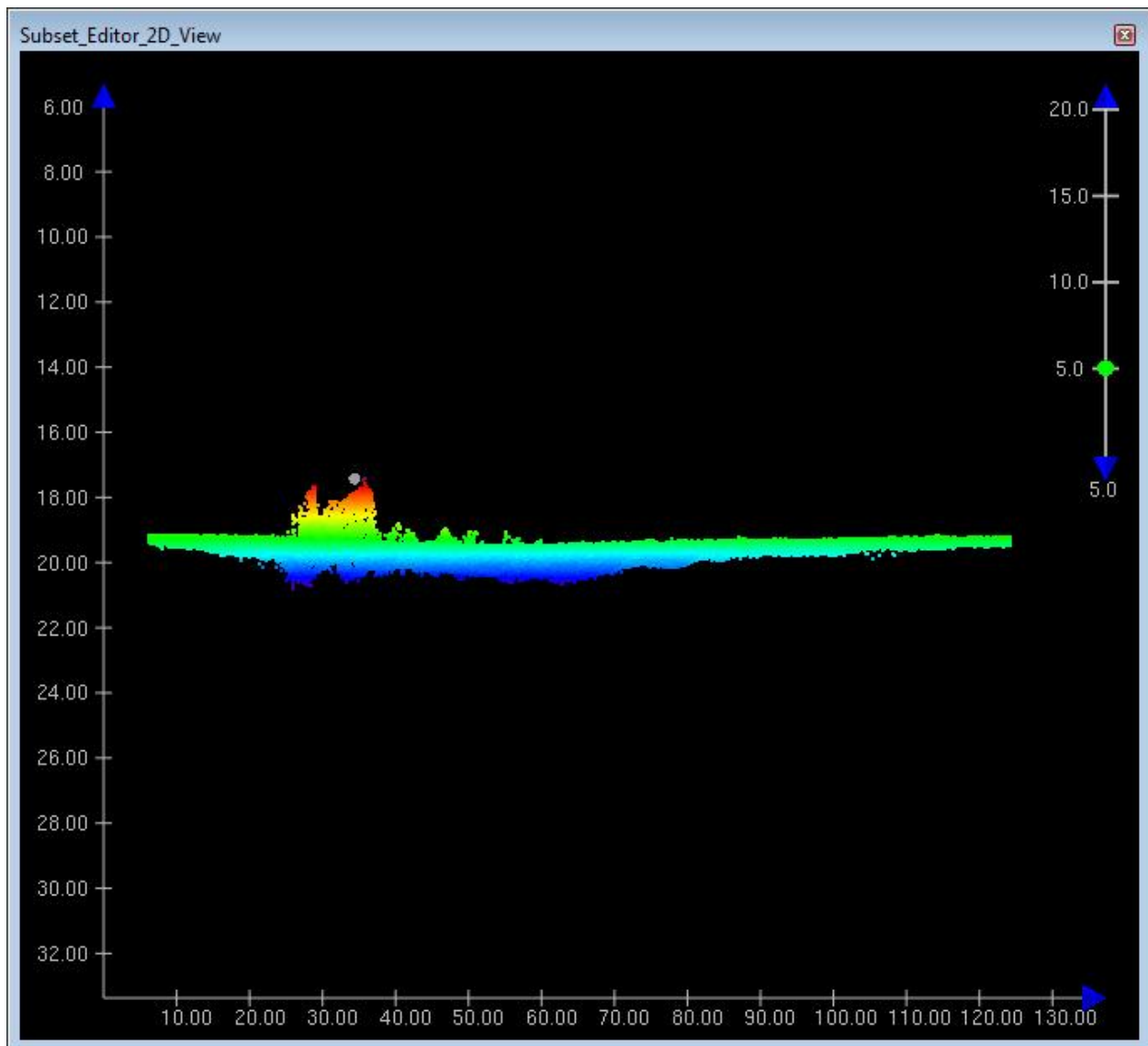


Figure 1.9.1

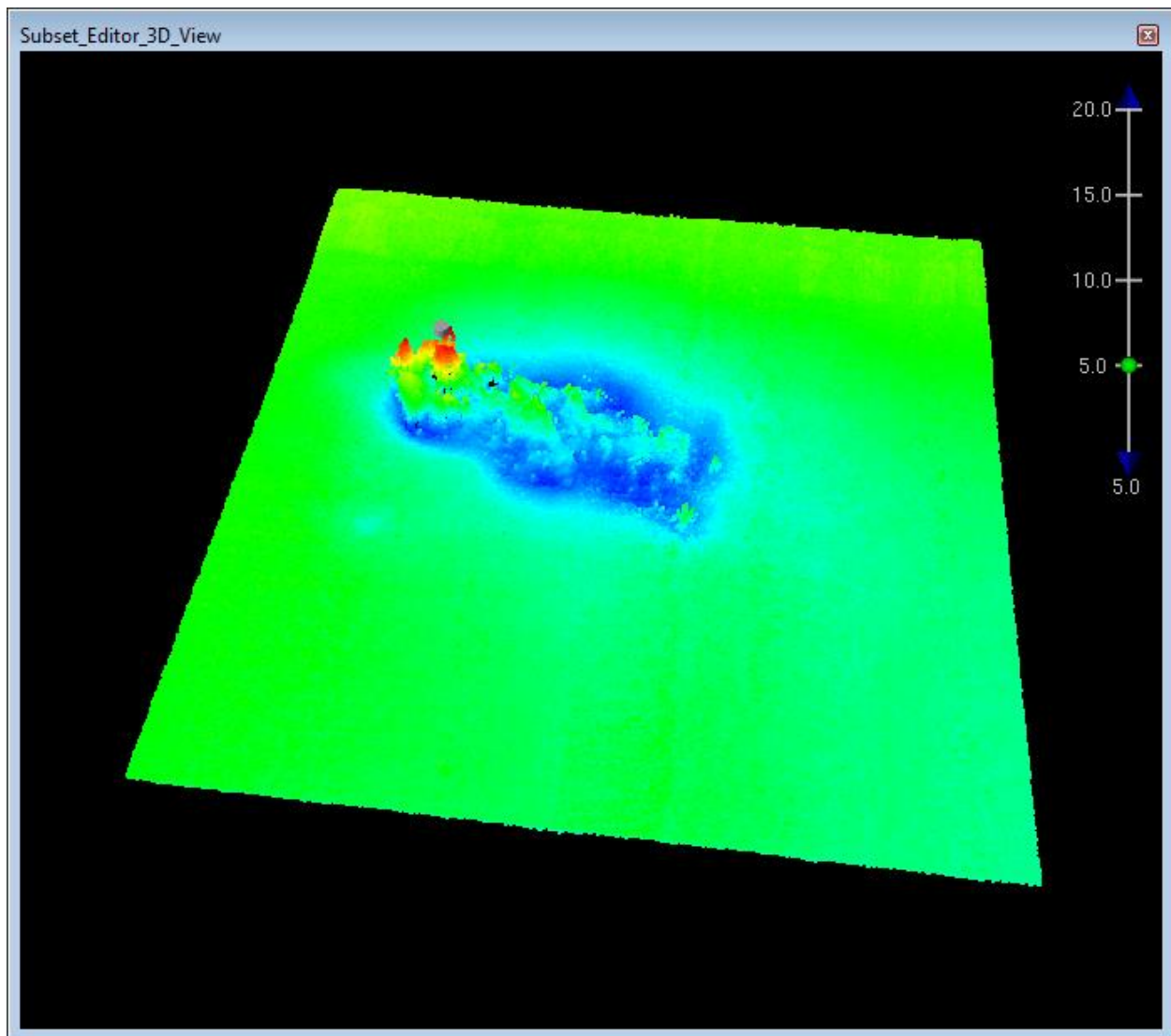


Figure 1.9.2

2.1) DTON 1.7 - Add Dangerous 39.66 ft obstruction

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 16' 10.5" N, 073° 57' 45.7" W
Least Depth: 12.09 m (= 39.66 ft = 6.609 fm = 6 fm 3.66 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2013-312.22:56:50.000 (11/08/2013)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_0004528451 00001(FFFE004519430001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

OBSTRN/remrks: Feature located between charted 53, 49 and 47 foot depths (closest to charted 53 foot depth). Surrounding surveyed water depths are around 50 feet

Hydrographer Recommendations

Add to chart as obstruction

Cartographically-Rounded Depth (Affected Charts):

39ft (12324_1, 12326_1)

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

12.1m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: NINFOM - Add obstruction
 OBJNAM - DtoN1.7
 QUASOU - 6:least depth known
 SORDAT - 20140512
 SORIND - US,US,graph,H12609
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 12.087 m
 WATLEV - 3:always under water/submerged

Office Notes

SAR: Object verified via MBES and SSS; Original DTON submission was applied to current charts.

COMPILATION: DTON 1.7 - Delete charted dangerous obstruction, least depth 40 feet. Add dangerous submerged obstruction, least depth 39.7 feet in present survey position.

Feature Images

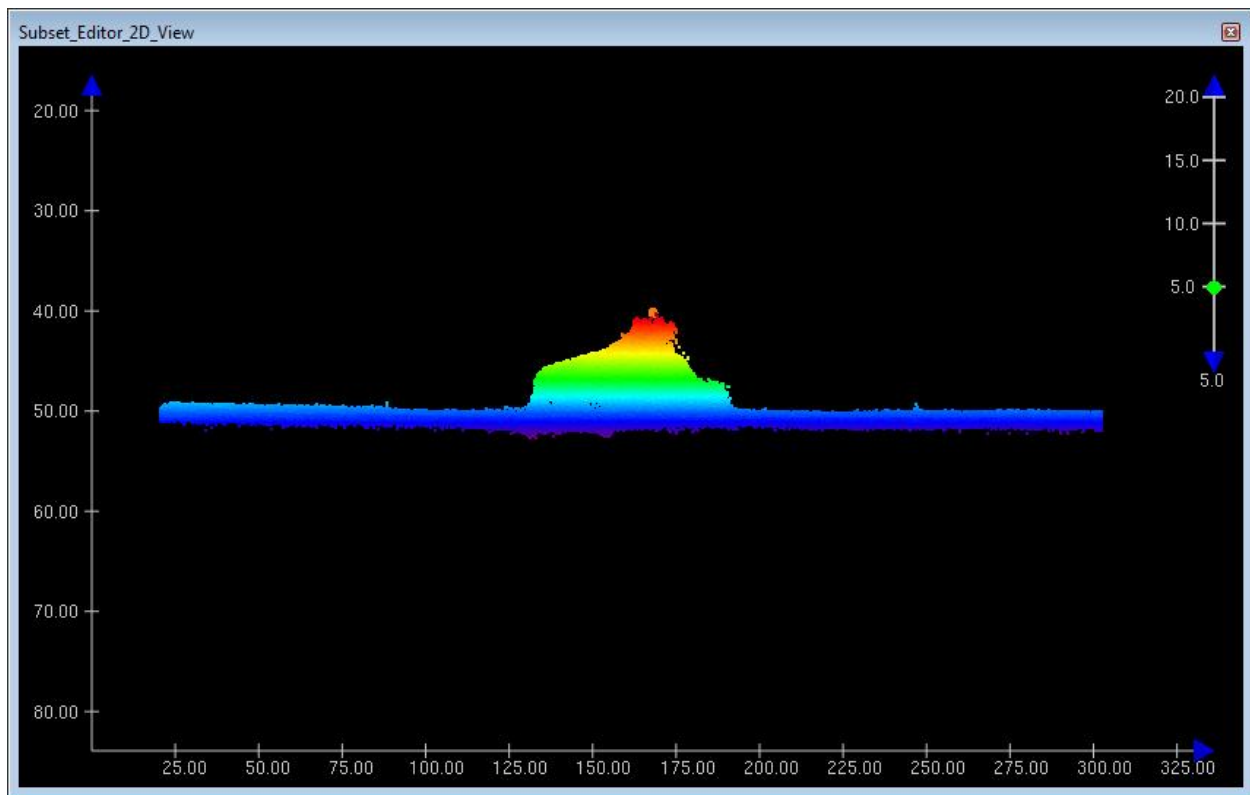


Figure 2.1.1

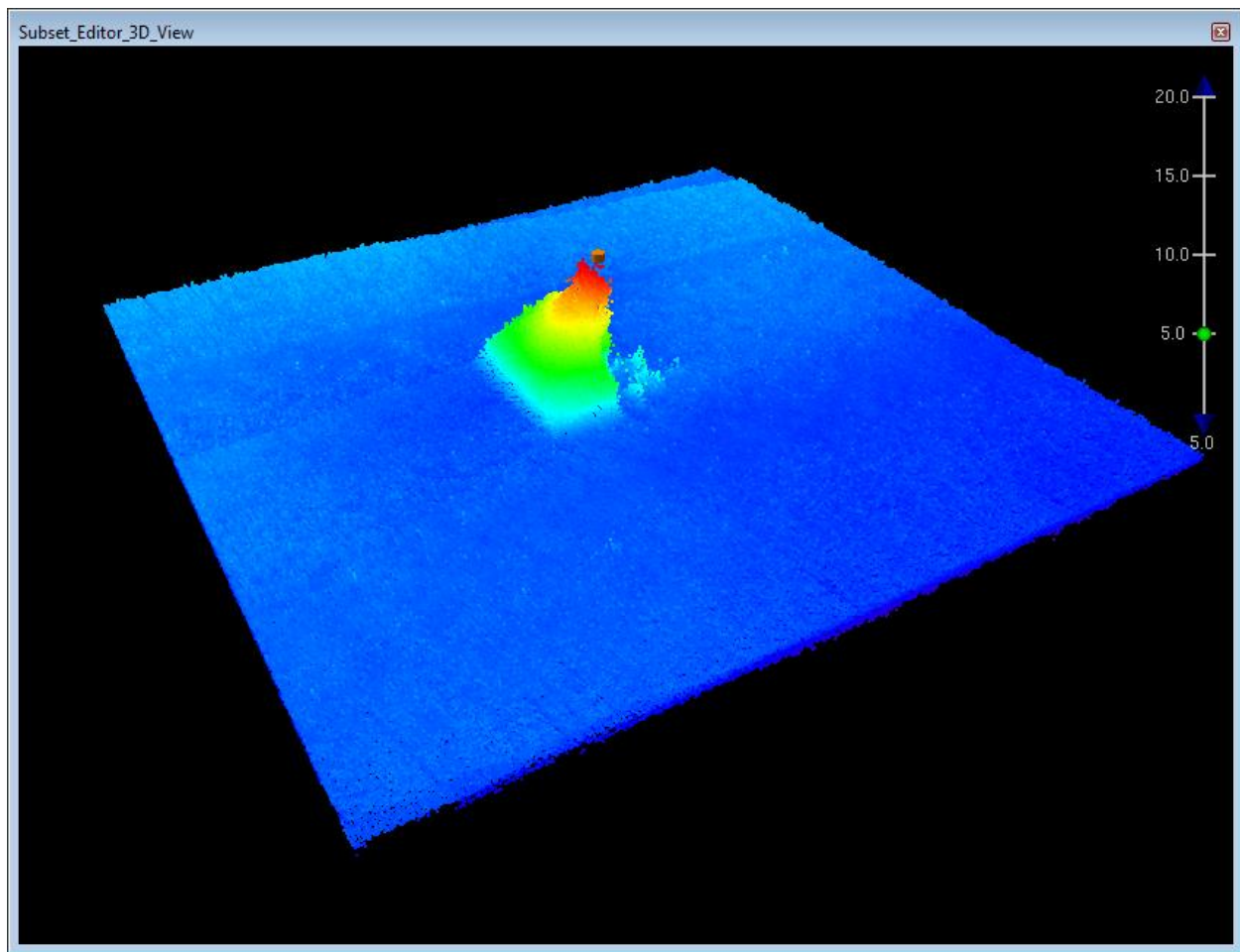


Figure 2.1.2

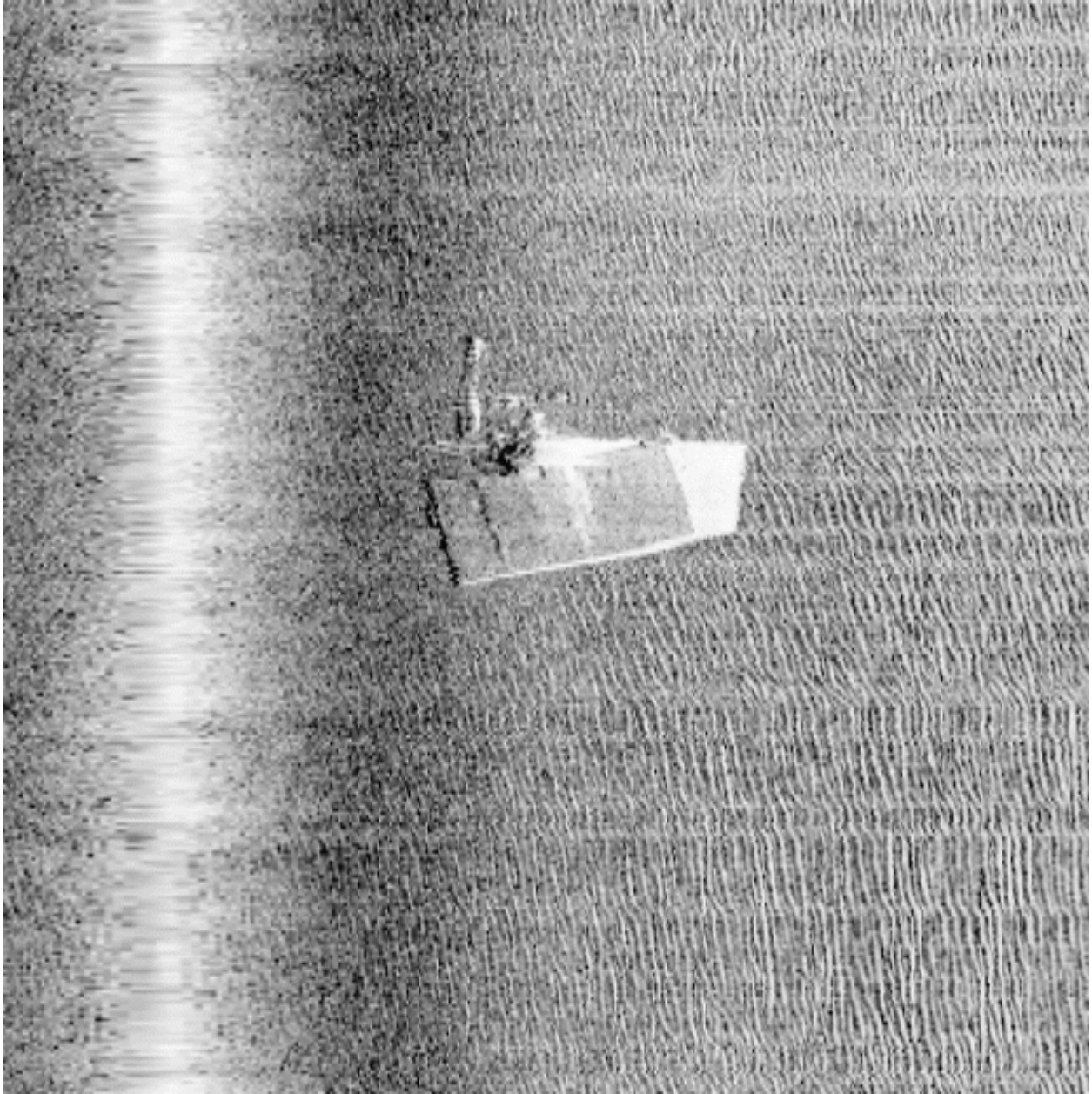


Figure 2.1.3

2.2) DTON 1.8- Add Dangerous 29.99 ft obstruction

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 21' 20.5" N, 073° 57' 44.7" W
Least Depth: 9.14 m (= 29.99 ft = 4.999 fm = 4 fm 5.99 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_0004528415 00001(FFFE0045191F0001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

OBSTRN/remrks: Significant contact - note that there are two other features nearby, not DtoNs according to charted OBSTRN depth

Hydrographer Recommendations

Add to chart as obstruction

Cartographically-Rounded Depth (Affected Charts):

30ft (12324_1, 12326_1)

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

9.1m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: NINFOM - Add obstruction
 OBJNAM - DtoN1.8
 QUASOU - 6:least depth known
 SORDAT - 20140512
 SORIND - US,US,graph,H12609
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 9.142 m
 WATLEV - 3:always under water/submerged

Office Notes

SAR: Object verified via MBES and SSS; Original DTON submission was applied to the charts

COMPILATION: DTON 1.8 - Delete charted dangerous obstruction, least depth 31 feet. Add dangerous submerged obstruction, least depth 30.0 feet in present survey position.

Feature Images

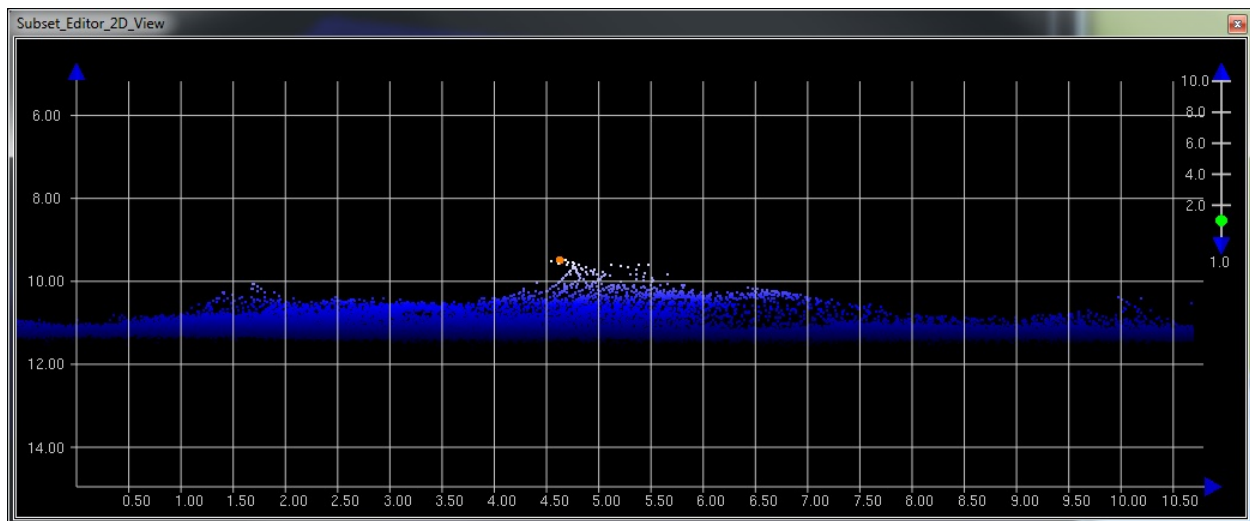


Figure 2.2.1

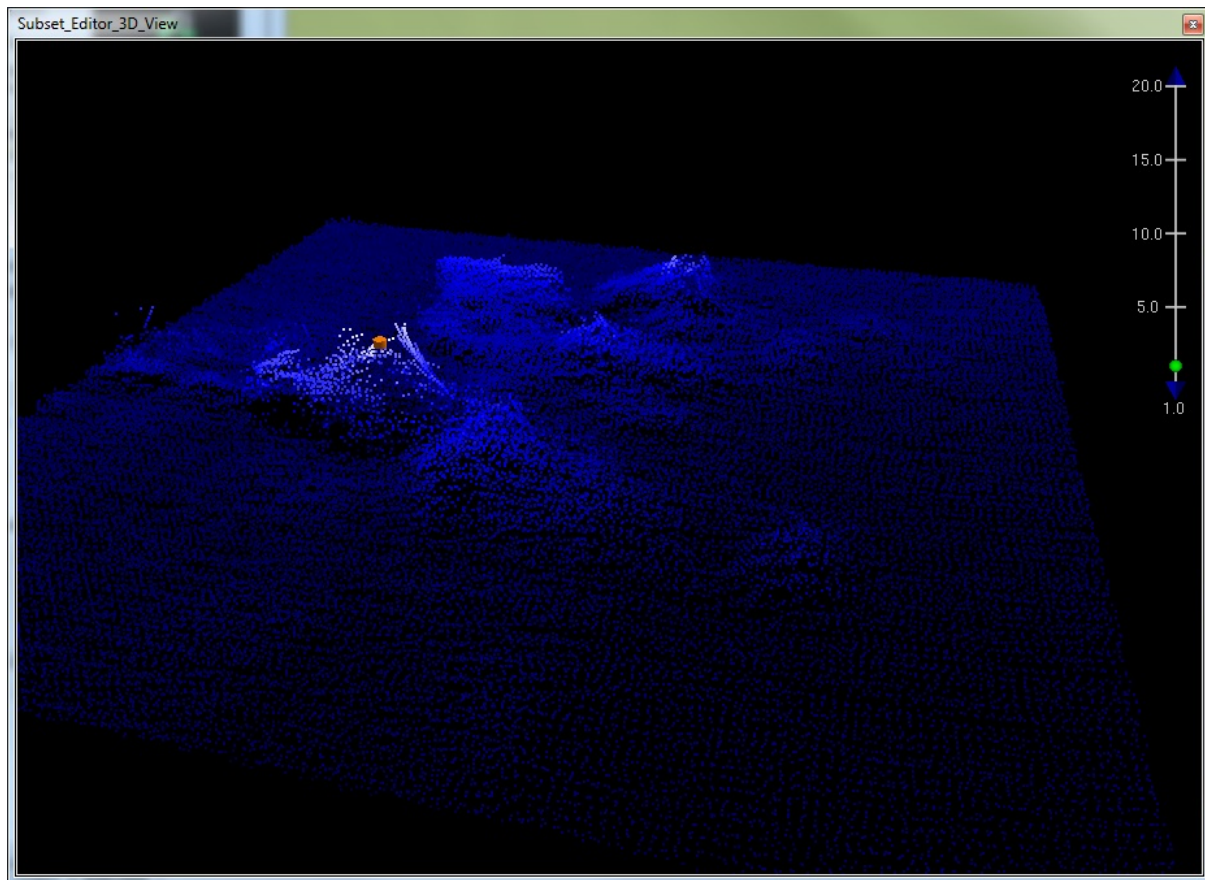


Figure 2.2.2

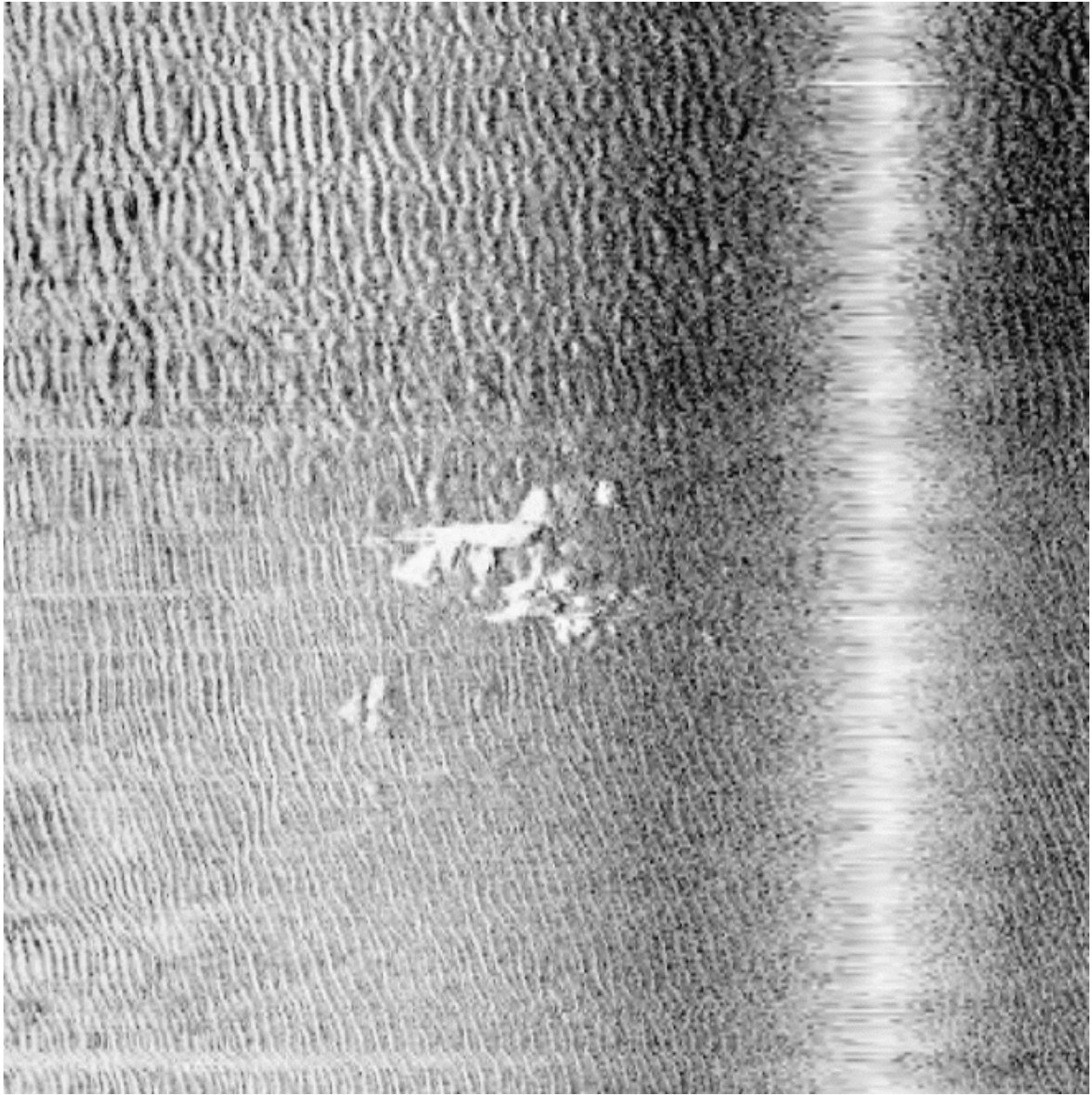


Figure 2.2.3

3.1) AWOIS 8097 - Dangerous 40 ft sunken wreck

Survey Summary

Survey Position: 40° 19' 29.2" N, 073° 57' 01.8" W
Least Depth: 12.16 m (= 39.90 ft = 6.651 fm = 6 fm 3.90 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132:00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_0004528457 00001(FFFE004519490001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: Complete multibeam and SSS were acquired within the radius and confirm a contact at this location with a least depth of 40 feet

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_0004528457 00001	0.00	000.0	Primary

Hydrographer Recommendations

Retain as charted

Cartographically-Rounded Depth (Affected Charts):

40ft (12324_1, 12326_1)

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

12.1m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 NINFOM - Add wreck
 OBJNAM - AWOIS 8097
 QUASOU - 6:least depth known
 SORDAT - 20140512

SORIND - US,US,graph,H12609

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

VALSOU - 12.163 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Field had AWOIS 8097 designated as an obstruction; recommend retain as a wreck. Side scan imagery validates the feature as a wreck.

COMPILATION: AWOIS 8097 - Delete charted dangerous sunken wreck, least depth 40 feet. Add dangerous sunken wreck, least depth 39.9 ft in the present survey position. Update the AWOIS database with present survey findings.

Feature Images

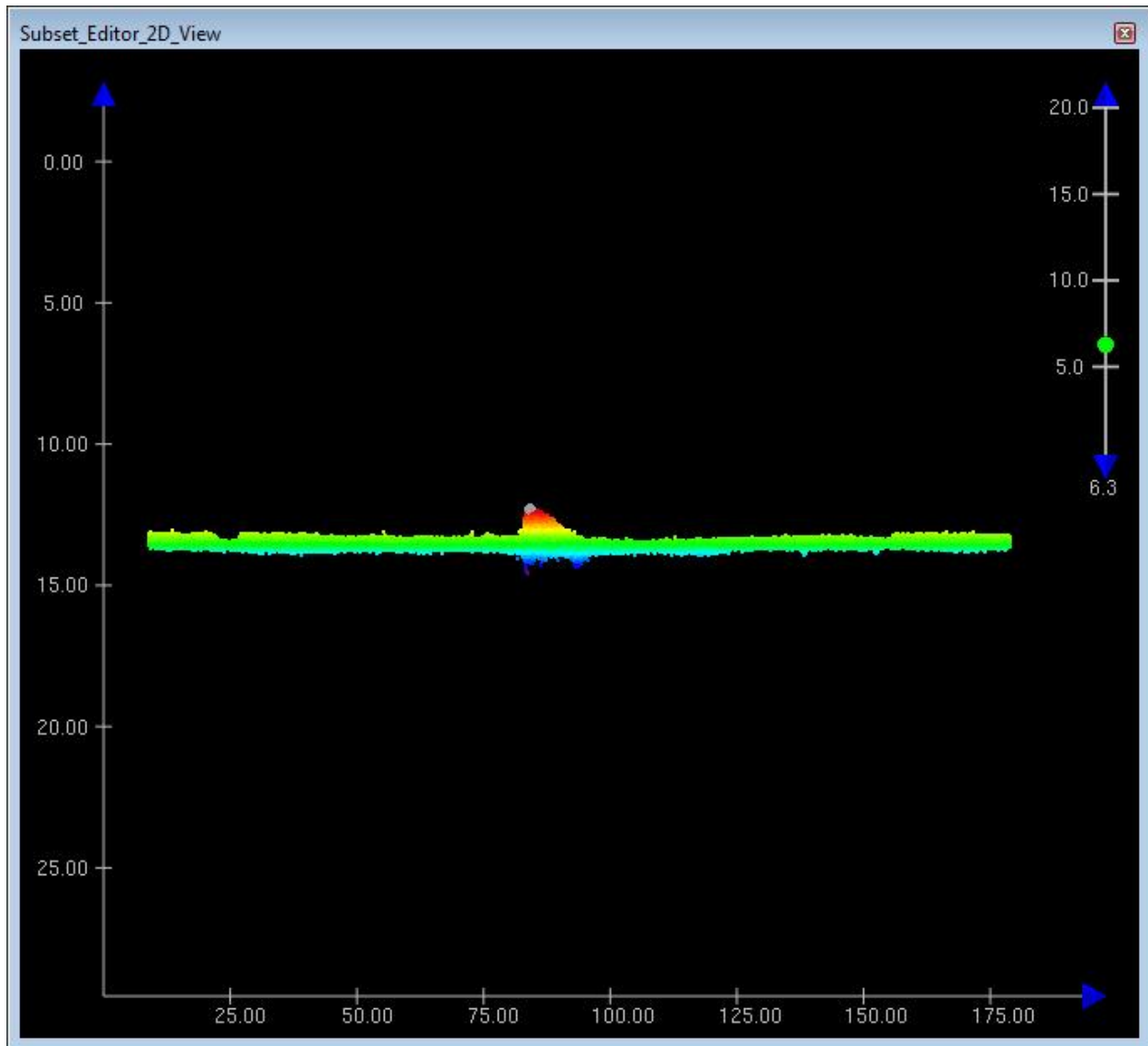


Figure 3.1.1

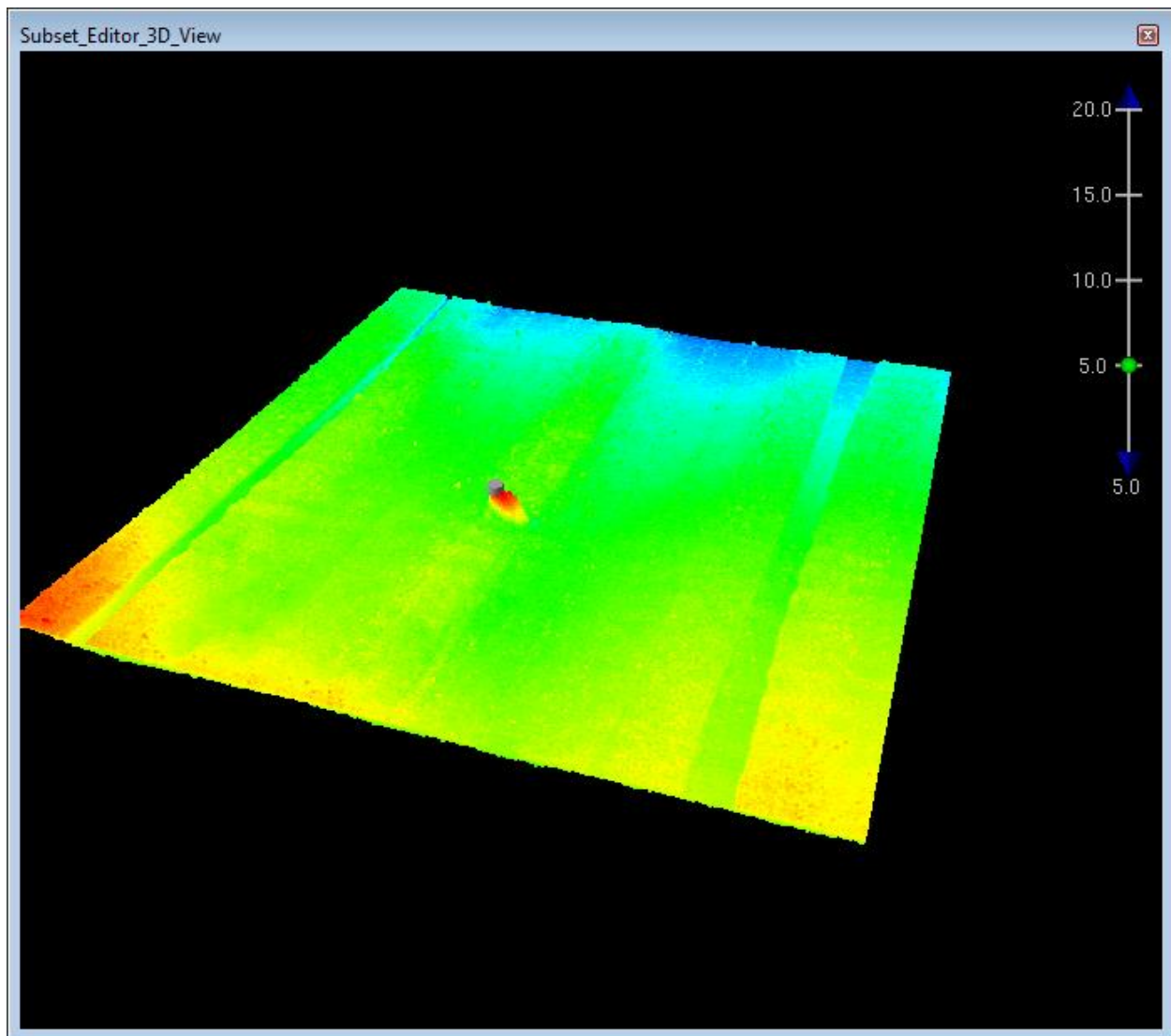


Figure 3.1.2

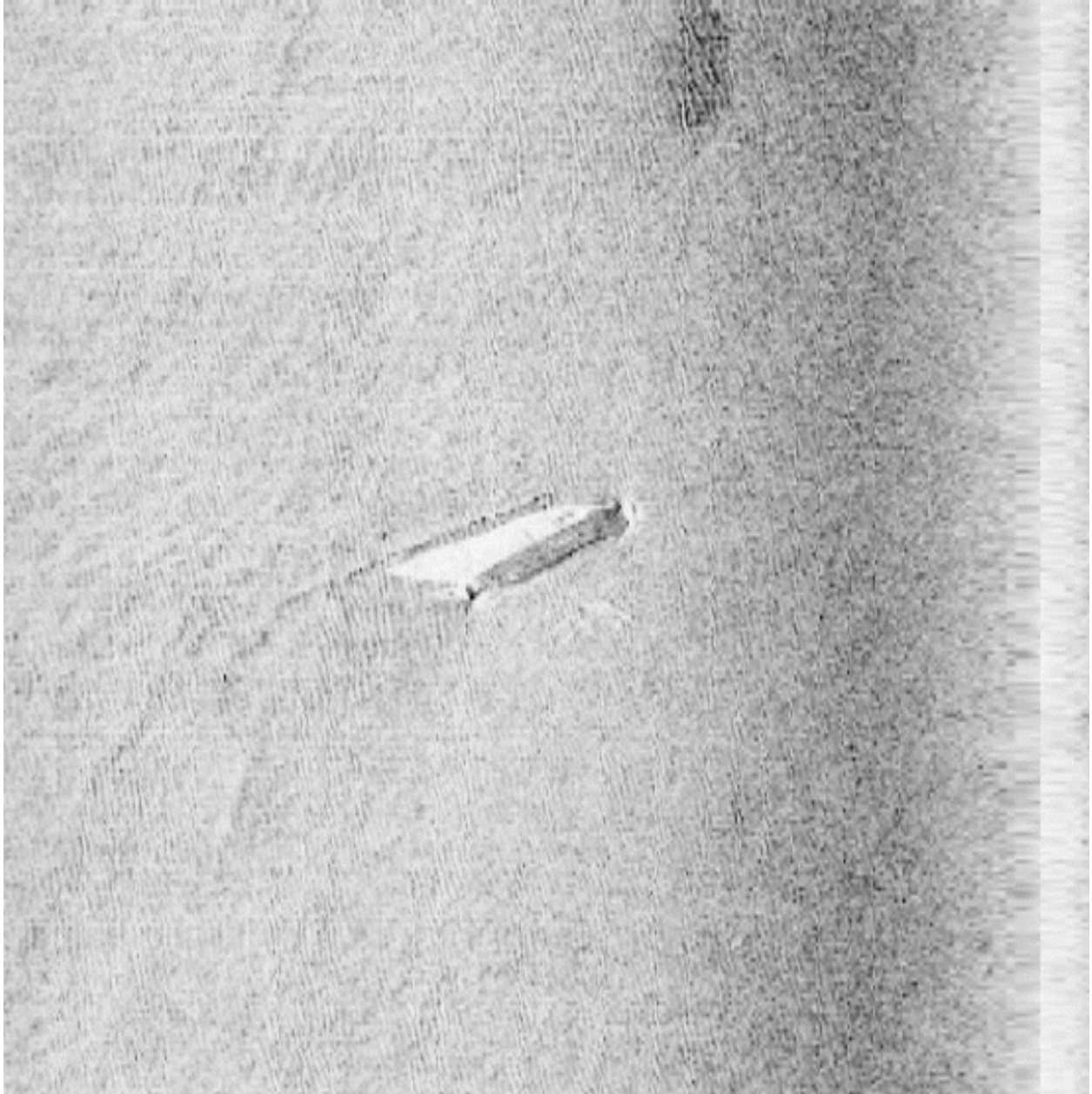


Figure 3.1.3

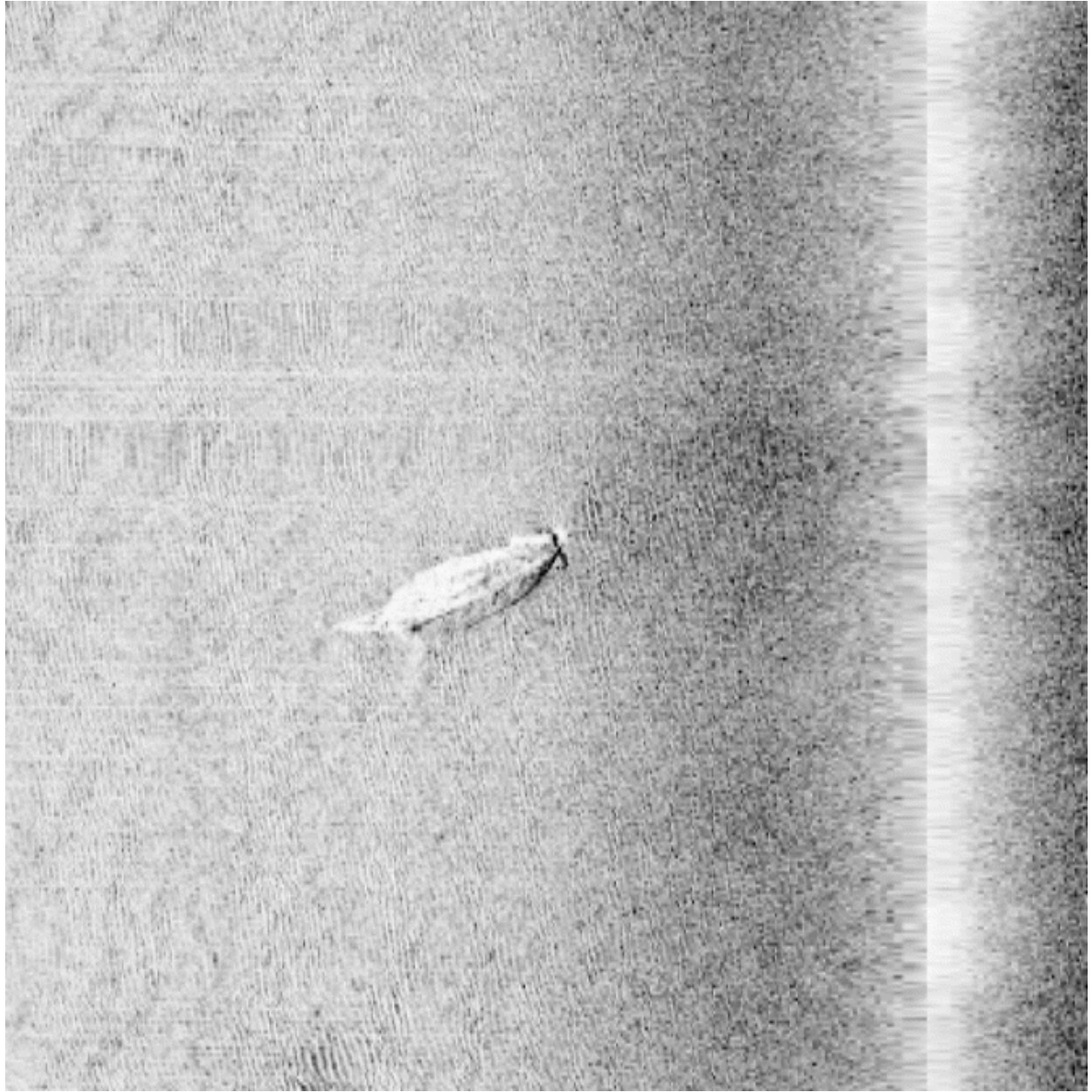


Figure 3.1.4

3.2) AWOIS 1531 - Dangerous 56 ft sunken wreck

Survey Summary

Survey Position: 40° 16' 08.3" N, 073° 56' 34.6" W
Least Depth: 17.19 m (= 56.39 ft = 9.399 fm = 9 fm 2.39 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132:00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_0004528406 00001(FFFE004519160001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: Bathymetry and backscatter indicate three linear contacts at the location of the AWOIS item with a least depth of 56 feet

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_0004528406 00001	0.00	000.0	Primary

Hydrographer Recommendations

Update charted depth

Cartographically-Rounded Depth (Affected Charts):

56ft (12324_1, 12326_1)

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

17.2m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 NINFOM - Add wreck
 OBJNAM - AWOIS 1531
 QUASOU - 6:least depth known
 SORDAT - 20140512

SORIND - US,US,graph,H12609

TECSOU - 3:found by multi-beam

VALSOU - 17.189 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Field had AWOIS 1531 designated as an obstruction; recommend retain as a wreck

COMPILATION: AWOIS 1531

Delete charted dangerous sunken wreck, least depth 54 feet. Add dangerous sunken wreck, least depth 56 feet in present survey position. Update AWOIS database with present survey findings.

Feature Images

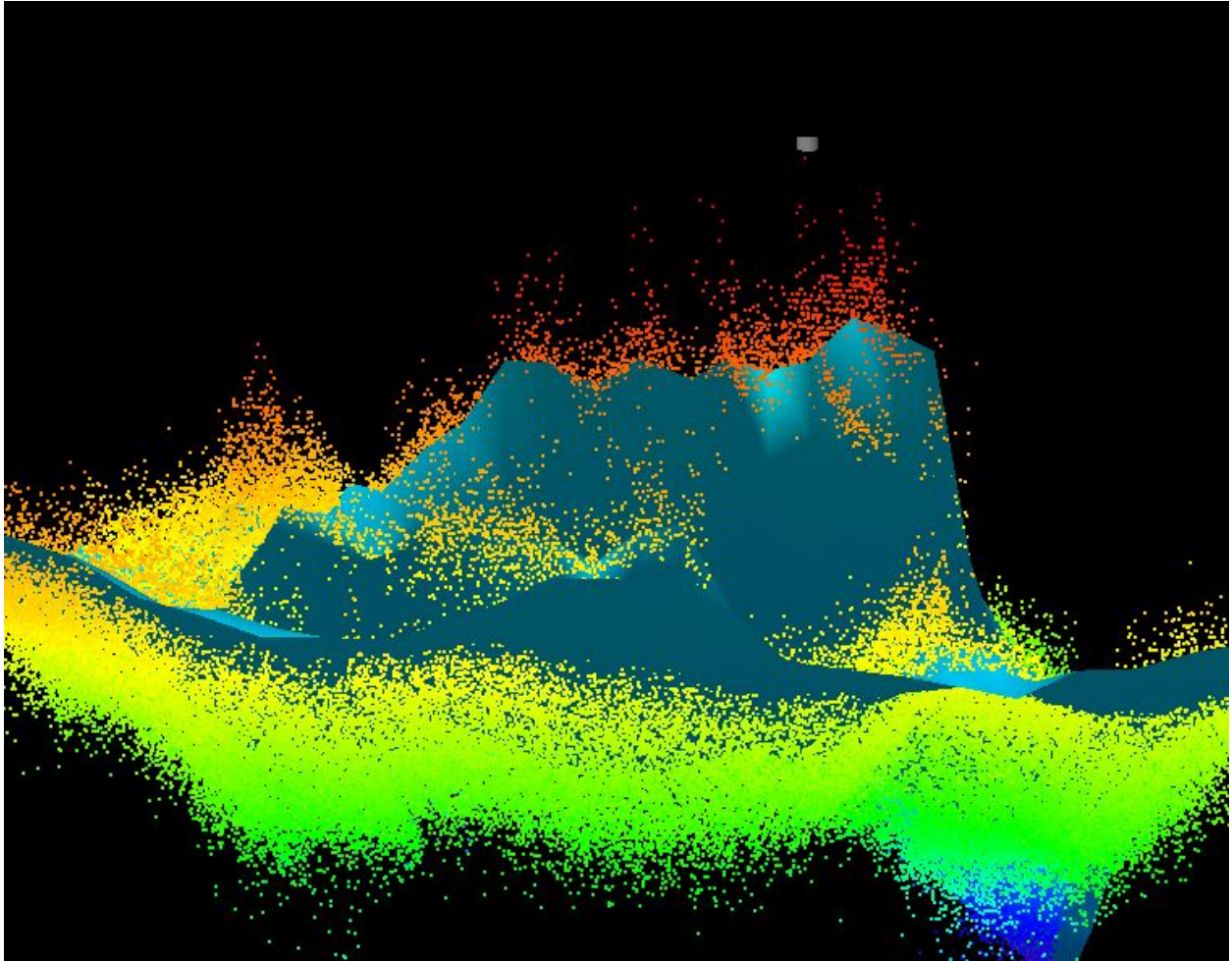


Figure 3.2.1

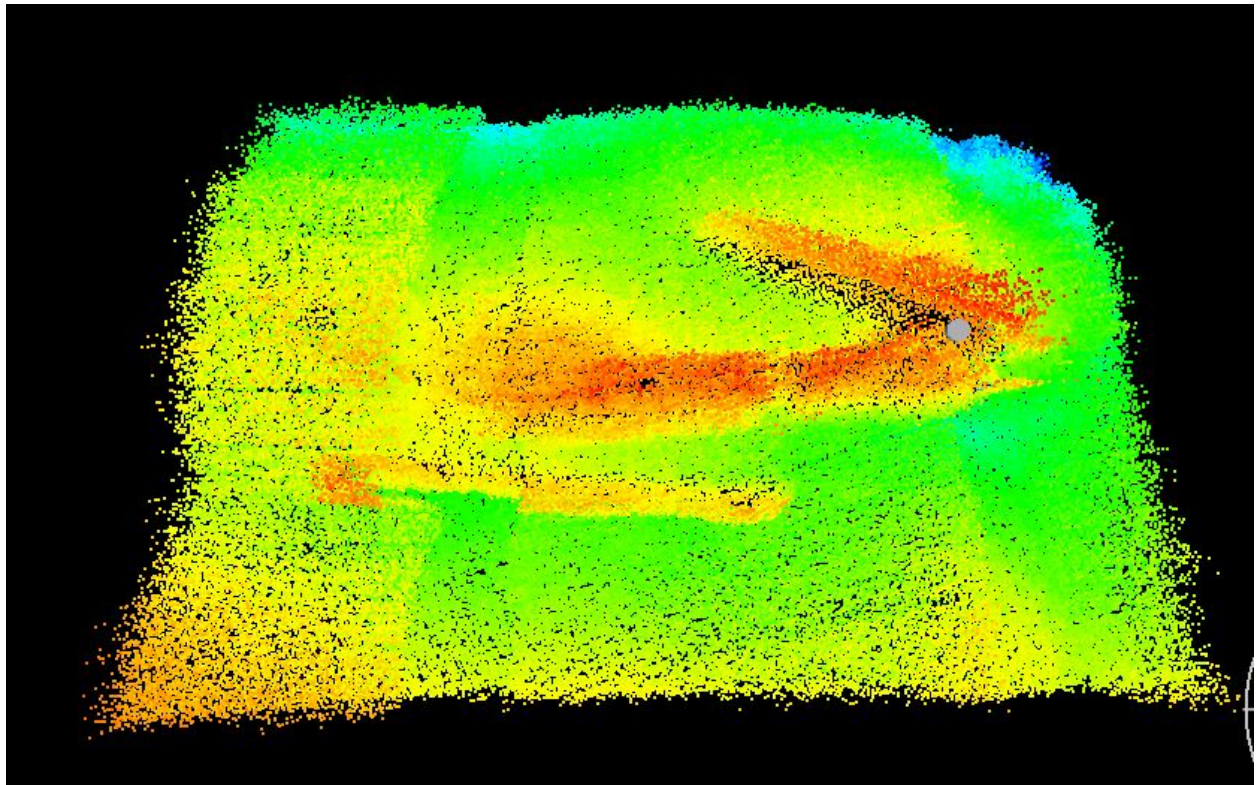


Figure 3.2.2

3.3) AWOIS 8073 - Dangerous 52ft sunken wreck

Survey Summary

Survey Position: 40° 19' 58.2" N, 073° 55' 37.2" W
Least Depth: 15.80 m (= 51.83 ft = 8.638 fm = 8 fm 3.83 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132:00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_0004528427 00001(FFFE0045192B0001)
Charts Affected: 12324_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: The bathymetry and backscatter confirm a contact at this location

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12609_DR_Feature_Report.000	0_0004528427 00001	0.00	000.0	Primary

Hydrographer Recommendations

update charted depth

Cartographically-Rounded Depth (Affected Charts):

52ft (12324_1, 12326_1)

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

15.8m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 NINFOM - Add wreck
 OBJNAM - AWOIS 8073
 QUASOU - 6:least depth known
 SORDAT - 20140512
 SORIND - US,US,graph,H12609

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

VALSOU - 15.798 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Field had AWOIS 8073 designated as an obstruction; do not recommend to retain as a wreck as the MB data does not validate a wreck. No side scan imagery exists within the common area. Defer charting decision to AHB Compiler.

COMPILATION: AWOIS 8073 - Concur with conditions. Delete charted dangerous sunken wreck, least depth 53 feet. Add dangerous sunken wreck, least depth 52 feet in the present survey position. Update AWOIS database with present survey findings.

Feature Images

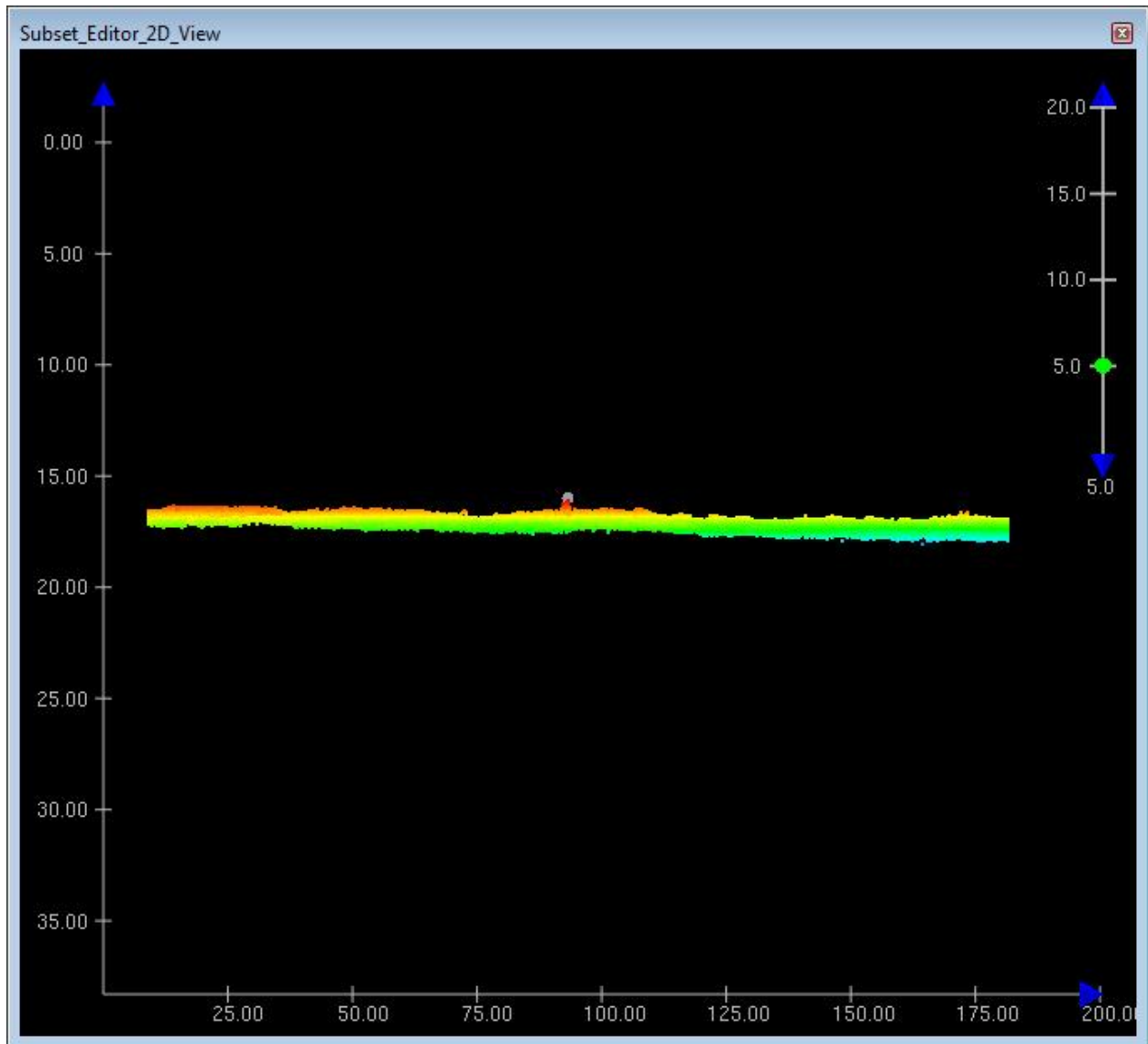


Figure 3.3.1

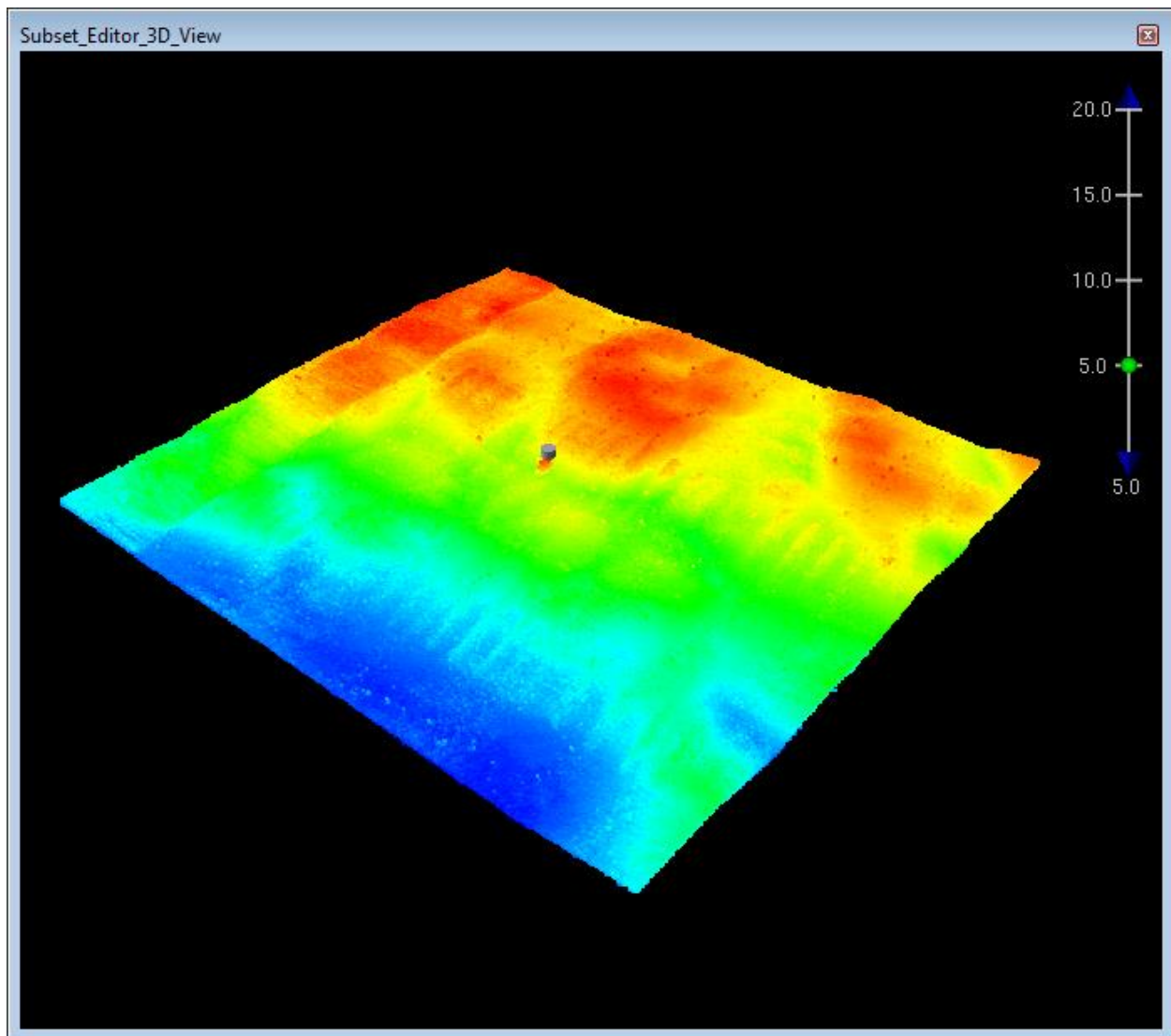


Figure 3.3.2

3.4) AWOIS 8071 - Dangerous 58 ft sunken wreck

Survey Summary

Survey Position: 40° 22' 21.1" N, 073° 55' 07.4" W
Least Depth: 17.80 m (= 58.38 ft = 9.730 fm = 9 fm 4.38 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2014-132.00:00:00.000 (05/12/2014)
Dataset: H12609_DR_Feature_Report.000
FOID: 0_0004528418 00001(FFFE004519220001)
Charts Affected: 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

WRECKS/remrks: Bathymetry and backscatter confirm a contact at this location with debris-like characteristics, but with a least depth of 56 feet

COMPILATION: AWOIS 8071 - Concur. Delete charted dangerous sunken wreck, least depth 52 feet. Add dangerous sunken wreck, least depth 56 feet in the present survey position. Update AWOIS database with present survey findings.

Hydrographer Recommendations

update depth

Cartographically-Rounded Depth (Affected Charts):

58ft (12326_1)
 9 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)
 17.8m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 NINFOM - Add wreck
 OBJNAM - AWOIS 8071
 QUASOU - 6:least depth known
 SORDAT - 20140512
 SORIND - US,US,graph,H12609
 TECSOU - 3:found by multi-beam

VALSOU - 17.795 m

WATLEV - 3:always under water/submerged

Office Notes

SAR: Wreck verified via MBES

COMPILATION: AWOIS 8071

Delete charted dangerous sunken wreck, least depth 52 feet. Add dangerous sunken wreck, least depth 58 feet in present survey position. Update AWOIS database with present survey findings.

Feature Images

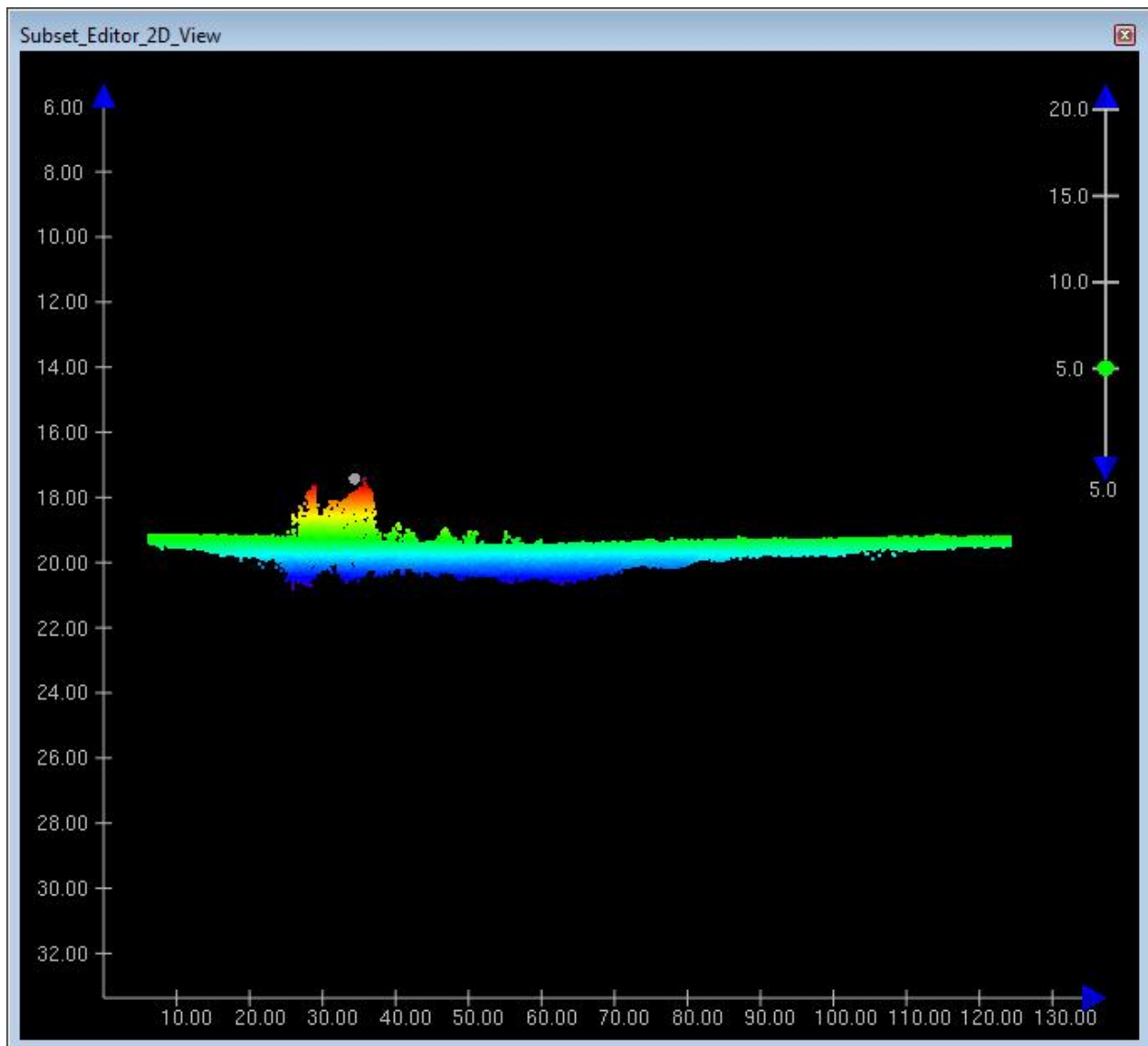


Figure 3.4.1

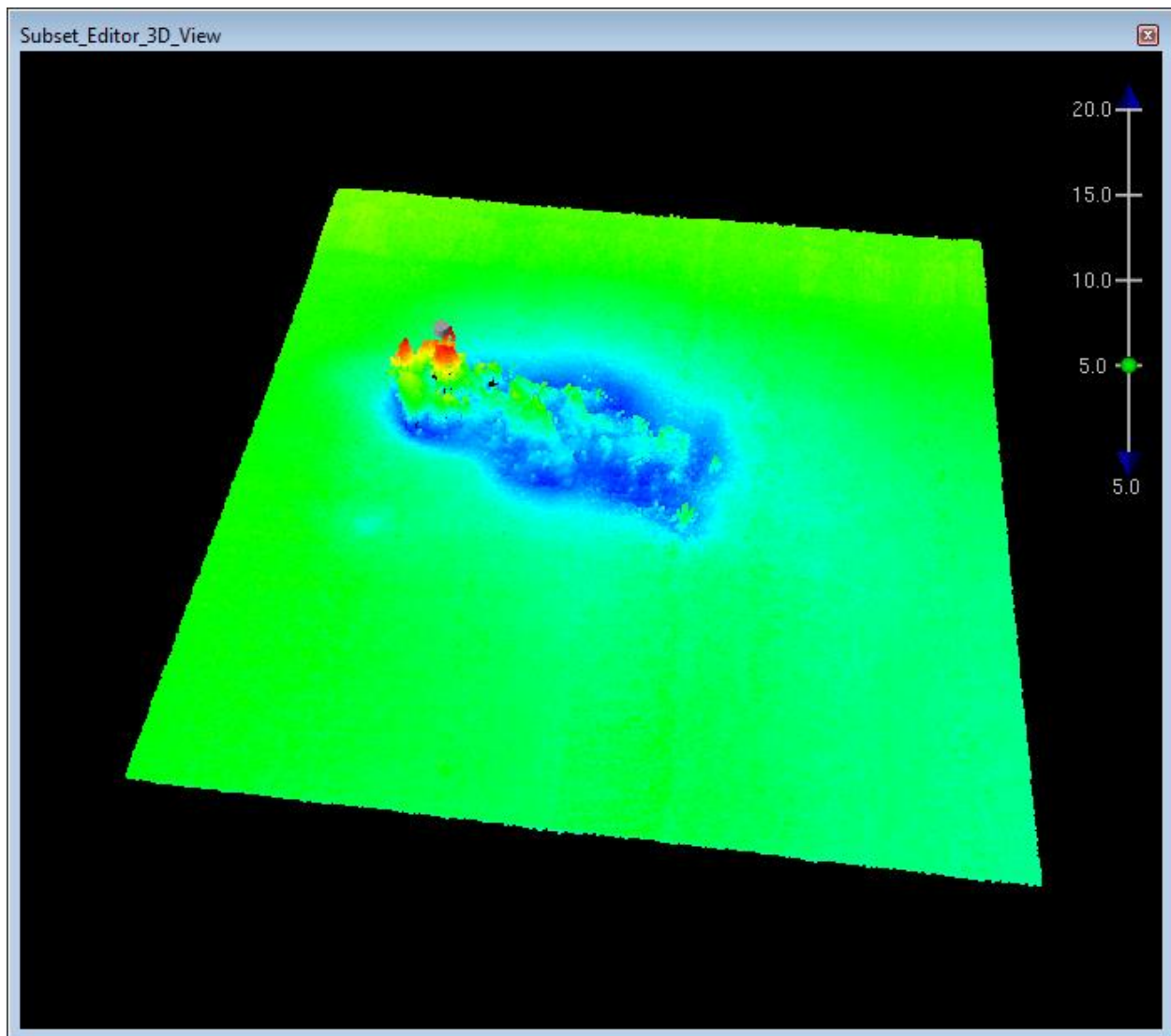


Figure 3.4.2

APPROVAL PAGE

H12609

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

- H12609_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- H12609_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