H12015

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey: Navigable Area

Registry Number: H12015

LOCALITY

State: Rhode Island

General Locality: Block Island Sound

Sub-locality: 3 NM S of Weekapaug Pt.

2009

CHIEF OF PARTY
CDR Shepard M.Smith
NOAA

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 U.S. DEPARTMENT OF COMMERCE
(11-72) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

H12015

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:	**Rhode Island**
General Locality:	**Block Island Sound, RI**
Sub-Locality:	**3 NM S of Weekapaug Pt.**
Scale:	**1:20,000** Date of Survey: **09/27/09 to 10/14/09**
Instructions Dated:	**26 February 2009** Project Number: **OPR-B363-TJ-09**
Vessel:	**NOAA Ship *Thomas Jefferson***
Chief of Party:	**CDR Shepard M. Smith , NOAA**
Surveyed by:	***Thomas Jefferson* Personnel**
Soundings by:	**Reson 7125 multibeam echo sounder.**
Graphic record scaled by:	**N/A**
Graphic record checked by:	**N/A**
Protracted by:	**N/A** Automated Plot: **N/A**
Verification by:	***Atlantic Hydrographic Branch Personnel***
Soundings in:	**Meters at MLLW***
H-Cell compilation units in:	***Feet at MLLW***

Remarks:

1) All Times are in UTC.

2) This is a Navigable Area Hydrographic Survey.

3) Projection is NAD83, UTM Zone 19.

Bold italic red notes in the Descriptive Report were made during office processing.

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Descriptive Report to Accompany Hydrographic Survey H12015

Project OPR-B363-TJ-09
Block Island Sound, RI
3 NM S of Weekapaug Pt.
Scale 1:20,000
September 27th – October 14th 2009
NOAA Ship *Thomas Jefferson*

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-B363-TJ-09, dated 26 February 2009. ***Concur.***

North Western Limit	South Western Limit	South Eastern Limit	North Eastern Limit
41° 17’ 34.87” N 071° 51’ 24.56” W	41°13'35.08" N 071°51'26.86" W	41°15'36.12" N 071°38'12.06" W	41°19'04.14" N 071°38'10.23" W

Data acquisition was conducted from September 27th – October 14th, 2009. ***Concur.***

The purpose of this project is to update the nautical charts in the area. Most of the bathymetry is from surveys completed before 1940. This project responds, in part, to a request from the president of the Northeast Marine Pilots for new hydrographic survey to support deep draft (60’) vessels carrying oil along the route that proceeds northwest from the precautionary area south of the Narragansett Bay and Buzzards Bay traffic lanes. ***Concur.***

	Linear Nautical Miles
LNM Single beam mainscheme only	N/A
LNM Multibeam mainscheme only	749.28
LNM Lidar mainscheme only	N/A
LNM Side Scan Sonar mainscheme only	N/A
Lineal nautical miles of any combination of the above techniques (specify methods)	749.28
LNM Crosslines singlebeam and multibeam combined	33.72
LNM Lidar Crosslines	N/A
LNM development lines non mainscheme	N/A
LNM shoreline/nearshore investigations	0
Number of Bottom Samples	6
Number of items investigated that required additional time/effort in the field beyond the above survey operations	0
Total number of square nautical miles	37.37

Table 1: Hydrographic Survey Statistics

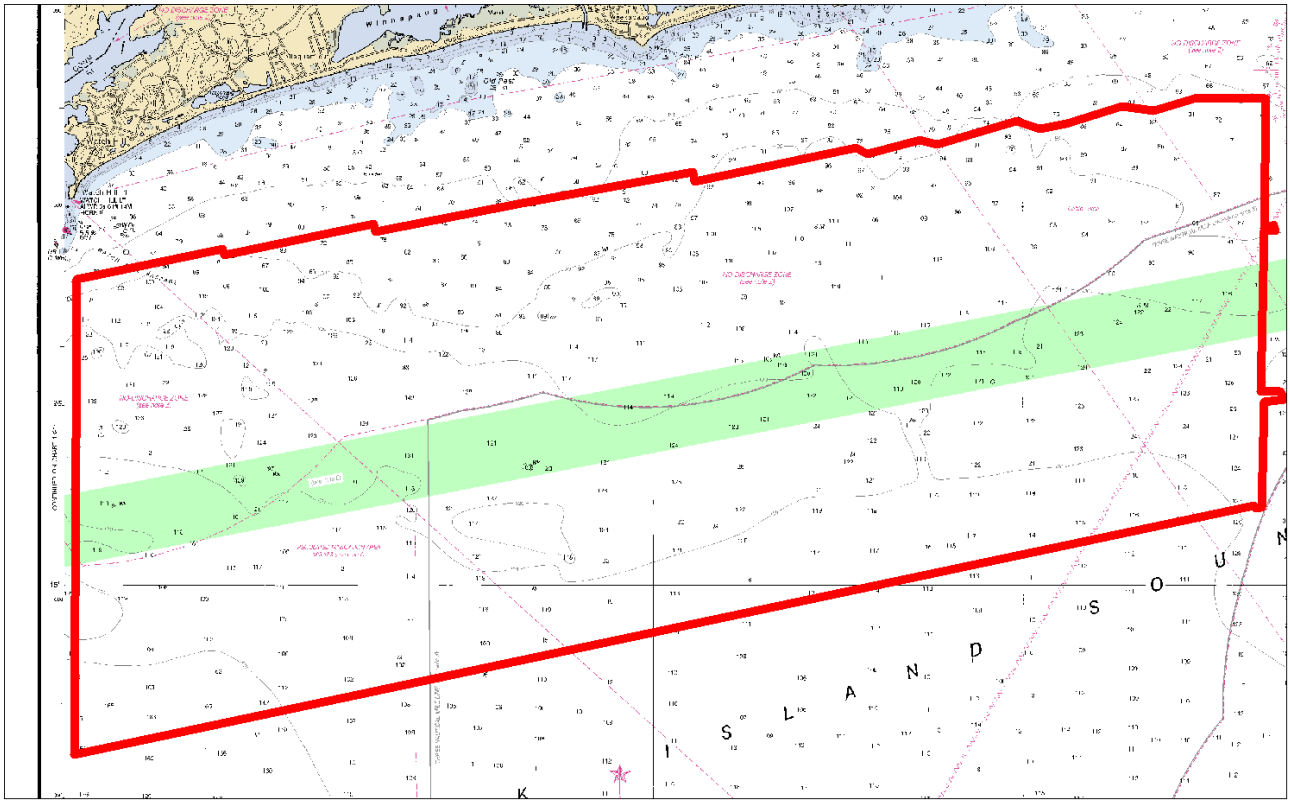


Fig. 1. H12015 Survey Area.

Calendar Date	Julian Day
27-September-09	270
28-September-09	271
29-September-09	272
10-October-09	283
11-October-09	284
12-October-09	285
13-October-09	286
14-October-09	287

Table 2: MB Acquisition Dates

B. DATA ACQUISTION AND PROCESSING *See also the H-Cell report.*

Refer to ***OPR-B363-TJ-09 Data Acquisition and Processing Report (DAPR)**** for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR are included in this descriptive report. ***Concur.***

****DAPR included with survey deliverables.***

B 1. EQUIPMENT AND VESSELS

Data were acquired by NOAA Ship *Thomas Jefferson* . NOAA Ship *Thomas Jefferson* acquired Reson 7125 multibeam echo sounder soundings and sound velocity profiles. Bottom samples were collected by NOAA Ship *Thomas Jefferson*. Vessel configurations, equipment operation and data acquisition and processing were consistent with specifications described in the DAPR*. ***Concur.***

B 2. QUALITY CONTROL

B 2.1 System Certification and Calibration

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

B.2.2 Sounding Coverage

As per the Letter Instructions, this survey was conducted using complete coverage multibeam. Bathymetry coverage was monitored by creating a BASE surface with two meter resolution, as per HTD 2009-2 for Complete Multibeam Coverage in depth greater than 20 meters, except in sounding coverage where data was deleted creating a holiday, see fig 2. ***Concur.***

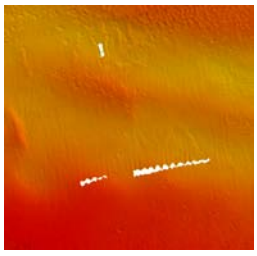


Fig 2. Erroneous data was deleted creating holidays in the sounding coverage, located at 41-14-52.98 N, 071-49-05.11 W.

B 2.3 Crosslines

Multibeam echosounder cross-lines totaling 33.72 lineal nautical miles, comprising 4.5% of multibeam hydrography, were acquired during the course of the survey. As per email dated 10 September 2009 from AHB, the quality control check was done using the standard deviation layer of the survey's CUBE surface. Standard deviation values higher than 0.4m were investigated and resolved in processing, except where caused by areas of high bathymetric relief or features or as described in Section 2.5 Systematic Errors. ***Concur.***

DAPR included with survey deliverables.
****HSRR memo filed with original field reports.***

B 2.4 Junctions and Prior Surveys *See also the H-Cell report.*

The following contemporary surveys junction with H12015:

Registry #	Scale	Date	Field Party	Junction side
H12011	1;10,000	2009	Thomas Jefferson	east
H12033	1:7,500	2009	Thomas Jefferson	south east
H12139	1:20,000	2009	Thomas Jefferson	south

Survey H12015 junctions with survey H12011 to the east. Soundings between H12015 and H12011 agreed within 1 foot. ***Concur.***

Survey H12015 junctions with survey H12033 to the south east. Soundings between H12015 and H12033 agreed within 1 foot. ***Concur with clarification – Upon completion of H12139 the limits of this survey were superseded. No junction is needed.***

Survey H12015 junctions with survey H12139 to the south. Soundings between H12015 and H12139 agreed within 1 foot. ***Concur***

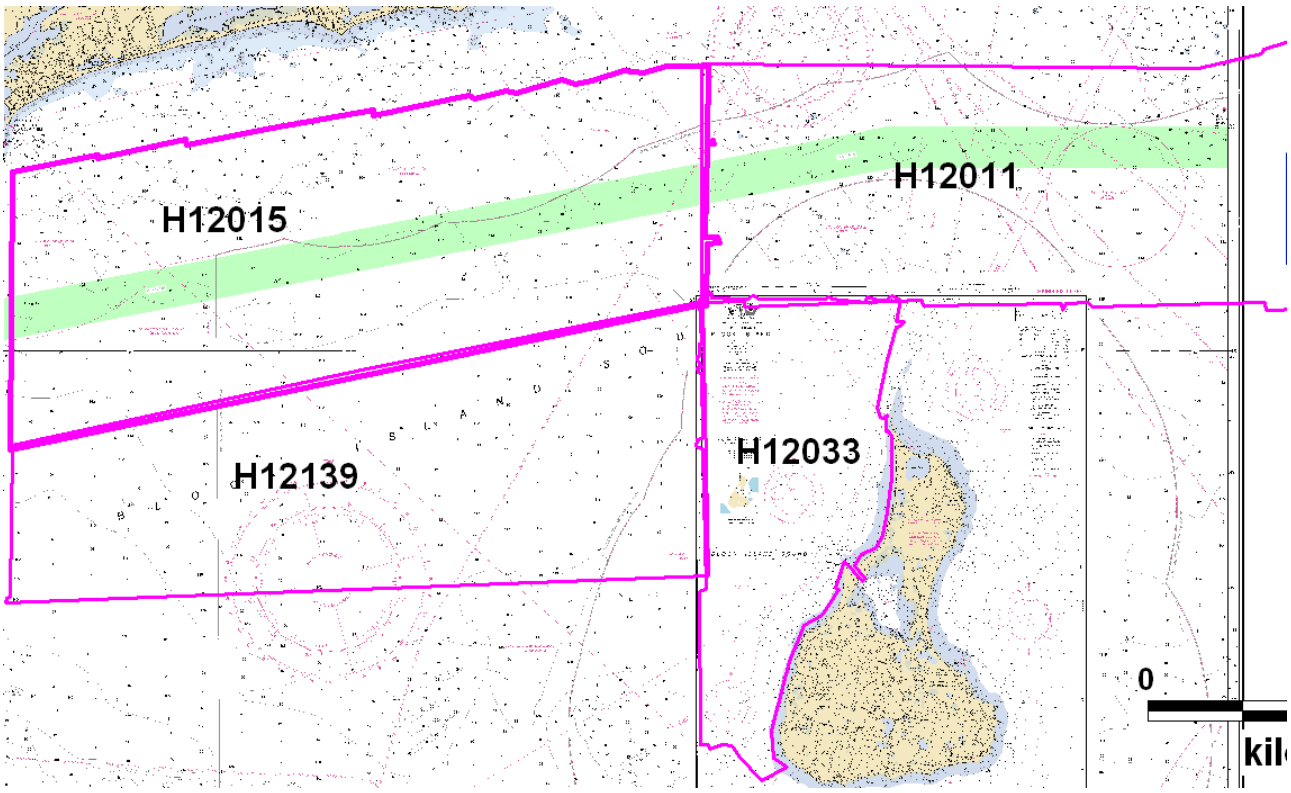


Fig 3. H12015 Junction Surveys.

B 2.5 Systematic Errors

Some areas of the survey displayed high standard deviations (0.4m), not related to slope or features, where cross lines and main scheme intersected and/or certain line's outer beams (see, fig 4-6). The verified tide and svp correctors were double checked and remerged. The causes for these errors are unknown, but may be attributed to unresolved tide and/or svp correctors. ***Concur.***

A horizontal position artifact from our Pos/MV, which affected our MB data, was discovered on DN 271, LN 448_1013. After discussion with AHB and HSTP, to determine if this data was worth salvaging, it was determine to be unfixable. It was deleted, creating a holiday in the base surface, see fig 7. ***Concur.***

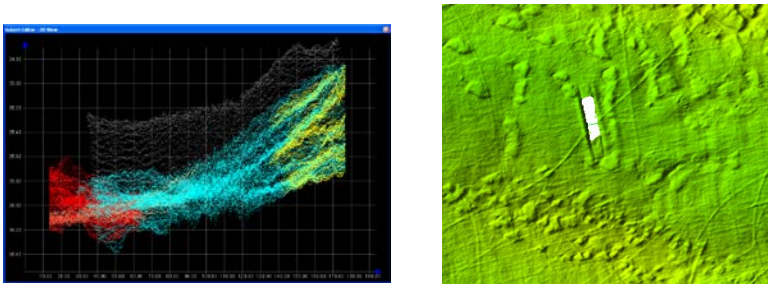


Fig 4. Unknown error, data was deleted creating a holiday, located at 41-15-05.65 N, 071-48-40.96 W.

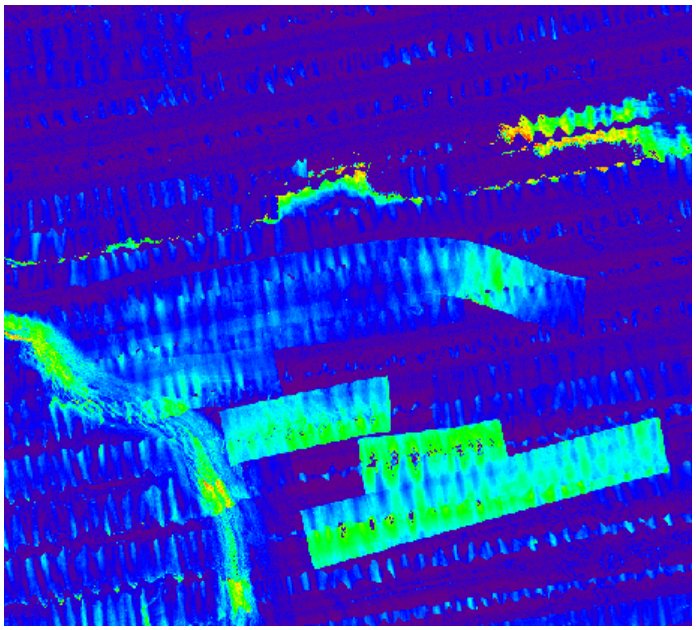


Fig 5. Tide error located @ 41-14-32.36 N, 071-48-58.88 W. Std Dev values range from dark blue = 0 and red 0.4.

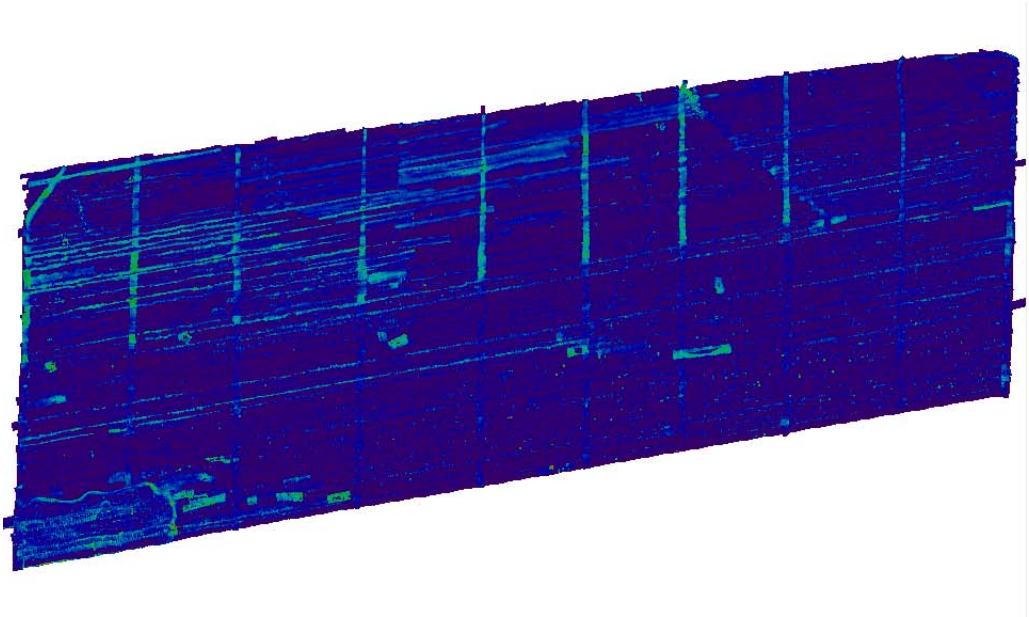


Fig 6. Crossline and main scheme comparison inconsistency and svp errors.
Std Dev values range from dark blue = 0 and red 0.4.

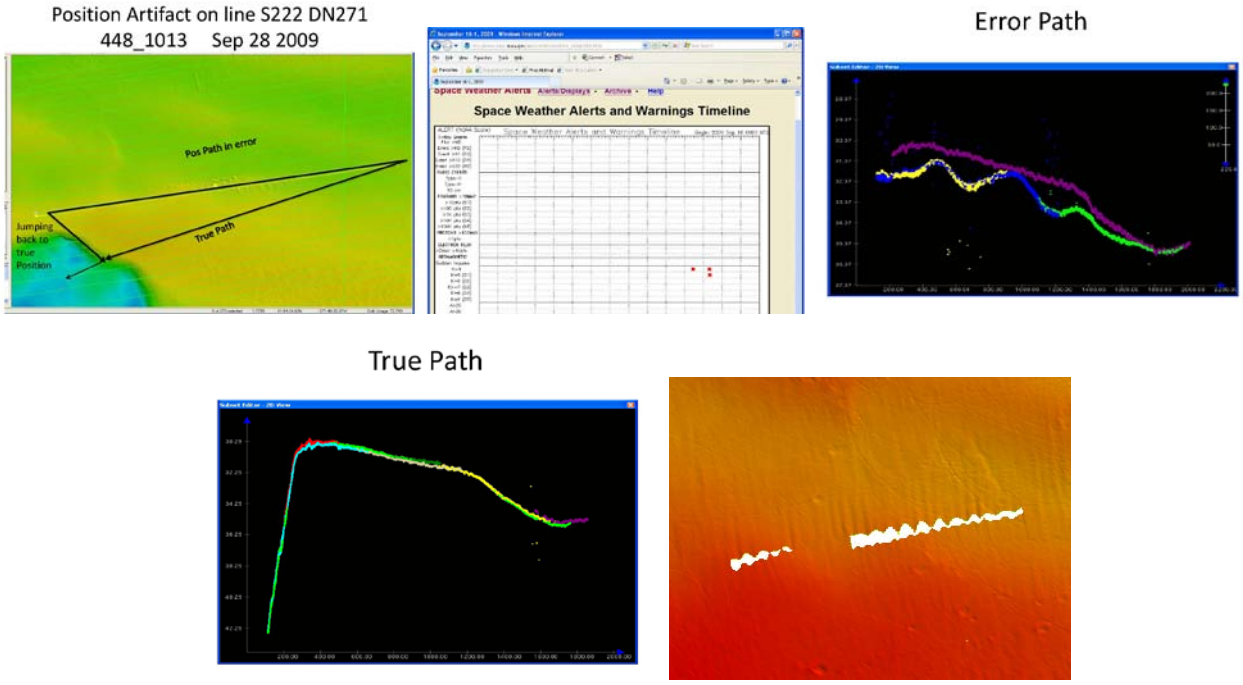


Fig 7. Unknown horizontal positioning issues.
Line was deleted creating a holiday at 41-14-39.68 N, 071-49-20.53 W.

B 3. CORRECTIONS TO ECHO SOUNDING

HDCS sounding data were reduced to mean lower-low water (MLLW) using verified water levels from New London, CT (8461490), Newport, RI (8452660), and Montauk, NY (8510560) adjusted for tidal constituents and residuals provided by CO-OPS and illustrated in Fig. 11. ***Concur.***

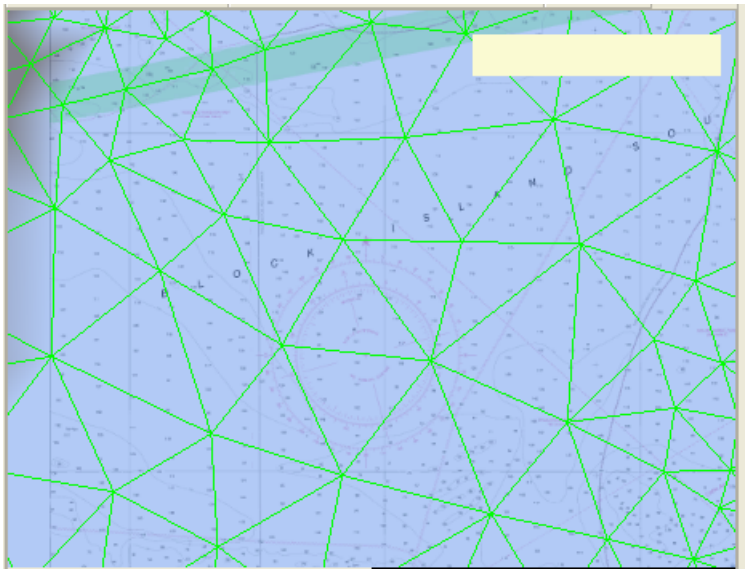


Fig 8. Final Tide Zoning

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

All methods and instruments used for sound velocity correction were as described in the DAPR*. A table detailing all sound velocity casts is located in Separate II of this Descriptive Report.

Sound velocity corrections for this survey were applied using only the ship's Moving Vessel Profiler (MVP). ***Concur.***

B 4. DATA PROCESSING

B 4.1 Total Propagated Error

For the 2009 field season, Total Propagated Error (TPE) parameters for sound speed and tides are calculated separately for each project. The project-specific parameters for OPR-B363-TJ-09, Survey H12015 are as follows:

Project	Vessel	Tide Values		Sound Velocity Values		
		Measured	Zoning	CTD	MVP	Surface
H12015	S222	TCARI	TCARI	4	1	0.2

Table 3: TPE Parameters

These values were calculated for all MBES data immediately following CARIS Merge. ***Concur.***
Included with survey deliverables.

B 4.2 BASE Surfaces

The following table describes all BASE Surfaces submitted as part of Survey H12015:

Name of Surface	*Resolution*	*Type*	*Purpose*
H12015_NOAA_CUBE_2m_A_Final	2.0 meter	CUBE	Sounding Coverage
H12015_NOAA_CUBE_2m_B_Final	2.0 meter	CUBE	Sounding Coverage
H12015_NOAA_CUBE_2m_C_Final	2.0 meter	CUBE	Sounding Coverage
H12015_NOAA_CUBE_2m_D_Final	2.0 meter	CUBE	Sounding Coverage
H12015_NOAA_CUBE_50cm_D_Final	0.5 meter	CUBE	Sounding Coverage
H12015_NOAA_CUBE_1m_A1_Final	1.0 meter	CUBE	AWOIS #7479 Sounding Coverage
H12015_NOAA_CUBE_1m_A2_Final	1.0 meter	CUBE	AWOIS #7346 Sounding Coverage
H12015_NOAA_CUBE_1m_A3_Final	1.0 meter	CUBE	AWOIS #1850 Sounding Coverage
H12015_NOAA_CUBE_1m_A4_Final	1.0 meter	CUBE	AWOIS #2627 Sounding Coverage
H12015_NOAA_CUBE_1m_A5_Final	1.0 meter	CUBE	AWOIS #7475 Sounding Coverage
H12015_NOAA_CUBE_1m_A6_Final	1.0 meter	CUBE	AWOIS #7472 Sounding Coverage
H12015_NOAA_CUBE_1m_A7_Final	1.0 meter	CUBE	AWOIS #2924 Sounding Coverage
H12015_NOAA_CUBE_1m_A8_Final	1.0 meter	CUBE	AWOIS #2918 Sounding Coverage
H12015_NOAA_CUBE_1m_A9_Final	1.0 meter	CUBE	Uncharted Wreck Sounding Coverage

Table 4: BASE Surfaces

This survey was processed using the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm. The CUBE configuration was set to the specified coverage requirement per depth range. Refer to the 2009 Data Acquisition and Processing Report*, 2009 Field Procedures Manual, and CARIS HIPS and SIPS User Guide for further discussion. ***Concur.***

B 4.3 Data Cleaning

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

Included with survey deliverables.

C. HORIZONTAL AND VERTICAL CONTROL

As per FPM section 5.2.3.2.3 a HVCR report was not filed as no horizontal and vertical control stations were established by the field party for this survey. A summary of horizontal and vertical control for this survey follows. ***Concur.***

C 1.1 Horizontal Control ***See also the H-Cell report.***

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacons at Moriches, NY (293 kHz), and Acushnet, MA (kHz 306), were used during this survey. ***Concur.***

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

C 1.2 Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at New London, CT (8461490), Newport, RI (8452660), and Montauk, NY (8510560) will serve as datum control for H12015. Verified tides with final TCARI constituents and residuals were applied to all sounding data. A request for delivery of final approved (verified) tides for this survey was forwarded to N/OPS1 on 15 October 2009 in accordance with the FPM and project letter instructions. ***Concur.***
Approved tides and zoning were applied during field processing.

D. RESULTS AND RECOMMENDATIONS ***See also the H-Cell report.***

D.1 Chart Comparison

Chart/ENC	Edition/Date	Scale
13214	28th Ed., Apr/06	1:20,000
13215	18th Ed., Aug/04	1:40,000
13217	15th Ed., Nov/06	1:15,000
13218	40th Ed., Feb/08	1:80,000
13219	12th Ed., Oct/01	1:15,000
US5RI11E	N/A	
US4CN21M	9th	
US4MA23M	12th	

Table 5. Chart Editions

D 1.1 Chart 13214 Comparison

No depths or features are charted within the limits of H12015. ***Do not concur - Significant overlap on the western portion of survey area. Generally the survey soundings agree with the charted depths between 1-2 feet difference.***

D.1.2 Chart 13215 Comparison

Depths from charts 13215 generally agree with the current survey, with differences generally 1 feet or less. ***Concur***

D.1.3 Chart 13217 Comparison

No depths or features are charted within the limits of H12015. ***Concur.***

D.1.4 Chart 13218 Comparison

No depths or features are charted within the limits of H12015. ***Concur.***

D 1.5 Chart 13219 Comparison

No depths or features are charted within the limits of H12015. ***Concur.***

D.1.6 ENC US5RI10E

This preliminary ENC has not been reviewed by the Marine Chart Division.

D 1.7 ENC US4CN21M Comparisons

Soundings are generally comparable with charted depths, with differences in charted and survey soundings 1 meter or less. ***Concur***

D.1.8 ENC US4MA23M

No depths or features are charted within the limits of H12015. ***Concur.***

D.2 Additional Results

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

Eight AWOIS items were assigned within the limits of H12015 (see, appendices II*). ***Concur.***

D.2.4 Shoreline

There is no shoreline within the sheet limits of survey H12015. ***Concur.***

D.2.5 Charted Features

There are no charted features within the limits of survey H12015. ***Concur with clarification - All charted features within the limits of survey H12015 are AWOIS items, and addressed sufficiently in DR Appendix II.***

D.2.6 Charted Pipelines and Cables

One charted cable transects the survey area. This cable is not visible in multibeam data. The Hydrographer has no recommendation on these cables. ***Concur.***

D.2.7 Bridges, Ferry Routes, and Overhead Cables

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

D.3 Dangers to Navigation and Shoals

D 3.1 Dangers to Navigation

No dangers to navigation were found or reported to the NOAA's Office of Coast Survey. ***Concur.***

D 3.2 Shoals

Shoals are adequately depicted as currently charted, except as noted in the chart comparison section. ***Concur.***

D.4 Aids to Navigation

There are no charted Aids to Navigation (ATON) within the limits of H12015. ***Concur.***

D.5 Coast Pilot Information

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

D.6 Miscellaneous

Bottom Samples

Bottom samples were collected in accordance with NOAA Hydrographic Survey Specifications and Deliverables. A complete description of all bottom samples acquired during Survey H12015 is contained in Appendix V. ***Concur.***

Environmental Conditions and Notes

No environmental conditions occurred. ***Concur.***

D.8 Adequacy of Survey ***See also the H-Cell report.***

This survey is considered complete and adequate to supersede charted depths and features within the common area except as noted in this report. ***Concur.***

Summary and Recommendations for Additional Work

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

E. APPROVAL

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

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

The Data Acquisition and Processing Report for OPR-B363-TJ-09 is submitted separately and contains additional information relevant to this survey.

Approved and Forwarded:

Jasper Schaer
2009.12.16 16:33:05
-05'00'

LT Jasper D. Schaer, NOAA
Field Operations Officer

Digitally signed by Shepard Smith
Date: 2009.12.16 17:22:33
-05'00'

CDR Shepard M. Smith, NOAA
Commanding Officer

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

Survey Manager:

Frank Daniel
2009.12.16 16:31:45 -05'00'

Frankie A. Daniel, NOAA
Assistant Survey Tech

Jasper Schaer
2009.12.16 16:36:29
-05'00'

ENS Marina Kosenko, NOAA
Junior Officer

Appendix I

Dangers to Navigation

No Dangers to navigation were reported for survey H12015.

Appendix II

Survey Features Report

1. **AWOIS Items**

   -eight

2. **Charted Features**

   -none

3. **Uncharted Features**

   ~~**-eight**~~ ***one***

H12015 AWOIS Feature Report

Registry Number: H12015
State: Rhode Island
Locality: Block Island Sound
Sub-locality: 3nm S of Weekapaup Pt
Project Number: OPR-B363-TJ-09
Survey Dates: 09/28/2009 - 10/13/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
13214	28th	04/01/2006	1:20,000 (13214_1)	[L]NTM: ?
13215	19th	12/01/2009	1:40,000 (13215_1)	USCG LNM: 12/08/2009 (05/25/2010) CHS NTM: None (05/28/2010) NGA NTM: None (06/12/2010)
13205	38th	02/01/2007	1:80,000 (13205_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: ?

* 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	111ft Wreck	Wreck	32.26 m	41° 16' 21.1" N	071° 42' 09.3" W	2924
1.2	107ft Wreck	Wreck	32.76 m	41° 16' 53.6" N	071° 43' 44.1" W	7472
1.3	89ft Wreck	Wreck	27.47 m	41° 17' 15.8" N	071° 46' 14.7" W	2627
1.4	83ft Wreck	Wreck	26.44 m	41° 17' 46.0" N	071° 45' 37.3" W	7475
1.5	94ft Wreck	Wreck	28.12 m	41° 15' 39.8" N	071° 51' 01.2" W	7479
1.6	SNAPPER	AWOIS	[no data]	[no data]	[no data]	---
1.7	97ft Wreck	Wreck	30.40 m	41° 15' 59.3" N	071° 49' 16.4" W	1850
1.8	88ft Wreck	Wreck	28.71 m	41° 15' 59.5" N	071° 46' 24.3" W	2918

1 - DR_AWOIS

1.1) Profile/Beam - 5940/52 from h12015 / tj_s222_reson7125_stbd / 2009-271 / 458_2115

Primary Feature for AWOIS Item #2924

Search Position: 41° 16' 20.3" N, 071° 42' 10.5" W

Historical Depth: [None]

Search Radius: 100

Search Technique: MB,S2,ES

Technique Notes: [None]

History Notes:

HISTORY■ MAR--9/84, OPR-B660-RU/HE-84; NON-DANG SUBM WK, LOCATED BY ECHOSOUNDER ì■5FT OFF BOTTOM IN DEPTHS OF 120FT IN LAT.41-16-19.96N, LONG.71-42-12.32W. ì■NTERED 11/84 RWD)■ FE266/84--OPR-B660-RU/HE-84; WRECKAGE, 111.5FT DEPTH REPORTED, LOCATED BY ì■SSS, DEPTH DETERMINED BY RECONNAISSANCE SURVEY (ECHOSOUNDER), LD NOT ACQUIRED. ■WRECK PROTRUDES APPROX. 9.5FT OFF BOTTOM IN LAT 41-16-19.96N, LONG ì■71-42-12.32W; LORAN C RATES 9960-X-25935.2, Y-43940.7, W-14570.3. WK ì■CONSIDERED NON-DANG. (UPDATED 4/85 RWD)■■ DESCRIPTION■ 195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, ì■CT. POLICE DEPARTMENT, TEL NO 203-622-8007; 9960-Y 43940.8, ì■9960-W 14570.1; IDENTIFIED AS THE LIME SCHOONER. (ENTERED MSM ì■4/89)

Survey Summary

Survey Position: 41° 16' 21.1" N, 071° 42' 09.3" W

Least Depth: 32.26 m (= 105.83 ft = 17.639 fm = 17 fm 3.83 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.046 m ; **TVU (TPEv)** ±0.358 m

Timestamp: 2009-271.21:35:38.060 (09/28/2009)

Survey Line: h12015 / tj_s222_reson7125_stbd / 2009-271 / 458_2115

Profile/Beam: 5940/52

Charts Affected: 13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Covered radius with MB. AWOIS #2924 located.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-271/458_2115	5940/52	0.00	000.0	Primary
BlockIslandAWOIS	AWOIS # 2924	38.06	049.3	Secondary

Hydrographer Recommendations

Chart least depth and reposition wreck as per current survey.

Cartographically-Rounded Depth (Affected Charts):

106ft (13215_1, 13205_1)

17fm (12300_1, 13006_1, 13003_1)

32m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 1:non-dangerous wreck
	QUASOU - 6:least depth known
	SORDAT - 20090928
	SORIND - US,US,nsurf,H12015
	TECSOU - 3:found by multi-beam
	VALSOU - 32.258 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 111 ft Wk. Add 106 ft Wk.

Feature Images

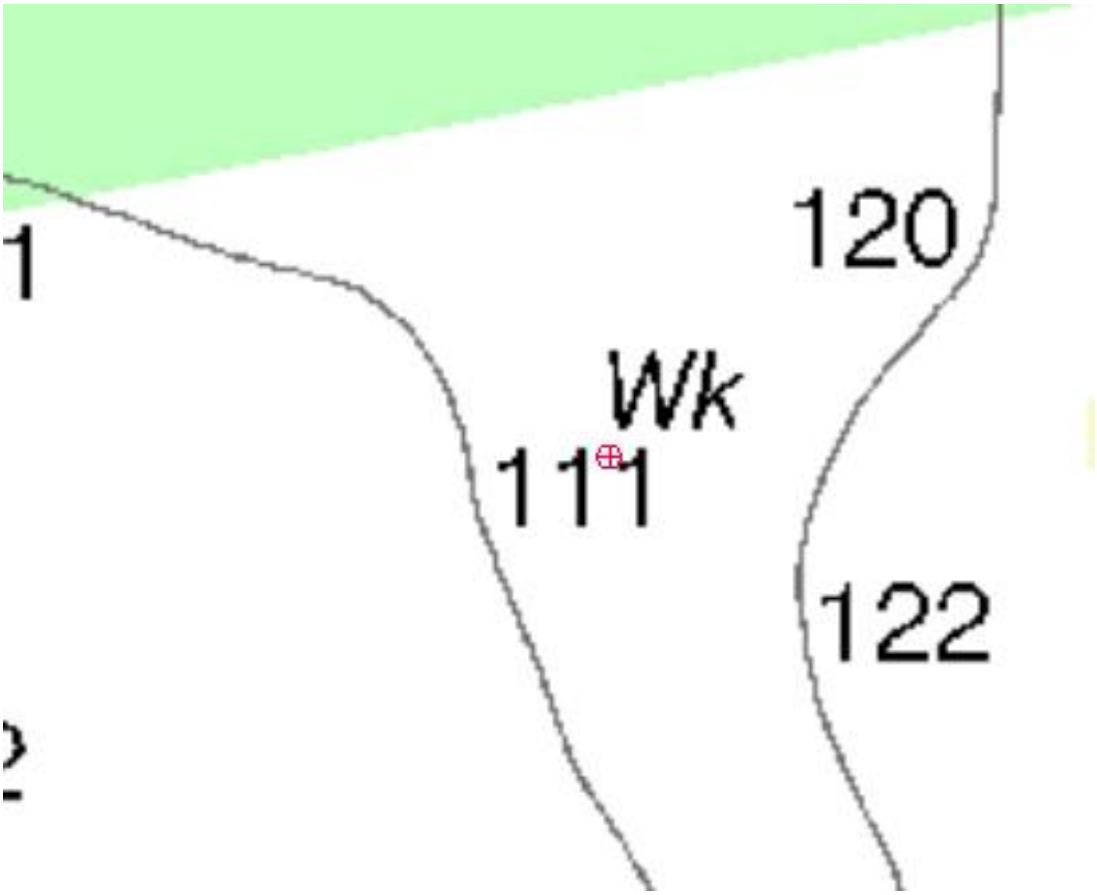


Figure 1.1.1

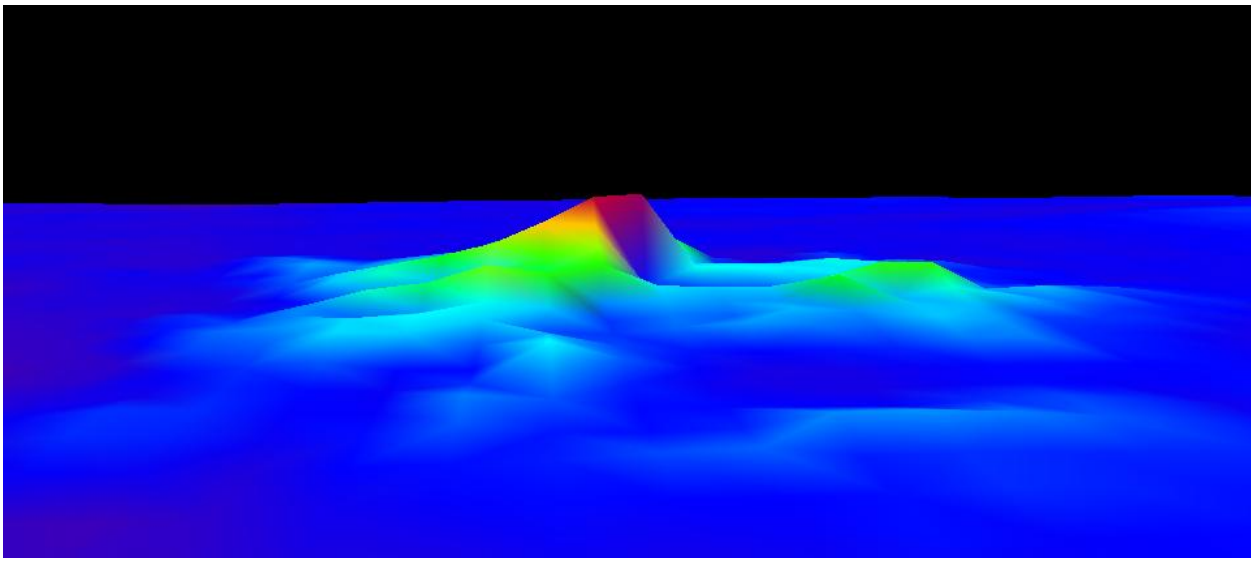


Figure 1.1.2

1.2) Profile/Beam - 4234/501 from h12015 / tj_s222_reson7125_stbd / 2009-272 / 470_1043

Primary Feature for AWOIS Item #7472

Search Position: 41° 16' 53.3" N, 071° 43' 44.1" W

Historical Depth: [None]

Search Radius: 100

Search Technique: MB,S2,ES

Technique Notes: UPDATE LEAST DEPTH ON WRECK

History Notes:

SURVEY REQUIREMENT COMMENTS■ CONDUCT INVESTIGATION AROUND LORAN RATES RATHER THAN GEOGRAPHIC i■POSITION. DO NOT EXPEND MORE THAN TWO HOURS SEARCHING FOR THIS i■TEM. IF FOUND, ACQUIRE POSITION AND LEAST DEPTH.■■ HISTORY■ FE345SS/90--OPR-B660-HE; WRECK WAS LOCATED IN POS. i■LAT.41-16-53.35N, LONG.71-43-44.10W (NAD 83); ECHO SOUNDER DEPTH i■ON WRECK WAS 32M (105 FT) AT MLLW. WRECK WAS LOCATED NEAR PROVIDED LORAN i■RATES. (UPDATED 7/92 MCR)

Survey Summary

Survey Position: 41° 16' 53.6" N, 071° 43' 44.1" W

Least Depth: 32.76 m (= 107.49 ft = 17.915 fm = 17 fm 5.49 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.066 m ; **TVU (TPEv)** ±0.443 m

Timestamp: 2009-272.10:58:23.899 (09/29/2009)

Survey Line: h12015 / tj_s222_reson7125_stbd / 2009-272 / 470_1043

Profile/Beam: 4234/501

Charts Affected: 13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Covered radius with MB. AWOIS #7472 located.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-272/470_1043	4234/501	0.00	000.0	Primary
BlockIslandAWOIS	AWOIS # 7472	8.70	358.4	Secondary

Hydrographer Recommendations

Chart least depth and reposition wreck as per current survey.

Cartographically-Rounded Depth (Affected Charts):

107ft (13215_1, 13205_1)

18fm (12300_1, 13006_1, 13003_1)

33m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 1:non-dangerous wreck
	QUASOU - 6:least depth known
	SORDAT - 09/29/2009
	SORIND - US,US,nsurf,H12015
	TECSOU - 3:found by multi-beam
	VALSOU - 32.763 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 105 ft Wk. Add 107 ft Wk..

Feature Images

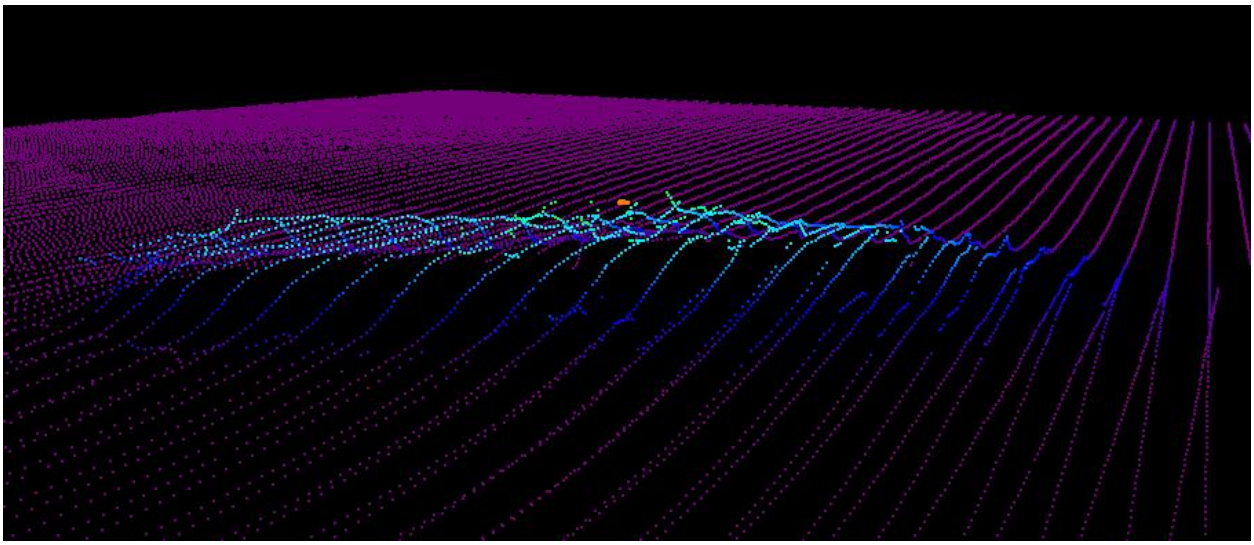


Figure 1.2.1

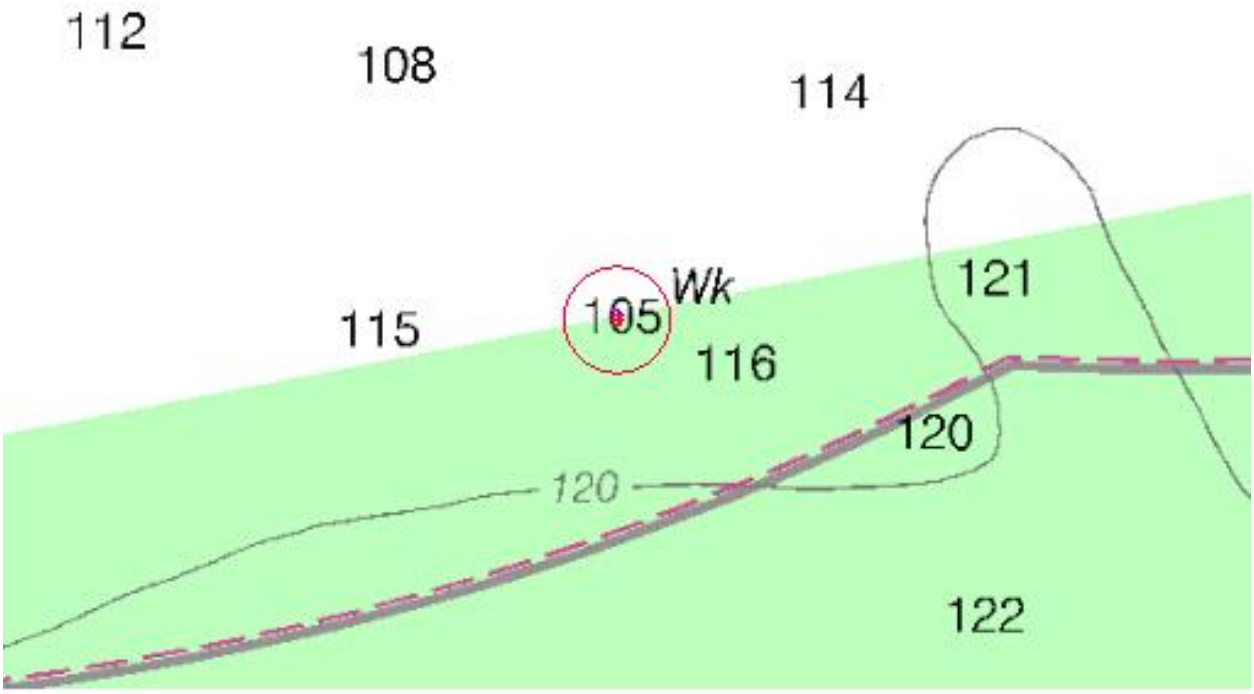


Figure 1.2.2

1.3) Profile/Beam - 387/184 from h12015 / tj_s222_reson7125_stbd / 2009-285 / 448_0545

Primary Feature for AWOIS Item #2627

Search Position:	41° 17' 15.8" N, 071° 46' 14.5" W
Historical Depth:	27.30 m
Search Radius:	100
Search Technique:	MB,S2,ES
Technique Notes:	UPDATE LEAST DEPTH ON WRECK

History Notes:

SURVEY REQUIREMENT COMMENTS■ CONDUCT SEARCH AROUND LORAN C RATES RATHER THAN GP. DO NOT EXPEND MORE THAN TWO HOURS SEARCHING FOR THIS ITEM. IF FOUND, ACQUIRE POSITION AND LEAST DEPTH.■■ HISTORY■345SS/90--OPR-B660-HE; THE HERCULES WAS FOUND IN POS. LAT.41-17-16.14N, LONG.71-46-14.72W (NAD 83); ECHO SOUNDER DEPTH ON THE WRECK WAS 26.1M (85 FT), MLLW. SONARGRAM INDICATES WRECK RISES 1.6M OFF THE BOTTOM. (UPDATED 7/92 MCR)■■ FE363/91--OPR-B66-RU; WRECK LOCATED IN POS. LAT.41-17-15.81N, LONG.71-46-14.51 (NAD 83) WITH A DIVER LEAST DEPTH OF 27.3M (89FT). DIVERS REPORT THE WRECK TO BE 60FT LONG, BOW RELATIVELY INTACT. EXACT ID COULD NOT BE MADE DUE TO DETERIORATION. (UPDATED 11/93 MCR)■■ *****E-mail Corrospondence -- Report from Mark Munro (private citizen) indicates that the wreck located at this position is 50-60' in length and has a diesel engine. This is not consistent with his indication that the Hercules was 108' in length and powered by coal engines. Mr. Munro indicates that John Stanford of Jamestown, RI has located the Hercules with a least depth of 11' at 41/19.408 north lat, 71/47.468w lon (NAD83) in 14' of water approximately 100 yards south of Misquamicit Beach, RI. Mr. Munro indicates that Mr. Stanford has dove on the wreck and reports it as contiguous and consisting of the keel and plating to just above the turn of the bilge and an iron propeller. (Updated 8/06 by CG) ■■ DESCRIPTION■ 195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, CT. POLICE DEPARTMENT, TEL NO. 203-622-8007; 9960-W 14593.0, 9960-Y 43953.6, 9960-Z 25973.7. (ENTERED MSM 3/89)■ **** NOT CHARTED. MAPPING AND CHARTING BRANCH INFORMED.

Survey Summary

Survey Position:	41° 17' 15.8" N, 071° 46' 14.7" W
Least Depth:	27.47 m (= 90.12 ft = 15.021 fm = 15 fm 0.12 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.005 m ; **TVU (TPEv)** ±0.235 m
Timestamp:	2009-285.05:46:45.358 (10/12/2009)
Survey Line:	h12015 / tj_s222_reson7125_stbd / 2009-285 / 448_0545
Profile/Beam:	387/184
Charts Affected:	13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Covered radius with MB. AWOIS #2627 located.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-285/448_0545	387/184	0.00	000.0	Primary
BlockIslandAWOIS	AWOIS # 2627	5.08	267.2	Secondary

Hydrographer Recommendations

Chart least depth and reposition wreck as per current survey.

Cartographically-Rounded Depth (Affected Charts):

90ft (13215_1, 13205_1)

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

27m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 1:non-dangerous wreck

QUASOU - 6:least depth known

SORDAT - 10/12/2009

SORIND - US,US,nsurf,H12015

TECSOU - 3:found by multi-beam

VALSOU - 27.470 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 89 ft Wk. Add 90 ft Wk..

Feature Images

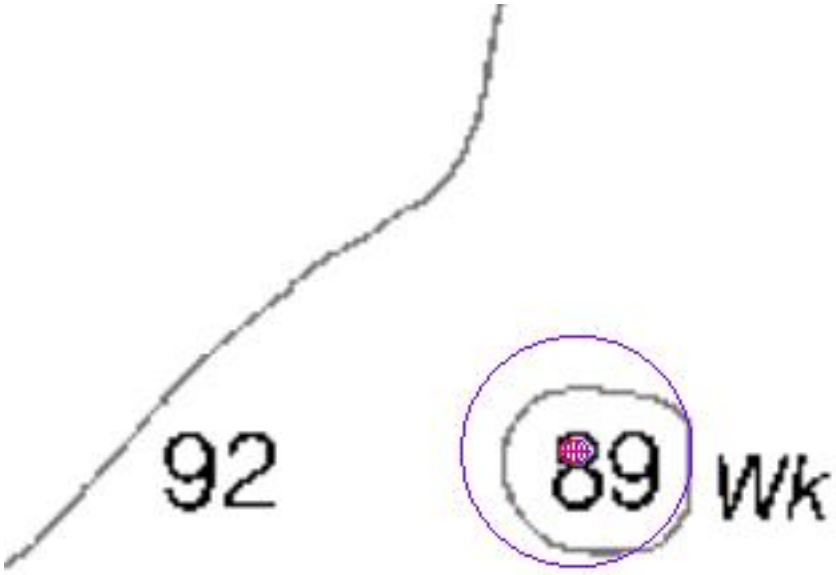


Figure 1.3.1

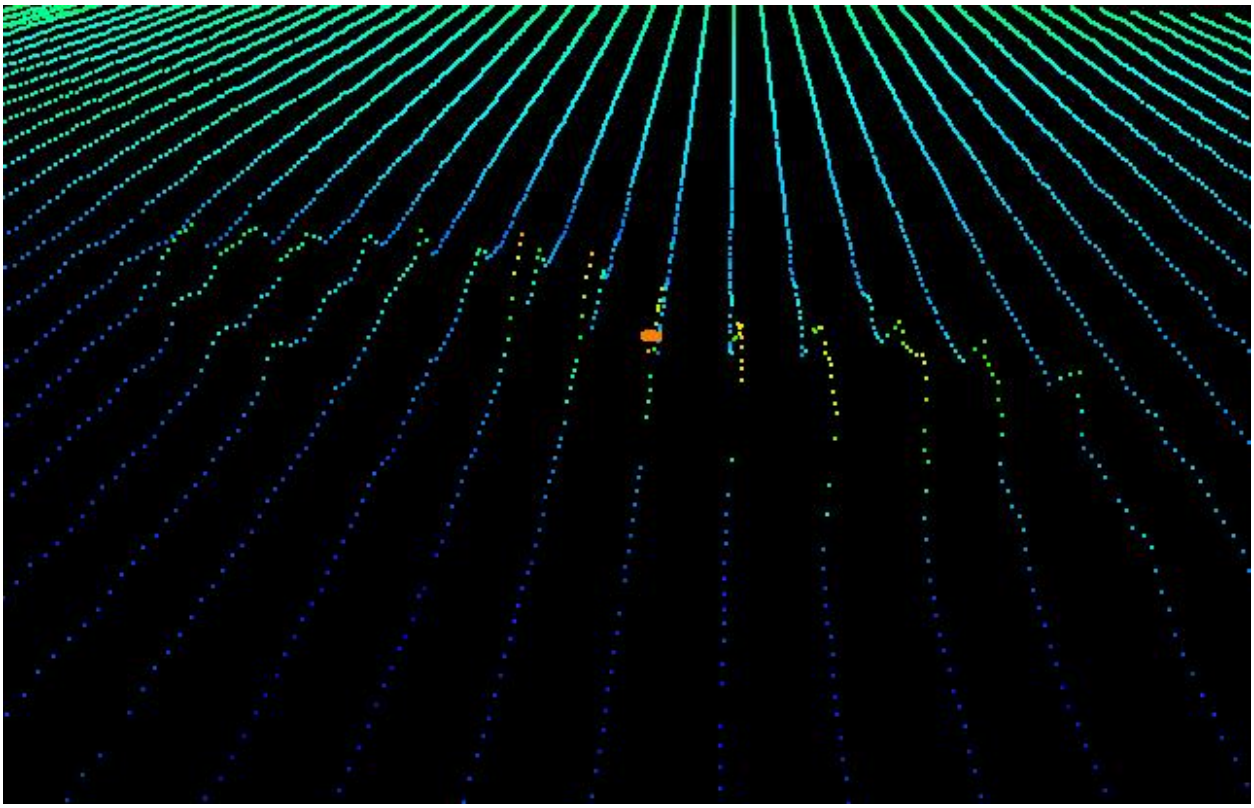


Figure 1.3.2

1.4) Profile/Beam - 6918/167 from h12015 / tj_s222_reson7125_stbd / 2009-285 / 455_0920

Primary Feature for AWOIS Item #7475

Search Position: 41° 17' 46.1" N, 071° 45' 37.2" W

Historical Depth: [None]

Search Radius: 100

Search Technique: MB,S2,ES

Technique Notes: UPDATE LEAST DEPTH ON WRECK

History Notes:

SURVEY REQUIREMENT COMMENTS■ CONDUCT INVESTIGATION AROUND LORAN RATES RATHER THAN GEOGRAPHIC i■POSITION. DO NOT EXPEND MORE THAN TWO HOURS SEARCHING FOR THIS i■TEM. IF FOUND, ACQUIRE POSITION AND LEAST DEPTH. ■■ HISTORY■ FE345SS/90--OPR-B660-HE; WRECK WAS LOCATED IN POS. i■LAT.41-17-46.08N, LONG.71-45-37.19W (NAD 83); ECHO SOUNDER DEPTH ON i■WRECK WAS 25.3M (83FT) MLLW. WRECK COMES OFF THE BOTTOM BY .9M i■(2.9 FT). (ENTERED 7/92 MCR)

Survey Summary

Survey Position: 41° 17' 46.0" N, 071° 45' 37.3" W

Least Depth: 26.44 m (= 86.74 ft = 14.456 fm = 14 fm 2.74 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.007 m ; **TVU (TPEv)** ±0.235 m

Timestamp: 2009-285.09:37:40.155 (10/12/2009)

Survey Line: h12015 / tj_s222_reson7125_stbd / 2009-285 / 455_0920

Profile/Beam: 6918/167

Charts Affected: 13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Covered radius with MB. AWOIS #7475 located.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-285/455_0920	6918/167	0.00	000.0	Primary
BlockIslandAWOIS	AWOIS # 7475	3.28	227.5	Secondary

Hydrographer Recommendations

Chart least depth and reposition wreck as per current survey.

Cartographically-Rounded Depth (Affected Charts):

86ft (13215_1, 13205_1)

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

26m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 1:non-dangerous wreck
	QUASOU - 6:least depth known
	SORDAT - 10/12/2009
	SORIND - US,US,nsurf,H12015
	TECSOU - 3:found by multi-beam
	VALSOU - 26.438 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 83 ft Wk. Add 86 ft Wk.

Feature Images

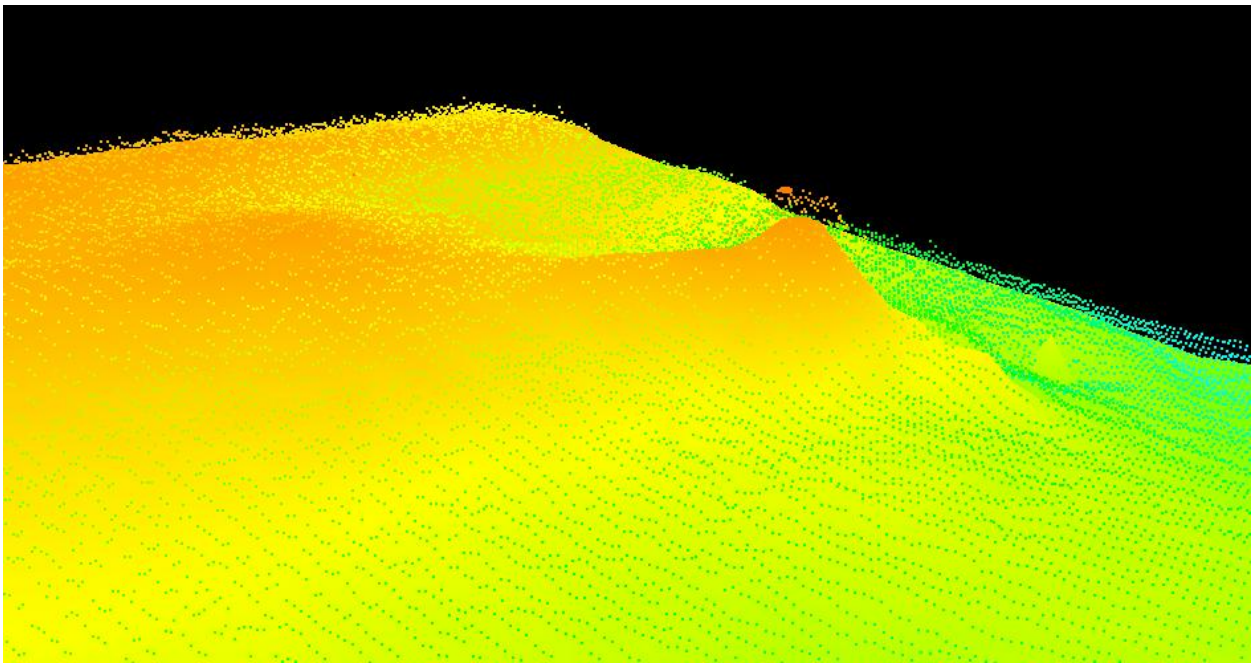


Figure 1.4.1

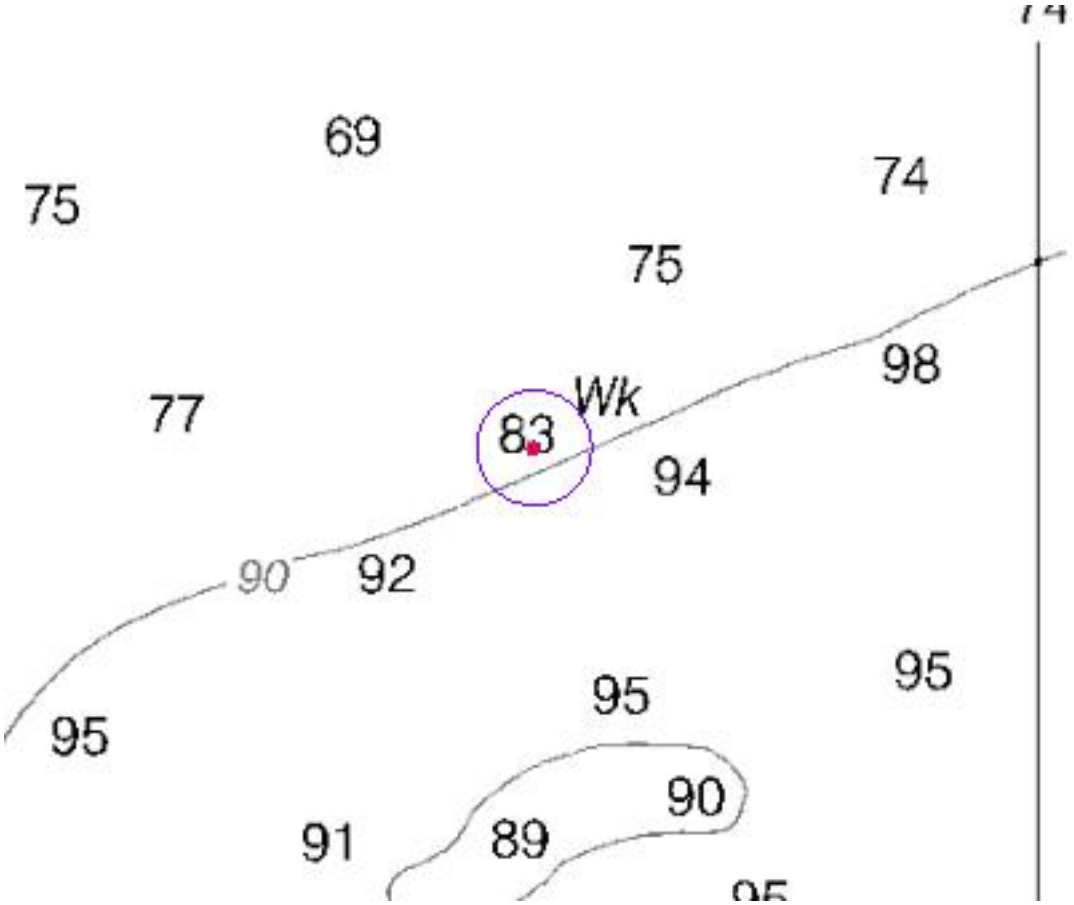


Figure 1.4.2

1.5) Profile/Beam - 101/19 from h12015 / tj_s222_reson7125_stbd / 2009-286 / 361_2340

Primary Feature for AWOIS Item #7479

Search Position: 41° 15' 39.7" N, 071° 51' 01.3" W

Historical Depth: [None]

Search Radius: 100

Search Technique: MB,S2,ES

Technique Notes: UPDATE LEAST DEPTH ON WRECK

History Notes:

SURVEY REQUIREMENT COMMENTS■ CONDUCT INVESTIGATION AROUND LORAN RATES RATHER THAN GEOGRAPHIC i■POSITION. DO NOT EXPEND MORE THAN TWO HOURS SEARCHING FOR THIS i■TEM.■■ HISTORY■ FE345SS/90--OPR-B660-HE; BARGE WAS LOCATED IN LAT.41-15-39.67N, i■LONG.71-51-01.31W (NAD 83). ECHO SOUNDER DEPTH ON WRECK WAS 28.7M i■(94FT) MLLW. (ENTERED 7/92 MCR)

Survey Summary

Survey Position: 41° 15' 39.8" N, 071° 51' 01.2" W

Least Depth: 28.12 m (= 92.27 ft = 15.378 fm = 15 fm 2.27 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.038 m ; **TVU (TPEv)** ±0.355 m

Timestamp: 2009-286.23:41:05.062 (10/13/2009)

Survey Line: h12015 / tj_s222_reson7125_stbd / 2009-286 / 361_2340

Profile/Beam: 101/19

Charts Affected: 13214_1, 13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Covered radius with MB. AWOIS #7479 located.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-286/361_2340	101/19	0.00	000.0	Primary
BlockIslandAWOIS	AWOIS # 7479	4.72	022.2	Secondary

Hydrographer Recommendations

Chart least depth and reposition wreck as per current survey.

Cartographically-Rounded Depth (Affected Charts):

92ft (13214_1, 13215_1, 13205_1)

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

28m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 1:non-dangerous wreck
	QUASOU - 6:least depth known
	SORDAT - 10/13/2009
	SORIND - US,US,nsurf,H12015
	TECSOU - 3:found by multi-beam
	VALSOU - 28.124 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 94 ft Wk. Add 92 ft Wk.

Feature Images

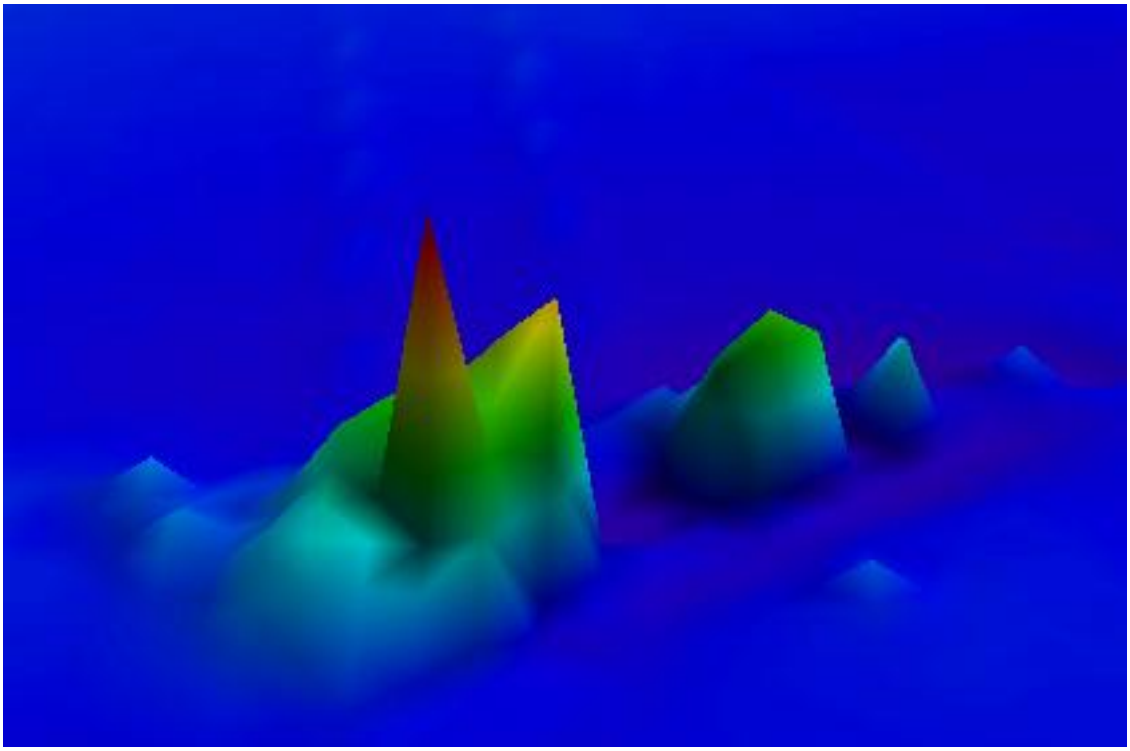


Figure 1.5.1

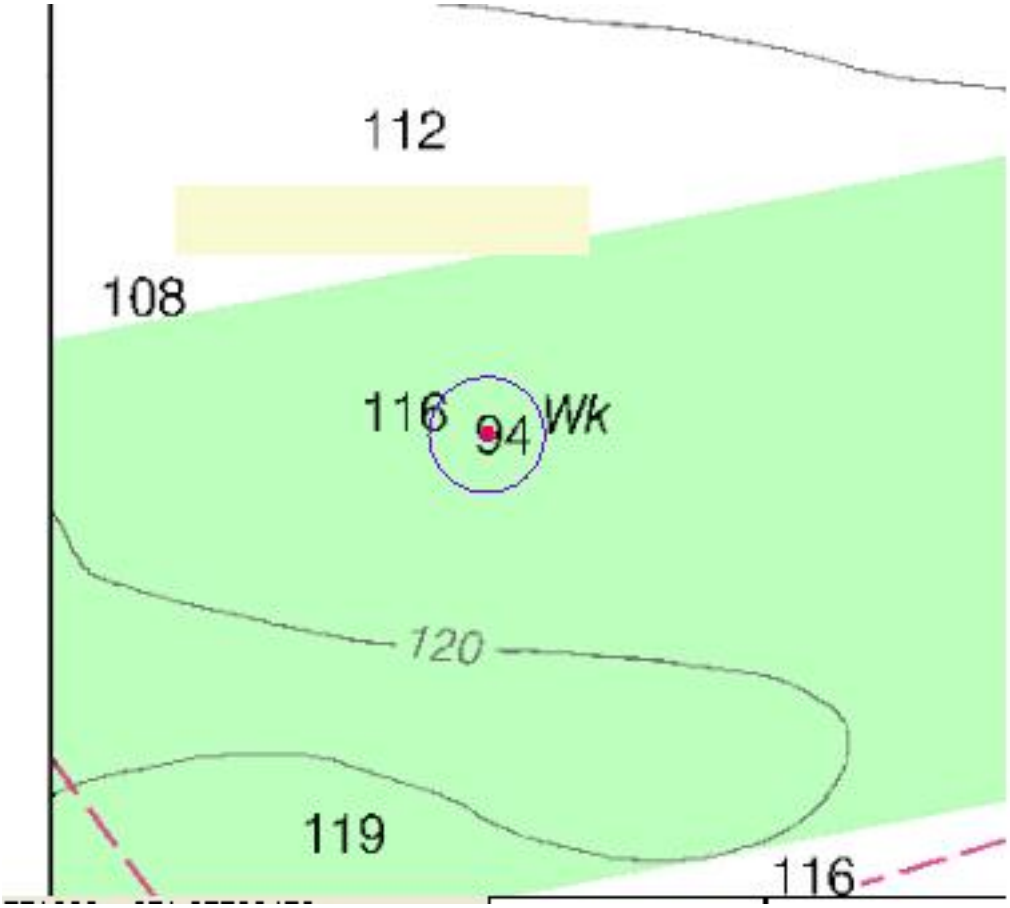


Figure 1.5.2

1.6) AWOIS #7346 - SNAPPER

No Primary Survey Feature for this AWOIS Item

Search Position: 41° 15' 50.4" N, 071° 49' 43.2" W

Historical Depth: [None]

Search Radius: 400

Search Technique: MB,S2, ES

Technique Notes: [None]

History Notes:

HISTORY■ NM45/59--A TUG HAS BEEN REPORTED SUNK IN 100 FT. OF WATER ABOUT i■5570 YARDS 150 DEGREES FROM WATCH HILL LIGHT; PA LAT 41-15-50N, i■LONG 70-49-45W. (ENTERED MSM 5/89)■■ESCRIPTION■ **** WESTERLY SUN, WESTERLY, RHODE ISLAND, 10/9/59; 40-FT TUG, i■SNAPPER, WHILE ASSISTING IN TOWING A DREDGING OUTFIT THROUGH i■ROUGH SEAS IN FISHERS ISLAND SOUND, WAS CAUGHT UNDER THE BOW OF A i■LIGHTER, ROLLED OVER AND SANK; OWNED BY PERINI CONSTRUCTION CO. i■OF FRAMINGHAM, MA.; TUG SANK IN 110 FT. OF WATER IN ROUGH SEAS WITH i■35 MILE AN HOUR WINDS. (ENTERED MSM 6/89)■ **** NOTE ON AID PROOF STATES THAT WRECK IS NONDANGEROUS IN i■THIS DEPTH OF WATER AND TO OMIT IT FROM ALL CHARTS. (UPDATED MSD i■6/91)■ **** SEE ITEM 7479.

Survey Summary

Charts Affected: 13214_1, 13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Covered radius with MB. AWOIS #7346 not located.

Feature Correlation

Address	Feature	Range	Azimuth	Status
BlockIslandAWOIS	AWOIS # 7346	0.00	000.0	Primary

Hydrographer Recommendations

Retained as uncharted.

S-57 Data

[None]

Office Notes

Concur with clarification. AOWIS #7346 has been disproved in this area. No charting action required.

Feature Images

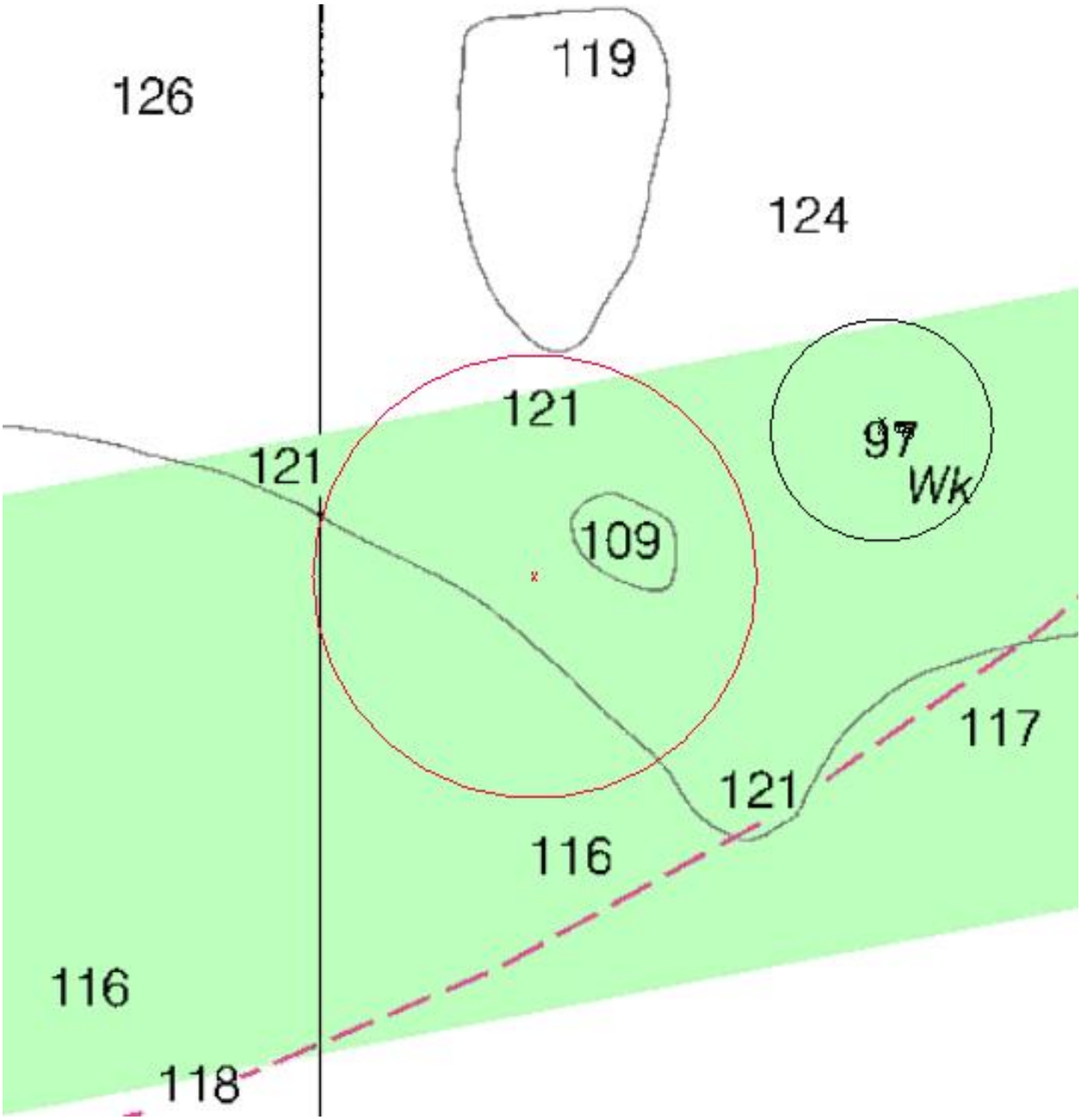


Figure 1.6.1

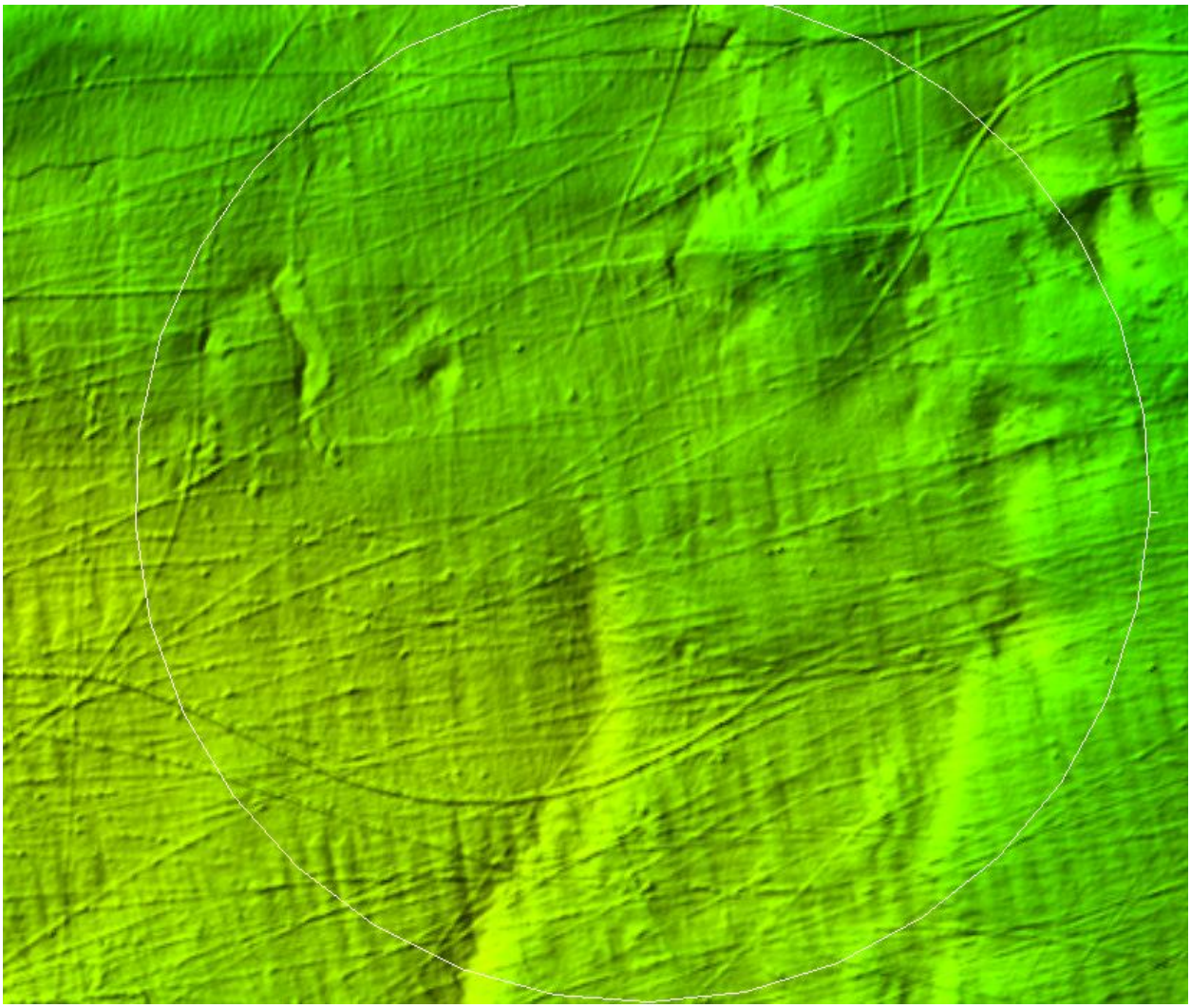


Figure 1.6.2

1.7) Profile/Beam - 186/321 from h12015 / tj_s222_reson7125_stbd / 2009-286 / 363_2244

Primary Feature for AWOIS Item #1850

Search Position:	41° 15' 58.9" N, 071° 49' 16.5" W
Historical Depth:	29.70 m
Search Radius:	200
Search Technique:	MB,S2,ES
Technique Notes:	[None]

History Notes:

HISTORY■ CL271/18--CGS; ADVANCE INFO FROM WIRE DRAG PARTY 1; AN i■OBSTRUCTION, SUPPOSED TO BE THE WRECK OF LARCHMONT FOUND IN LAT i■41-16-01N, LONG 71-49-19W; LEAST DEPTH FOUND WAS 77 FT; TO BE i■URTHER INVESTIGATED.■ H4042/18WD-- 74 FT GROUNDING CLEARED TO 65 FT., 78 FT LL LD.; i■NOTE ON H-SHEET RECOMMENDED CHARTING 74 FT. SOUNDING RATHER THAN i■CLEARANCE. (ENTERED MSM 6/89)■ FE345SS/90--OPR-B660-HE; LARCHMONT FOUND IN POS. LAT.41-15-58.87N i■LONG.71-49-16.46W (NAD 83); ECHO SOUNDER DEPTH ON WRECK WAS i■29.7M, (97FT) MLLW. SONARGRAM REVEALS WRECK TO BE IN A DETERIORATED i■STATE WITH ITS PADDLEWHEELS BROKEN APART. (UPDATED 7/92 MCR)i■■■ DESCRIPTION■ 24 NAVY; WK NO. 8671; CARGO VESSEL SUNK 1918, REPORTED THRU CGS i■SURVEY 1918; POS.41-16-06N, 71-49-19W, 1-3 MI ACCURACY. ■ 195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, i■CT. POLICE DEPARTMENT, TEL NO. 203-622-8007; 9960-W 14616.4, i■9960-X 25998.1-3, 9960-Y 43949.0-2. (ENTERED MSM 3/89)

Survey Summary

Survey Position:	41° 15' 59.3" N, 071° 49' 16.4" W
Least Depth:	30.40 m (= 99.73 ft = 16.622 fm = 16 fm 3.73 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.006 m ; **TVU (TPEv)** ±0.245 m
Timestamp:	2009-286.22:44:59.223 (10/13/2009)
Survey Line:	h12015 / tj_s222_reson7125_stbd / 2009-286 / 363_2244
Profile/Beam:	186/321
Charts Affected:	13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Covered radius with MB. AWOIS #1850 located.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-286/363_2244	186/321	0.00	000.0	Primary
BlockIslandAWOIS	AWOIS # 1850	14.62	009.8	Secondary

Hydrographer Recommendations

Chart least depth and reposition wreck as per current survey.

Cartographically-Rounded Depth (Affected Charts):

99ft (13215_1, 13205_1)

16fm (12300_1, 13006_1, 13003_1)

30m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 1:non-dangerous wreck

QUASOU - 6:least depth known

SORDAT - 10/13/2009

SORIND - US,US,nsurf,H12015

TECSOU - 3:found by multi-beam

VALSOU - 30.399 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 97 ft Wk. Add 99 ft Wk.

Feature Images

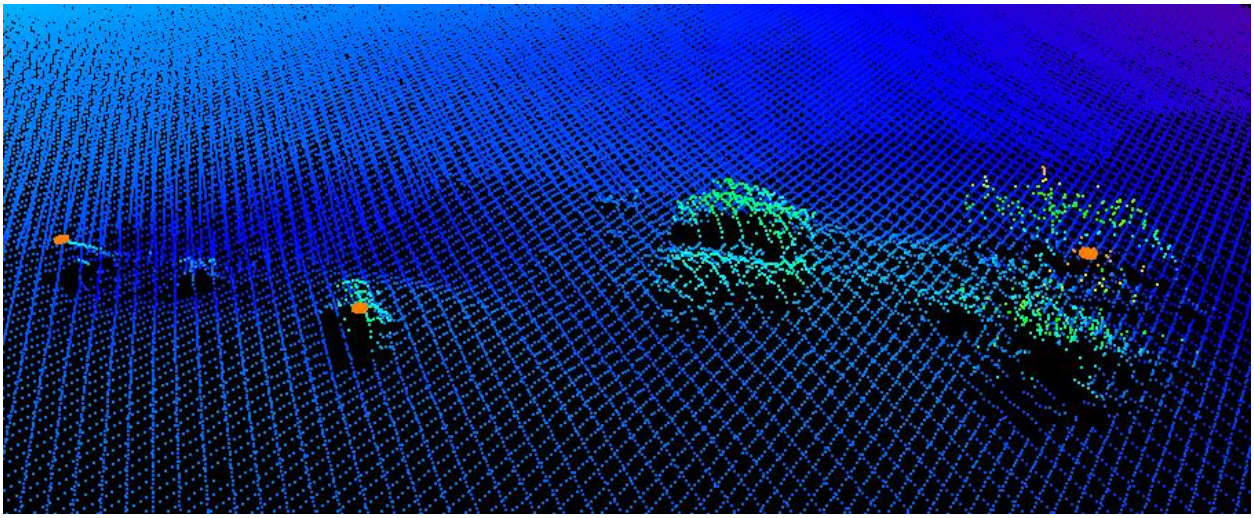


Figure 1.7.1

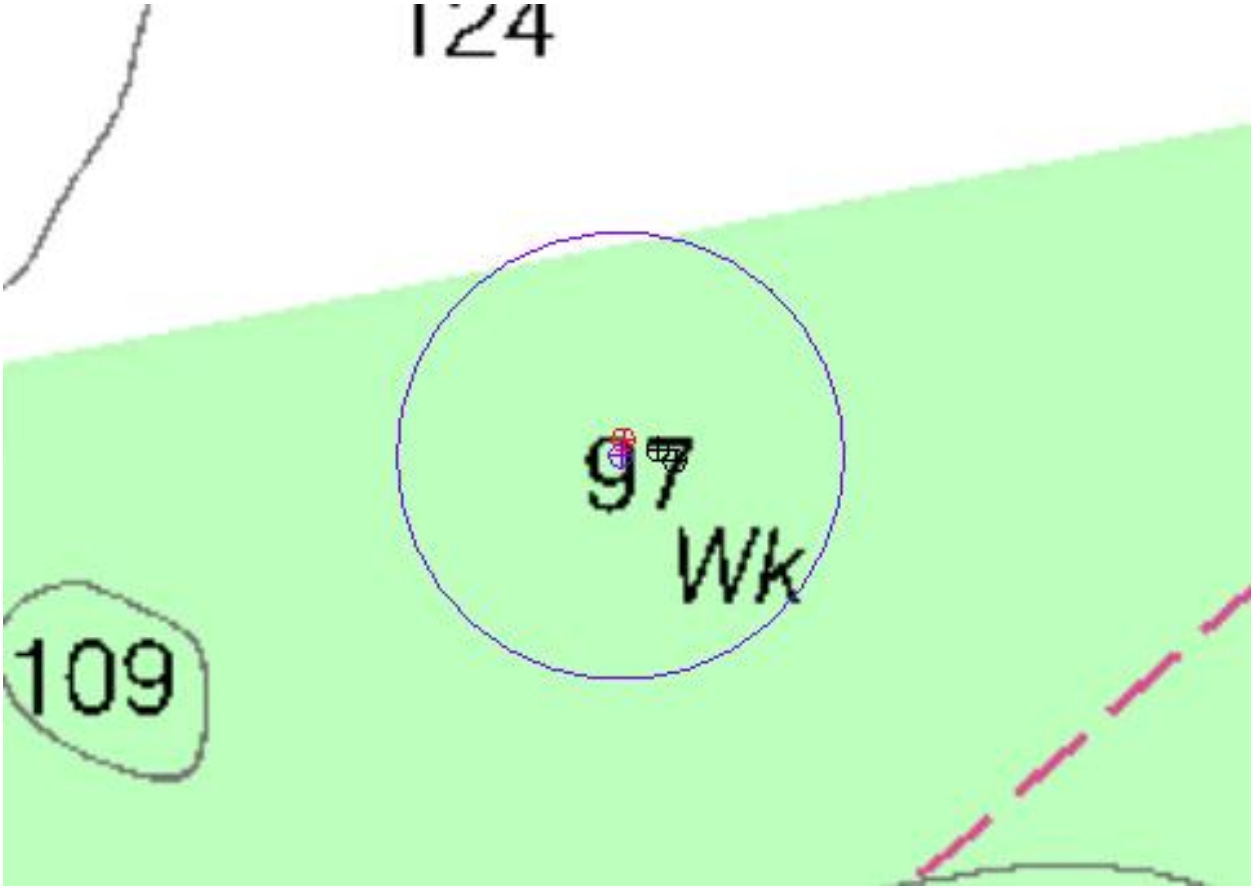


Figure 1.7.2

1.8) Profile/Beam - 243/285 from h12015 / tj_s222_reson7125_stbd / 2009-286 / 305_1643

Primary Feature for AWOIS Item #2918

Search Position: 41° 15' 59.5" N, 071° 46' 23.9" W

Historical Depth: 26.82 m

Search Radius: 300

Search Technique: MB,S2, ES

Technique Notes: [None]

History Notes:

HISTORY■ MAR--10/84, OPR-B660-RU/HE-84; DANG SUBM WK, COVERED 88FT (PREDICTED TIDES) i■IN 127FT SURROUNDING DEPTHS WAS DETERMINED BY DIVERS IN LAT.41-15-59.14N, i■LONG.71-46-25.69W. WRECKAGE IS OF STEEL HULLED BARGE. (ENTERED 11/84 RWD)■ FE266/84--OPR-B660-RU/HE-84; STEEL HULLED BARGE, PNEUMATIC LD 88.6FT AT MLW i■APPROX 100-120FT IN LENGTH. BARGE IS OVERTURNED IN E-W DIRECTION IN LAT i■41-15-59.14N, LONG 71-46-25.69W; LORAN C RATES 9960-X-25972.1, Y-43944.7, i■W-14598.0, Z-60134.1. WK NOT CONSIDERED DANG. TO SURFACE NAVIGATION, BUT i■CONSIDERED DANGEROUS TO SUBSURFACE NAVIGATION. RECOMMENDS CHART AS DANGEROUS i■(UPDATED 4/85 RWD) ■ ■ DESCRIPTION■ 195 LORAN C RATES PROVIDED BY MR. RICHARD TARACKA, GREENWICH, i■CT. POLICE DEPARTMENT, TEL NO. 203-622-8007; 9960-W 14598.4, i■9960-Y 43944.9. (ENTERED MSM 4/89)

Survey Summary

Survey Position: 41° 15' 59.5" N, 071° 46' 24.3" W

Least Depth: 28.71 m (= 94.19 ft = 15.699 fm = 15 fm 4.19 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.002 m ; **TVU (TPEv)** ±0.236 m

Timestamp: 2009-286.16:44:30.750 (10/13/2009)

Survey Line: h12015 / tj_s222_reson7125_stbd / 2009-286 / 305_1643

Profile/Beam: 243/285

Charts Affected: 13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Covered radius with MB. AWOIS #2918 located. Shoalest sounding designated by AHB and imported into Pydro.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-286/305_1643	243/285	0.00	000.0	Primary
BlockIslandAWOIS	AWOIS # 2918	8.42	279.7	Secondary

Hydrographer Recommendations

Update least depth and position of charted wreck per present survey findings.

Cartographically-Rounded Depth (Affected Charts):

94ft (13215_1, 13205_1)

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

29m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 1:non-dangerous wreck
	QUASOU - 6:least depth known
	SORDAT - 20091014
	SORIND - US,US,nsurf,H12015
	TECSOU - 3:found by multi-beam
	VALSOU - 28.710 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 88 ft Wk. Add 94 ft Wk.

H12015 Uncharted Features Report

Registry Number: H12015
State: Rhode Island
Locality: Block Island Sound
Sub-locality: 3nm S of Weekapaup Pt
Project Number: OPR-B363-TJ-09
Survey Date: 10/11/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
13215	19th	12/01/2009	1:40,000 (13215_1)	USCG LNM: 12/08/2009 (05/25/2010) CHS NTM: None (05/28/2010) NGA NTM: None (06/12/2010)
13205	38th	02/01/2007	1:80,000 (13205_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: ?

* 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	74ft Rock	Rock	22.56 m	41° 18' 26.7" N	071° 42' 32.7" W	---
1.2	102ft Wreck	Wreck	31.22 m	41° 16' 35.2" N	071° 46' 05.4" W	---

1 - DR_UnCharted

1.1) Profile/Beam - 4/505 from h12015 / tj_s222_reson7125_stbd / 2009-284 / 431_0428

Survey Summary

Survey Position:	41° 18' 26.7" N, 071° 42' 32.7" W
Least Depth:	22.56 m (= 74.01 ft = 12.335 fm = 12 fm 2.01 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.027 m ; **TVU (TPEv)** ±0.322 m
Timestamp:	2009-284.04:28:23.746 (10/11/2009)
Survey Line:	h12015 / tj_s222_reson7125_stbd / 2009-284 / 431_0428
Profile/Beam:	4/505
Charts Affected:	13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Rock. Not navigationally significant.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-284/431_0428	4/505	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

74ft (13215_1, 13205_1)

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

23m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20091014
	SORIND - US,US,nsurf,H12015
	TECSOU - 3:found by multi-beam
	VALSOU - 22.558 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Rock is not navigationally significant at this depth. Shoaler depths in vicinity. Do not chart rock.

Feature Images

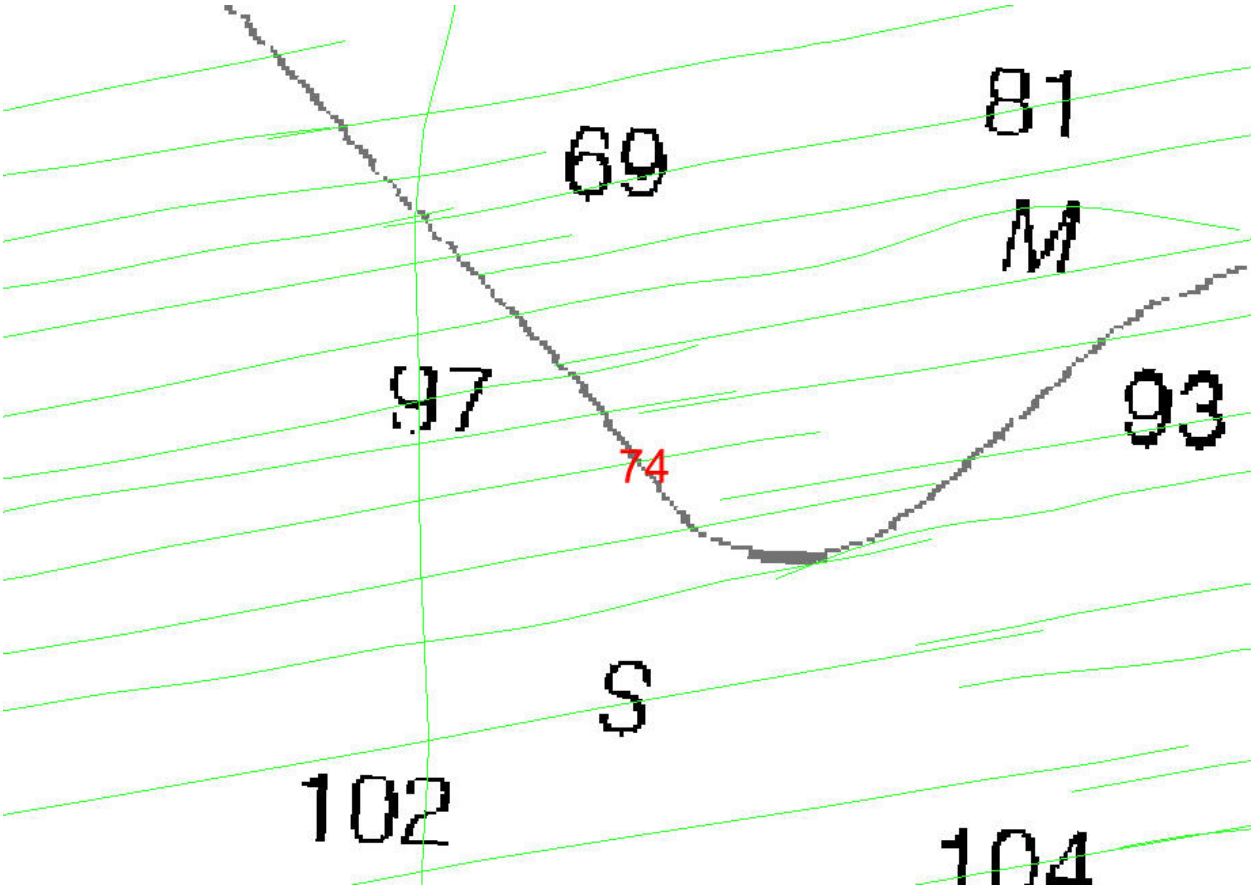


Figure 1.1.1

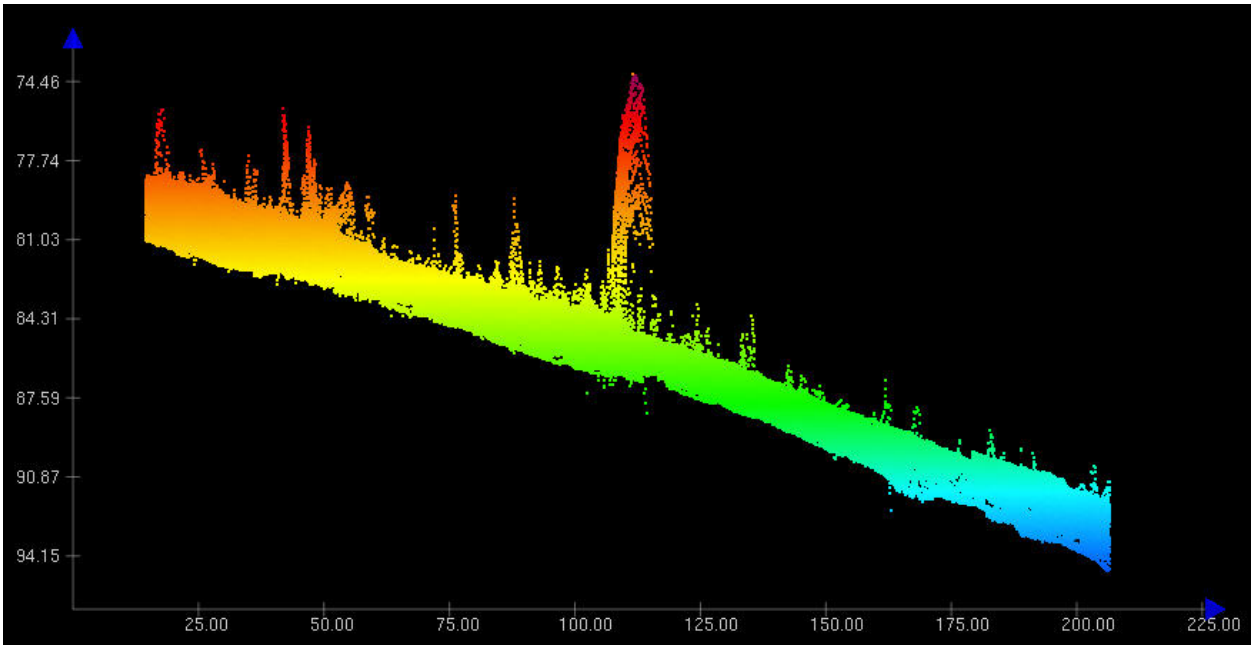


Figure 1.1.2

1.2) Profile/Beam - 755/457 from h12015 / tj_s222_reson7125_stbd / 2009-284 / 437_0722

Survey Summary

Survey Position:	41° 16' 35.2" N, 071° 46' 05.4" W
Least Depth:	31.22 m (= 102.43 ft = 17.072 fm = 17 fm 0.43 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.035 m ; **TVU (TPEv)** ±0.324 m
Timestamp:	2009-284.07:25:26.770 (10/11/2009)
Survey Line:	h12015 / tj_s222_reson7125_stbd / 2009-284 / 437_0722
Profile/Beam:	755/457
Charts Affected:	13215_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Located uncharted wreck with MultiBeam.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12015/tj_s222_reson7125_stbd/2009-284/437_0722	755/457	0.00	000.0	Primary

Hydrographer Recommendations

Chart least depth and wreck as per current survey.

Cartographically-Rounded Depth (Affected Charts):

102ft (13215_1, 13205_1)

17fm (12300_1, 13006_1, 13003_1)

31m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 1:non-dangerous wreck
	QUASOU - 6:least depth known
	SORDAT - 10/11/2009
	SORIND - US,US,nsurf,H12015
	TECSOU - 3:found by multi-beam

VALSOU - 31.222 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart 102 ft Wk.

Feature Images

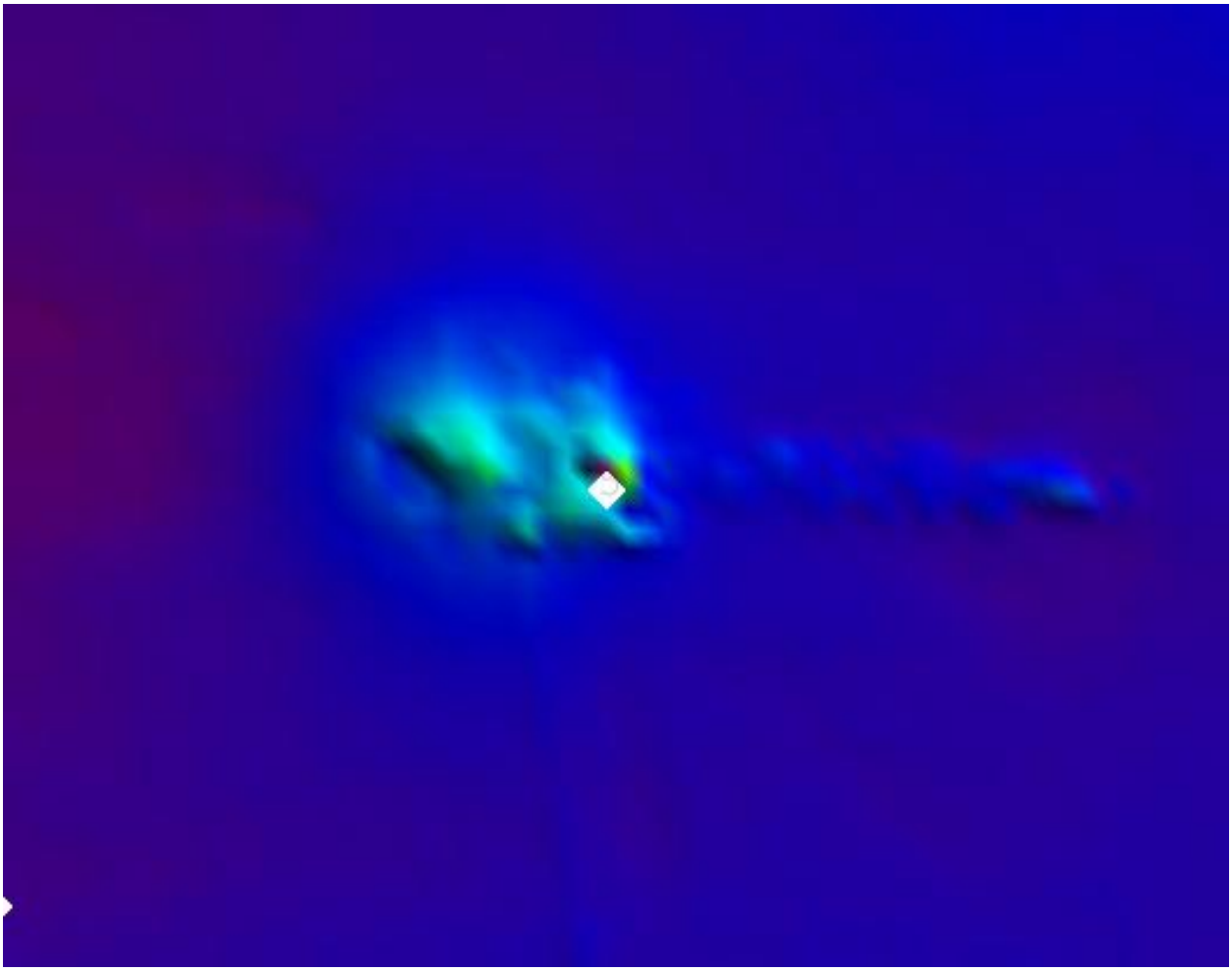


Figure 1.2.1

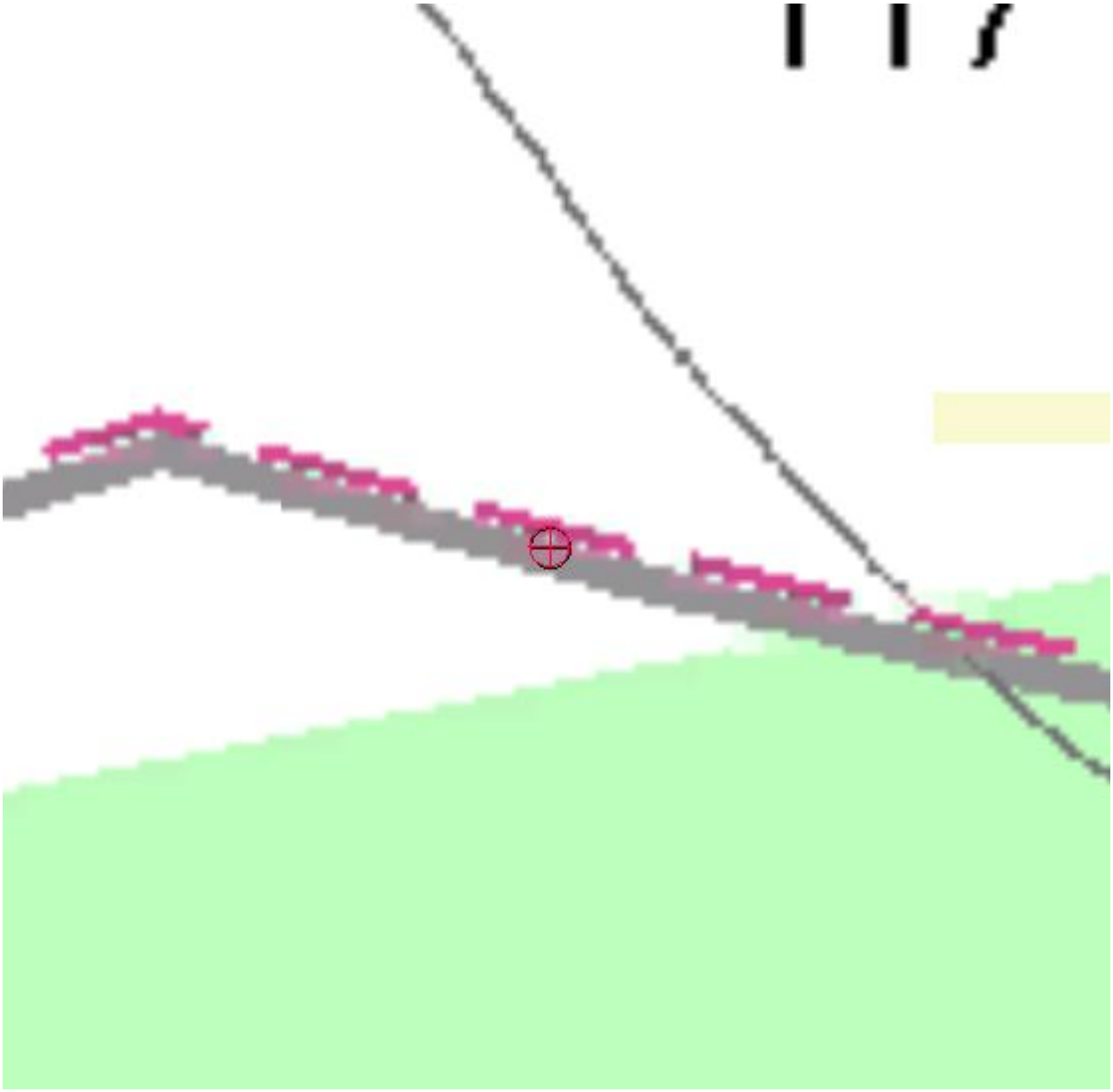
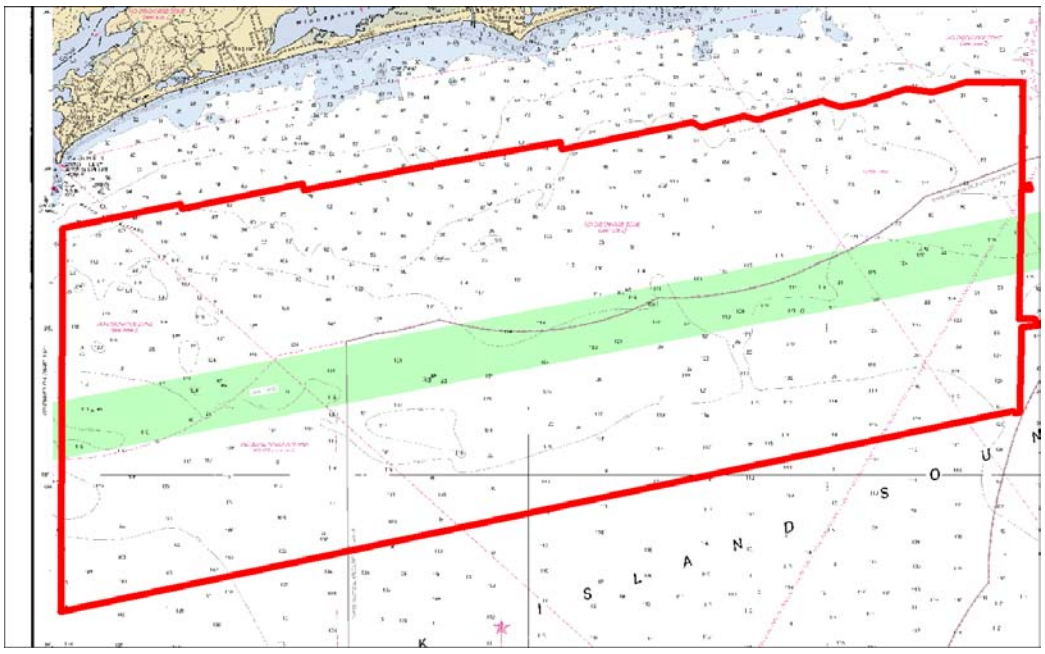


Figure 1.2.2

Appendix III

Progress Sketch



NOAA Ship THOMAS JEFFERSON

FY 2009 Project Statistics

Project	Location	Month/ Year	LNM YBES		LNM MB		LNM SSS		LNM Combo *		Combo Type ^		Items Investigated	Tide Gauges Installed / Removed	Bottom Samples
			Ship	Launch	Ship	Launch	Ship	Launch	Ship	Launch	Ship	Launch			
CY 2008															
[illegible]			0	0	932	528	58	208	0	0			0	0	40
CY 2009															
OPR-B363	Block Island Sound	Sep-09	0	0	0	253	0	0	0	102	392	0	0	0	0
OPR-B363	Block Island Sound	Oct-09	0	0	0	252	0	19	0	0	0	0	0	0	0

Appendix IV

Tides and Water Levels

1. **Tide Notes**
2. **Request for Approved Tides**
3. **Final Tide Notes**

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : October 29, 2009

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B363-TJ-2009
HYDROGRAPHIC SHEET: H12015

LOCALITY: 3 nm S of Weekapaup Pt., Block Island, RI
TIME PERIOD: September 27 - October 14, 2009

TIDE STATION USED: Newport, RI 845-2660
Lat.41° 30.3' N Long. 71° 19.6' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.099 meters

TIDE STATION USED: New London, CT 846-1490
Lat. 41° 21.7' N Long. 72° 05.4' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.839 meters

Tide STATION USED: Montauk, NY 851-0560
Lat. 41° 02.9' Long. 71° 57.6' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.683 meters

REMARKS: RECOMMENDED GRID

Please use the TCARI grid "B363TJ2009-TCARI-Revised" as the final grid for project OPR-B363-TJ-2009, H12015, during the time period between September 27 and October 14, 2009.

Refer to attachments for grid information.

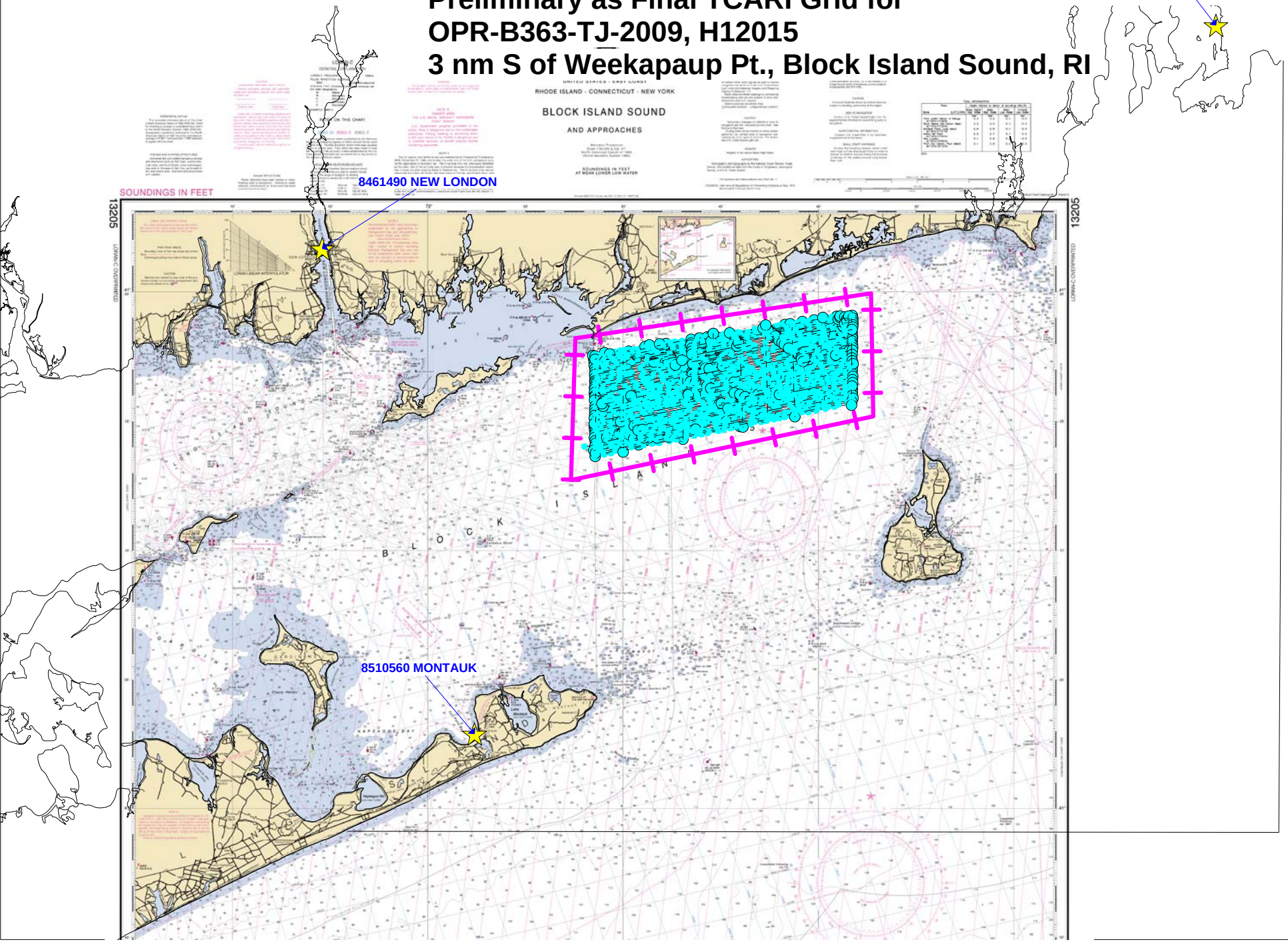
Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

Peter J. Stone

Digitally signed by Peter J. Stone
DN: cn=Peter J. Stone, o=CO-OPS, ou=NOAA/NOS, email=peter.stone@noaa.gov, c=US
Date: 2009.10.30 16:51:38 -04'00'

CHIEF, OCEANOGRAPHIC DIVISION

Preliminary as Final TCARI Grid for OPR-B363-TJ-2009, H12015
3 nm S of Weekapaup Pt., Block Island Sound, RI



Appendix V

Supplemental Survey Records & Correspondence

U.S. DEPARTMENT OF COMMERCE
(10-95)NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

VESSEL No.	PROJECT NO. OPR –B363 - TJ-09 FIELD NO. H12015 & H12023 SHEET LETTER: "N/A"	YEAR 2008	SURVEY TITLE:	SURVEY NO:	CHECKED BY:	DATE CHECKED:

POSITION NUMBERS	DAY OF THE YEAR	SAMPLE POSITION		DEPTHS (METERS)	TYPE OF SAMPLER	APPROXIMATE PENETRATION (CENTIMETERS)	LENGTH OF CORE	FIELD DESCRIPTION SIZE OR CONSISTENCY COLOR-NOUN (USE STANDARD ABBREVIATIONS)	REMARKS (Unusual conditions ,cohesiveness, dented cutter, stat.no.,type of bottom, relief .i.e slope plain disposition etc.)
		LATITUDE (o ' ") North	LONGITUDE (o ' ") West						
1	287	41d17.997'n	071d43.150'w	35m	Ponar	3cm		Brown Mud	
2	287	41.3549116d N	-071.532774d W		Ponar			Medium sand	Not within H12015 area
3	287	41.3593541d N	-071.542730d W		Ponar			Gravel and shells	Not within H12015 area
4	287	41.3281956d N	-071.551224d W		Ponar			Silt	Not within H12015 area
5	287	41.3251132d N	-071.522503d W		Ponar			Silt	Not within H12015 area
6	287	41.3421730d N	-071.560544d W		Ponar			Gravel and sand	Not within H12015 area
7	287	41.2890609d N	-0.71659212d W		Ponar			Mud	
8	287	41d16.142'n	071d42.795'w	38m	Ponar	4 cm		Grey mud	
9	287	41d16.792'n	071d49.513'w	39m	Ponar	1cm		Grey mud	
10	287	41d16.445'n	071d51.379'w	41m	Ponar	1cm		Mud w/ 1 clam shell	

Subject: [Fwd: Re: relaxing requirements for B363's surveys.]
From: "co.thomas.jefferson" <co.thomas.jefferson@noaa.gov>
Date: Mon, 10 Aug 2009 21:16:01 +0000
To: foo.thomas.jefferson@noaa.gov, daniel wright <daniel.wright@noaa.gov>

Please forward to all sheet managers, and ensure it is placed in the DR supplemental correspondence.

CO

-------- Original Message --------
Subject: Re: relaxing requirements for B363's surveys.
Date: Mon, 10 Aug 2009 16:09:35 -0400
From: james.m.crocker <James.M.Crocker@noaa.gov>
To: co.thomas.jefferson <CO.Thomas.Jefferson@noaa.gov>
CC: Jeremy McHugh <Jeremy.McHugh@noaa.gov>, jasper schaer <jasper.schaer@noaa.gov>, "shep.smith" <Shep.Smith@noaa.gov>, Kyle Ward <Kyle.Ward@noaa.gov>, LCDR Rick Brennan NOAA <Richard.T.Brennan@noaa.gov>
References: <4A7F8302.4000308@noaa.gov> <4A801AFC.7050002@noaa.gov> <4A80303B.6010000@noaa.gov> <4A8069F3.9070008@noaa.gov>

```
Hi Shep,

I concur with your assessment that OD MB is more efficient in this case
than either 200 SSS or 100 SSS and complete MB, both with feature
development.  Your request to replace the SSS requirement with OB MB in
water depths 4-20 m is granted for H12010, H12011, H12033 & H12137.  For
future sheets along the coast of RI, 100% SSS is required first, to
define areas where it is most efficient to run OB MB in lieu of 200%
SSS. In addition, 100% SSS should be run in areas such as,  inner
harbors and channels, AWOIS disprovals and over any suspect man made
like identified in the 0.5m OD MB grid.

Best Regards,
Jim

co.thomas.jefferson wrote:
> Hi Jim,
>
> It turns out that with the 7125 and 8125 working properly, there is no
> significant penalty for achieving object detection coverage vs
> complete coverage.  We do not need to slow down, nor decrease line
> spacing to get 0.5m resolution with 5 soundings per node in less than
> 20m of water.  Speed is limited by the increased noise level at higher
> speeds, and line spacing is limited by the limit of clean data.  Below
> is the density of data at 0.5m. Red to orange is 1-5 soundings per
> node.  Green to blue is 5-100 soundings per node.  Black is over 100
> soundings per node.
>
>
>
> In this area, which is a glacial moraine, there are glacial erratics
> spread in most parts of the seafloor, especially in the areas less
> than 20m deep where the softer sediments have eroded away, leaving the
> rocks armoring the slope to the beach.  The attached photo is on the
> beach at Block Island, and these rocks continue through most of the
> survey area.  Had we done sidescan to triage the area first, we are
> confident we would have had to do most of the area with OD multibeam
> to resolve all the rocks.
>
```

>
>
> I hear your concern about doing the SSS to support this, and we can
> always wear a belt and suspenders. We estimate that it will take
> about 12 boat-days to complete all the SSS on the five sheets, plus a
> couple more for holidays. We will process it to a mosaic, and look
> for manmade features that might improve interpretation of the multibeam.
>
> Alternately, the suggestion that Jasper made below, we could limit our
> SSS to the harbor, the nearshore areas which are arguably the only
> underkeel clearance areas in the survey area, the AWOIS disprovals,
> and any areas where the multibeam interpretation is unclear. This
> would save us time that we could apply toward doing an additional sheet.
>
> This approach is something we would only do in this sort of rocky
> environment, and do not envision doing anywhere else this year or
> next, with the possible exception of parts of the CT coast of LIS.
>
> I would like to give you a call to discuss this, but wanted to get you
> these images for reference before I did.
>
> Best,
>
> Shep
>
>
> CDR Shepard Smith, NOAA
> Commanding Officer
> NOAA Ship Thomas Jefferson
> 439 West York St
> Norfolk, VA 23510
> 757-647-0187
>

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

RI Lobstermen Meeting

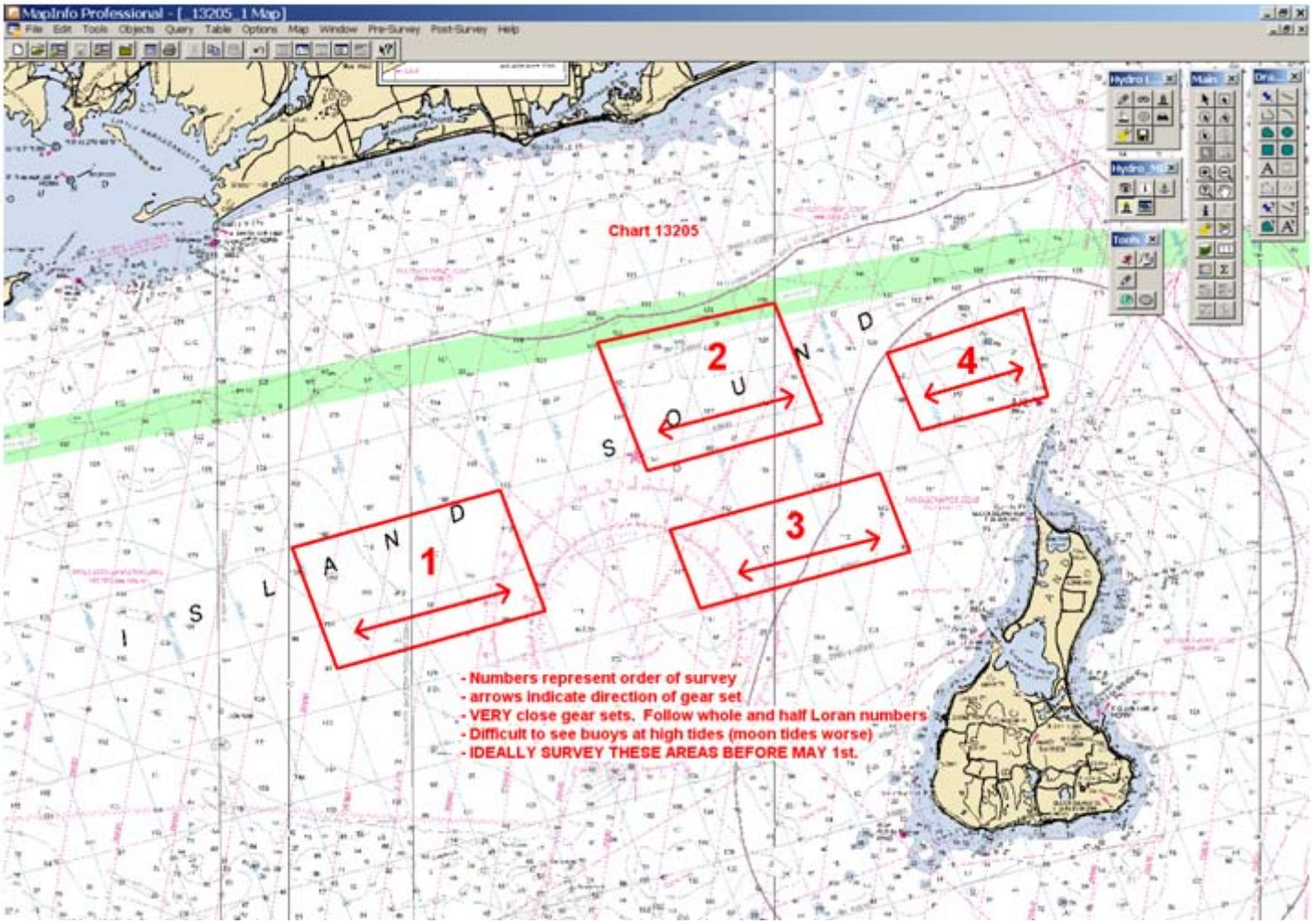
Feb. 17, 2009

Attendees:
Lanni Dellinger – President, RI Lobstermen's Association.
Bill McElroy – local lobstermen.
Al Christopher "Miss Stacey" – Provided most of the info. Cell (401) 742-0172, home (401) 783-4421.
Matt Wingate

General notes:

*****Best time to survey the boxed areas (see graphic) is prior to May 1st*****

- Lobstermen have a gentlemen's agreement with dragger fishermen in several areas west of Block Island.
- In one area, lobstermen do not set pots until Memorial Day and pull by Nov 1st.
- Another area, lobstermen set pots starting middle of June and pull by the end of Oct.
- A third area, lobstermen set gear between May 1st and Oct 1st.
- In essence, lobster gear will be in the water from May 1st until Nov 1st west of Block Island (boxed areas). Lobster gear begins to come out the beginning of Oct and is completely out by the beginning of Nov.
- Gear sets run approx. east – west along LORAN lines. Trawl lines are tightly packed in each boxed area. Sets run along whole and half LORAN numbers.
- Gear will be much tighter in the boxed areas than what *Thomas Jefferson* experienced in Mass. waters in 2008. Flags mark the beginning and end of each trawl line. Radar reflectors typically mark each corner of the boxes.
- Lobster gear and dragger gear do not coexist. Per the gentlemen's agreement, lobstermen need to confine their gear to the boxed areas.
- Southwest Ledge popular gear location. Also a VERY popular Bass fishing spot.
- Lobster buoys in the NW box will be underwater during a moon tide.
- Lobster buoys in the western box REALLY submerge on a moon tide.
- Slack tide the best time to see lobster buoys…otherwise, will probably be submerged.
- Gill net fishermen place their nets close to shore from Point Judith to Charlestown, RI.
- Fishermen (not lobstermen) set out "fish pots" along the coast where there are structures, wrecks, etc. These are single pots, not connected on a trawl line.


MapInfo Professional - [13205_1 Map]
File Edit Tools Objects Query Table Options Map Window Pre-Survey Post-Survey Help
Chart 13205
1
2
3
4
- Numbers represent order of survey
- arrows indicate direction of gear set
- VERY close gear sets. Follow whole and half Loran numbers
- Difficult to see buoys at high tides (moon tides worse)
- IDEALLY SURVEY THESE AREAS BEFORE MAY 1st.

H12015 COMPILATION LOG

General Survey Information	
REGISTRY No.	***H12015***
PROJECT No.	***OPR-B363-TJ-09***
FIELD UNIT	***NOAA SHIP THOMAS JEFFERSON***
DATE OF SURVEY	***September 27 to October 14, 2009***
LARGEST SCALE CHART	***13215, 19th Ed., 20091201***
SOUNDING UNITS	***Feet***
COMPILER	***Norris Wike***

Source Grids	File Name
	H12015_NOAA_CUBE_1m_A1_Final H12015_NOAA_CUBE_1m_A2_Final H12015_NOAA_CUBE_1m_A3_Final H12015_NOAA_CUBE_1m_A4_Final H12015_NOAA_CUBE_1m_A5_Final H12015_NOAA_CUBE_1m_A6_Final H12015_NOAA_CUBE_1m_A7_Final H12015_NOAA_CUBE_1m_A8_Final H12015_NOAA_CUBE_1m_A9_Final H12015_NOAA_CUBE_2m_A_Final H12015_NOAA_CUBE_2m_B_Final H12015_NOAA_CUBE_2m_C_Final H12015_NOAA_CUBE_2m_D_Final H12015_NOAA_CUBE_50cm_D_Final
Surfaces	**File Name**
Combined	***H120015_Combined_4m.hns***
Interpolated TIN	***H12015_8k_InterpTIN.hns***
Shifted Interpolated TIN	***H12015_8k_InterpTIN_Shifted.hns***
Product Surface	***N/A***
Final HOBs	**File Name**
Survey Scale Soundings	***H12015_SS.hob***
Chart Scale Soundings	***H12015_CS.hob***
Contour Layer	***H12015_Contours.hob***
Feature Layer	***H12015_Features.hob***
Meta-Objects Layer	***H12015_MetaLayers.hob***
Blue Notes	***H12015_BlueNotes.hob***
Seabed Layer	***NA***
ENC Retain Layer	***H12015_ENC_Retain.hob***
Bottom Characteristics	***H12015_Bottom_Samples.hob***

Meta-Objects Attribution	
Acronym	**Value**
M_COVR	
CATCOV	***1***
SORDAT	***20091014***
SORIND	***US,US,graph,H12015***
M_QUAL	
CATZOC	***6***
INFORM	***NOAA Ship Thomas Jefferson***
POSACC	***10***
SORDAT	***200901014***

SORIND	***US,US,graph,H12015***
SUREND	***20091014***
SURSTA	***20090927***
DEPARE	
DRVALV 1	***55.0 ft***
DRVALV2	***191.0 ft***
SORDAT	***20091014***
SORIND	***US,US,graph,H12015***
M_CSCL	
CSCALE	***40000***
SORDAT	***20091014***
SORIND	***US,US,graph,H12015***

SPECIFICATIONS:

I. COMBINED SURFACE:
   a. Number of ESAR Final Grids: ***14***
   b. Resolution of Combined (m): ***4M***

II. SURVEY SCALE SOUNDINGS (SS):
   a. Radius
   b. Shoal biased
   c. Use Single Defined Radius: ***mm at chart scale***
   d. Queried Depth of All Soundings
      i. Minimum: ***14.17M***
      ii. Maximum: ***53.28M***

III. INTERPOLATED TIN SURFACE:
   a. Resolution (m): ***4M***
   b. Linear
   c. Shifted value: *[-0.229m (feet), (≤ 10 fathoms)]*
      [-1.372m (fathoms), (> 10 fathoms)]

IV. CONTOURS:
   a. Use a Depth List: ***H12015_depth_curves_list.txt***
   b. Line Object: DEPCNT
   c. Value Attribute: VALDCO

V. FEATURES:
   a. Total Number of Features***:*** ***8***
   b. Number of Insignificant Features: ***7***

VI. CHART SURVEY SOUNDINGS (CS):
   a. Number of ENC CS Soundings: ***429***
   b. Radius
   c. Shoal biased
   d. Use Single-Defined Radius: ***NA***
      i. Radius Value (m):
      ii. Or use a Sounding Space Range Table: ***H12015_SoundingSpacingRange.txt***

10.9730	27.4320	225
27.4321	36.5760	300
36.5761	45.7200	325
45.7201	60.0000	350

   e. Filter: Interpolated != 1
   f. Number Survey CS Soundings: ***511***

ATLANTIC HYDROGRAPHIC BRANCH
H-CELL REPORT to ACCOMPANY
SURVEY H12015 (2009)

This H-Cell Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

B.2. QUALITY CONTROL

H-Cell

The AHB source depth grid for the survey's nautical chart update product entailed the field's original 50cm, 1m and 2m grids. These grids were combined at 4 meter resolution. The survey scale soundings were created from the combined surface using the 1mm at chart scale process. Refer to the Compilation Log above for exact values used for this process. A TIN was created from the survey scale soundings from which an interpolated surface was generated. The chart scale soundings were selected from the filtered interpolated surface using a Sounding Spacing Ranges table at the 1:20,000 and 1:40,000 chart scale. The chart scale selected soundings are a subset of the survey scale selected soundings. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

Depth contours were created from a shifted interpolated TIN surface of 8m resolution and the contours were then derived from the interpolated and non-interpolated nodes. Therefore, using this method the contours are in harmony with the SS and CS soundings while maintaining the chart equivalent contour values as whole integers. The depth contours are being forwarded to MCD for reference only. The contours were utilized during chart scale sounding selection and quality assurance efforts at AHB. The depth contours are incorporated into the SS H-Cell product as per 2009 H-Cell Specifications.

The compilation components (Stand Alone HOB files (SAHOB)) are detailed in the Compile Log attached to the Descriptive Report. The SAHOB files included depth areas (DEPARE), depth contours (DEPCNT), sounding selections (SOUNDG), features (UWTROC, WRECKS), Meta objects (M_COVR, M_QUAL, M_CSCL), and cartographic Blue Notes ($CSYMB).

All of the components with the exception of the survey scale sounding selection and depth contours were inserted into one feature layer (including the Bluenotes, as dictated by Hydrographic Technical Directive 2008-8), and this layer was exported into S-57 format in order to create the H-Cell deliverable. Similarly, the survey scale sounding selection and depth contours were exported into S-57 format separately, and then both S-57 files were processed in CARIS HOM to convert the metric units to feet. The final products are two S-57 files, in Lat/Lon NAD-83, one that contains the

chart soundings, all the Features, Meta objects, and Bluenotes (H12015_CS.000), and one that contains the survey scale sounding selection and depth contours (H12015_SS.000). Finally, quality assurance checks were made utilizing CARIS S-57 Composer version 2.1 validation checks and DKART INSPECTOR version 5.

H12015 CARIS H-Cell final deliverables include the following products:

H12015_CS.000	1:20,000 Scale	H12015 H-Cell with Chart Scale Selected Soundings
H12015_SS.000	1:20,000 Scale	H12015 Survey Scale Selected Soundings

B.2.4 Junctions

Survey H12015 has a junction with surveys H12011 to the east and H12139 to the south. Present survey soundings compare within 1-2 feet with H12011 and H12139.

B.4 DATA PROCESSING

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

CARIS HIPS/SIPS version 6.1 SP2, HF 1-8
CARIS Bathy DataBASE version 2.3 HF 1-16
CARIS Bathy DataBASE version 3.0 HF 1, 3, 5
CARIS S-57 Composer version 2.1 HF 4
DKART INSPECTOR, version 5.0 Build 732 SP1
CARIS HOM ENC 3.3 SP3 HF 8
PYDRO 10.9 (r3009)

C. HORIZONTAL AND VERTICAL CONTROL

The Hydrographer makes adequate mention of all water level and vertical datum adjustments in the Descriptive Report.

The horizontal control used for this survey's data acquisition and H-Cell compilation is based upon the North American Datum of 1983 (NAD83), UTM projection zone 19.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON 13215 (19th. Edition, Dec. /09)

Block Island Sound, Point Judith to Montauk
Corrected through NM 12/19/2009
Corrected through LNM 12/08/2009
Scale 1:40,000

13214 (28th. Edition, Apr./06)
Fisher Island Sound
Corrected through NM 06/12/2010
Corrected through LNM 05/14/2010
Scale 1:20,000

ENC Comparison **US5RI10M**
Block Island Sound, Point Judith to Montauk Point
Edition 3
Application Date 2010-03-02
Issue Date 2010-07-06
Chart 13215

US5CN44M
Fisher Island Sound
Edition 2
Application Date 2010-06-01
Issue Date 2010-06-01
Chart 13214

Hydrography

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section "D" and Appendix II of the Descriptive Report.

MISCELLANEOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. See Section D.1. of this report for a list of the Raster Charts and Electronic Navigation Charts (ENC) used for compiling the present survey.

ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell BASE Cell File or the Blue Notes should be retained as charted. Refer to the Descriptive Report for further recommendations by the hydrographer.

APPROVAL SHEET
H12015

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth contours, disposition of critical depths, cartographic symbolization, and verification or disproval of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with National Ocean Service and Office of Coast Survey requirements except where noted in the Descriptive Report and the Evaluation Report.

All final products have undergone a comprehensive reviews per the Hydrographic surveys Division Office Processing Manual and are verified to be accurate and complete except where noted.

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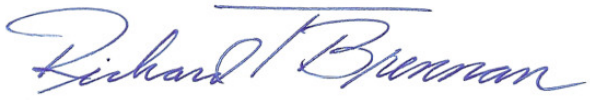
Norris A. Wike
Cartographer
Atlantic Hydrographic Branch

I have reviewed the H-Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet National Ocean Service requirements and standards for products in support of nautical charting except where noted.



Richard T. Brennan
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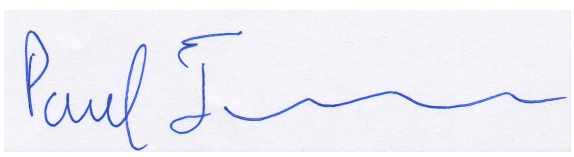
Approved: _____

Richard T. Brennan
Commander, NOAA
Chief, Atlantic Hydrographic Branch



Paul Turner
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