H11251

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: **H11251**

LOCALITY

State: New York

General Locality: Long Island Sound

Sub-locality: Truman Beach to Inlet Point

2008

CHIEF OF PARTY
CDR P. Tod Schattgen
NOAA

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DATE

NOAA FORM 77-28 (11-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H11251**

INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State:	**New York**		
General Locality:	**Long island Sound**		
Sub-Locality:	**Truman Beach to Inlet Point**		
Scale:	**1:10,000**	Date of Survey:	**10/07/08 to 10/27/08**
Instructions Dated:	**06/24/08**	Project Number:	**OPR-B370-TJ-08**
Vessel:	**NOAA Ship THOMAS JEFFERSON**		
Chief of Party:	**CDR P. Tod Schattgen**		
Surveyed by:	**THOMAS JEFFERSON Personnel**		
Soundings by:	**Reson 8101, 8125 and 7125 multibeam echosounders.**		
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**		

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

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Descriptive Report to Accompany Hydrographic Survey H11251

Project OPR-B370-TJ-08
Truman Beach to Inlet Point
Eastern Long Island Sound, NY
Scale 1:10,000
September 24th – October 27th 2008
NOAA Ship THOMAS JEFFERSON

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions* OPR-B370-TJ-08, dated 24 June, 2008 and Change 1 dated 30 September, 2008. Data acquisition was conducted from September 24th – October 27th 2008. This project will cover approximately 6.2 square nautical miles of critical survey area as designated in NOAA Hydrographic Survey Priorities, 2008 edition. ***Filed with original field records.***

Table 1: Survey Extents

Northern Limit	Southern Limit	Western Limit	Eastern Limit
41° 9' 38.8332"	41° 6' 19.2204"	-72° 24' 19.4328"	-72° 19' 3.2268"

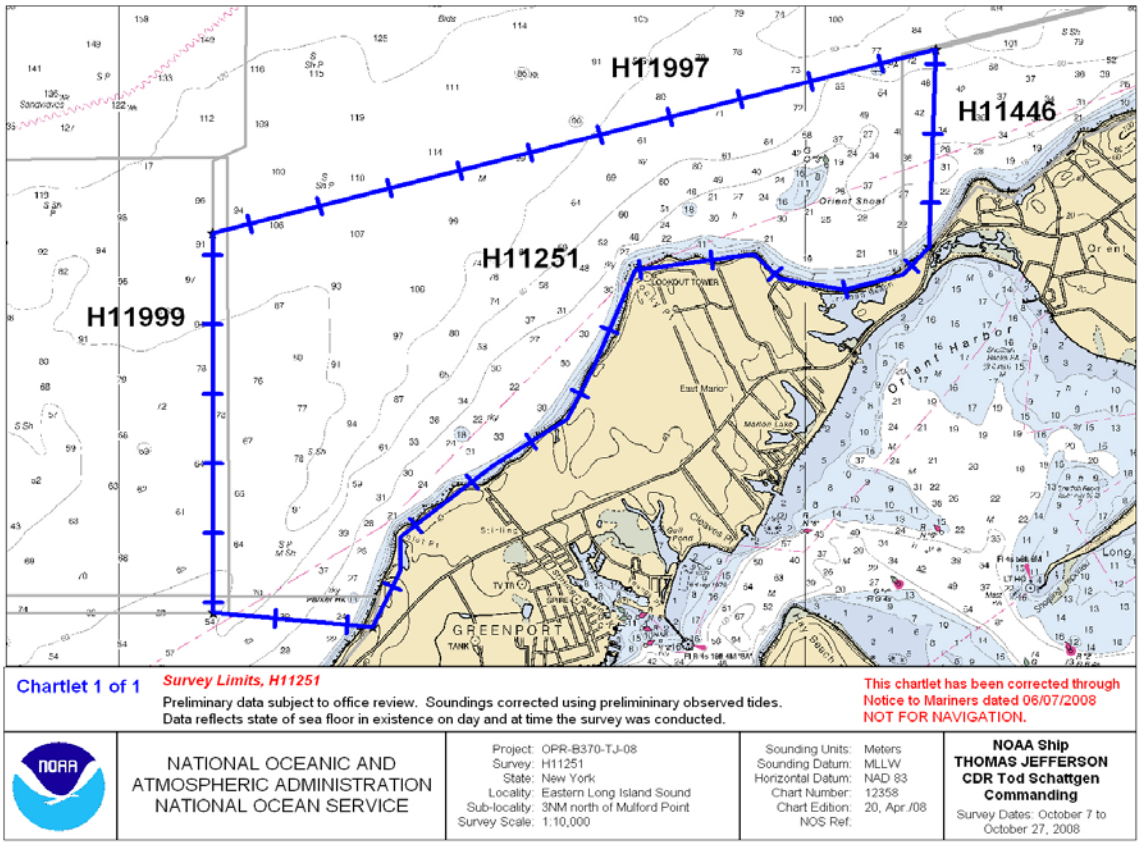
Table 2: Hydrographic Survey Statistic

***NOAA Ship THOMAS JEFFERSON*, Sheet E H11251**	
LNM Single beam mainscheme only	N/A
LNM Multibeam mainscheme only	353.4
LNM Lidar mainscheme only	N/A
LNM Side Scan Sonar mainscheme only	46.06
Lineal nautical miles of SSS with concurrent multibeam	N/A
LNM Crosslines singlebeam and multibeam combined	20.1
LNM Lidar Crosslines	N/A
LNM development lines non mainscheme	61.7
LNM shoreline/nearshore investigations	N/A
Number of Bottom Samples	17
Number of items investigated that required additional time/effort in the field beyond the above survey operations	N/A
Total number of square nautical miles	6.3

Table 3: Dates of Multibeam Data Acquisition

Calendar Date	Julian Day	Calendar Date	Julian Day
24-Sep-2008	268	14-Oct-2008	288
01-Oct-2008	275	21-Oct-2008	295
05-Oct-2008	279	23-Oct-2008	297
06-Oct-2008	280	24-Oct-2008	298
07-Oct-2008	281	25-Oct-2008	299
08-Oct-2008	282	26-Oct-2008	300
13-Oct-2008	287	27-Oct-2008	301

Figure 1: H11251 Limits



B. DATA ACQUISTION AND PROCESSING

Refer to ***Data Acquisition and Processing Report Spring Addendum-2008 (DAPR)**** and addendum 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. ***Filed with original field records.***

B. 1 EQUIPMENT AND VESSELS

Data were acquired by Hydrographic Survey Launches 3101, 3102 and Thomas Jefferson S222. HSL 3101 acquired RESON 8125 multibeam echosounder soundings, sound velocity profiles, and bottom samples. HSL 3102 acquired Klein 5000 side-scan imagery, RESON 8101 multibeam echosounder soundings, and sound velocity profiles. Thomas Jefferson S222 acquired RESON 7125 multibeam echosounder soundings, sound velocity profiles, and bottom samples. Vessel configurations, equipment operation and data acquisition and processing were consistent with specifications described in the DAPR.

B.2 QUALITY CONTROL

B.2.1 SYSTEM CERTIFICATION AND CALIBRATION

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

B.2.2 SOUNDING COVERAGE

As per the Letter Instructions, this survey was conducted using 100% side scan and complete multibeam coverage in depths from 4 to 20 meters, and complete multibeam in depths greater than 20 meters. To aid in feature management, mulitbeam coverage in depths shoaler than 20 meters was acquired to object detection specifications. Side Scan Sonar coverage was monitored by creation of a 100% coverage mosaic with 1 meter resolution. A list of all side-scan sonar contacts is contained in *Separates/Side Scan Contact Listing.* Bathymetry coverage was monitored by the creation of a multi-resolution BASE surface, with a 2 meter resolution in depths greater than 20 meters and a 50 centimeter resolution in depths from 4-20 meters.

Given the boulder-strewn nature of the bottom, it was time-prohibitive to identify every single side scan contact. Thus the complete multi-beam coverage that was done was conducted to object-detection criteria. This survey presented a number of unique challenges with respect to full multibeam coverage. The shallow water environment combined with large numbers of large rocks created a large number of sonar “shadows”. Small holidays remain in areas of low sounding density, however due to the shallow water environment it was not efficient to fill in every small area. The 50 centimeter multibeam BASE surface was compared to the 100% side scan mosaic and areas that contained small holidays that had no corresponding side scan features were not developed. Additionally, a 50 square meter grid was overlaid on the BASE surface, features that had multibeam holes and corresponding SSS contacts but were deemed to not be the shoalest feature were also not developed. The final criteria was to look in the grid square and determine if the area was likely to be charted as rocky, and if a large number of large rocks populated the grid square it was not developed. If any of those three criteria could not be met, additional bathymetry data was collected to fill in the hole. Several areas less than 20 meters did not get SSS coverage but were covered by object detection multibeam. Some side scan

contacts were noted to identify significant rocks that were uncharted and no multibeam data could be acquired over or encompassing the feature.

B.2.3 CROSSLINES

Multibeam echosounder cross-lines totaling 20.1 lineal nautical miles, comprising 5.7% of the originally planned multibeam hydrography, were acquired during the course of the survey. Crosslines were acquired with both vessels, so that a good comparison of same-vessel soundings for each of the vessels could be achieved. As per guidance from AHB an evaluation of the standard deviation layer of the BASE surface was performed for each fieldsheet in the survey. The average standard deviation at cross line junctions for 8101 was 0.042m for 99.3% of the samples. The 8125 and 7125 revealed std dev of 0.027m for 99.6% of the samples (see *Descriptive Report\Separates\Crossline_Comparisons\ H11251_Standard Deviation Report.doc).*

An uncertainty evaluation script V-0.2 (for experimental use) developed by Glen Rice was also used. This script needs two files that contain [X Y Z U]. X and Y are Ground coordinates with no precision. Z is the depth and U is the uncertainty (same units). These files need the same origin and resolution. The formula $z=(d_1-d_2)/(u_1+u_2)$ normalizes the depth difference to the total uncertainty at the node from the MS and XL surfaces. The percentage of nodes that fell inside uncertainty level 1 was at 99.64 percent. The script creates a text file of the result which can be plotted in Fledermaus. Uncertainty's outside of level one are in red. The script results can be found in H*1251\Field_Products\Public_Relation_Constituent_Products\Fledermaus\.H11251_surfoutput.txt and Descriptive Report\Separates\Crossline_Comparisons\ H11251_Standard Deviation Report.doc.*

The results indicate some systematic artifacts due to attitude inputs averaging 0.24 in any area. Other areas of high standard deviation are caused by bathymetric features or man made obstructions or the transition from one multibeam echosounder to another of the three platforms. The areas are considered suspect until examination in *subset edit* revealed that the correct hypothesis was chosen for the final surface. The results of the evaluation are located in the *Descriptive Report/Separates/Crossline Comparison/ H11251 Standard Deviation Report.pdf* folder submitted with this survey.

B.2.4 JUNCTIONS AND PRIOR SURVEYS

See Figure 1: H11251 Limits for survey junctions. CARIS Base Editor was used to compute differences from the junction surveys. The following table describes those results. The difference surfaces are located in *Descriptive Report\Separates\Crossline_Comparisons\Junctions.* ***See also Evaluation Report.***

Table 4 Contemporary surveys junction with H11251

Registry #	**Scale**	**Date**	**Field Party**	**Junction side**	Percentage of sounding ± 0.3m from Base
H11999	1:10,000	2008	Thomas Jefferson	W	99.9
H11997	1:10,000	2008	Thomas Jefferson	N	99.9
H11446	1:10,000	2008	Thomas Jefferson	E	97.8

B.2.5 SYSTEMATIC ERRORS

A roll error was observed on Launch 3102, 8101 data. The current value of -1.913 is currently being used for roll bias. An average of -2.250 (an increment of -0.337) was computed that would correct the error. The values however varied from beginning to end of survey by -0.2 to – 0.45 leading to the belief that a roll problem in the pos/mv was being experienced. No change to HVF was made. Many of the changes were at 0.5 m or less how ever some did go up into the 0.6 m range.

An error was found in 3101 Klein5000_SSS100 and 200 HVF's The X value and the Z value currently have the wrong sign. The error for X was -0.5 and should be 0.5. The Z value was -0.66 and should be 0.66. It was determined that for SSS this was within the error budget for rigid mount SSS. No correction was made to the data acquired.

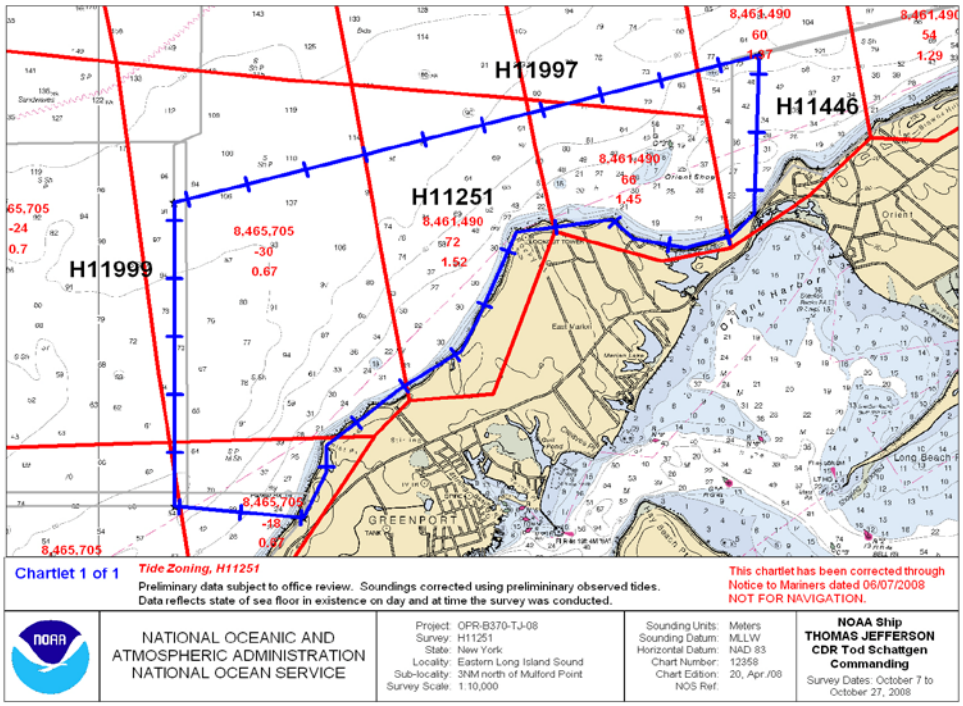
Another error observed was when the RESON 8101 projector flipped from back to forward on 3102. This is an occurrence that cannot be explained and it is why periodic monitoring of the RESON screen is implemented since it is a silent error. It may reveal itself as what looks like a roll artifact. The correction for this can be seen in the SVP pole entry in the HVF. The Azimuth field is changed 180° at the beginning of each time period that the error occurred followed by a return to 0 ° when the error period ends. An example of the error can be seen in the *H11251 Standard Deviation Report in the Crossline Comparison folder.*

Bathymetric data were evaluated to identify systematic errors in data correctors including motion, attitude, tide and sound velocity. Sun-illuminated digital terrain models (DTMs) did not reveal any other artifacts.

B.3 CORRECTIONS TO ECHO SOUNDING

HDCS sounding data were reduced to mean lower-low water (MLLW) using verified water levels from the primary stations 8461490, New London, CT and 8465705, New Haven, CT final zoning provided by CO-OPS as specified in the Letter Instructions and illustrated in Figure 2.

Figure 2 Tide Zoning



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

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

B.4 DATA PROCESSING

There were 763 raw files and 762 processed files. The extra raw files were false starts.

B.4.1 TOTAL PROPAGATED UNCERTAINTY

For the 2008 field season, Total Propagated Uncertainty is identified as TPE (Total Propagated error) in CARIS. The parameters for sound speed and tides are calculated separately for each project. The project-specific parameters for OPR-B370-TJ-08, Survey H11251 are as follows:

Table 5 TPU Parameters

Vessel	Tide Values		Sound Speed Values		Mode
	Measured	Zoning	Measured	Surface	
3101	0	0.19	4	0.2	CTD
3102	0	0.19	4	0.2	CTD
S222	0	0.19	4	0.2	CTD
S222	0	0.19	1	0.2	MVP

Measured Sound Speed values were calculated using the HSTP Sound Speed Estimator program and were consistently below 1 m/s for the project area (see processing logs in separates). These values were calculated for all MBES data immediately following CARIS Merge.

B.4.2 BASE SURFACES AND MOSAICS

The following table describes all BASE Surfaces and Mosaics submitted as part of Survey H11251.

Table 6 Field Sheet surfaces

Name of Fieldsheet and or surface	*Resolution*	*Type*	*Purpose*
H11251_2m_A.hns	2m	Cube	QC
H11251_2m_A_Final.hns	2m	Cube	QC
H11251_2m_B.hns	2m	Cube	QC
H11251_2m_B_Final.hns	2m	Cube	QC
H11251_50cm_A.hns	50cm	Cube	QC
H11251_50cm_A_Final.hns	50cm	Cube	QC
H11251_50cm_B.hns	50cm	Cube	QC
H11251_50cm_B_Final.hns	50cm	Cube	QC
H11251_50cm_C.hns	50cm	Cube	QC
H11251_50cm_C_Final.hns	50cm	Cube	QC
H11251_50cm_D.hns	50cm	Cube	QC
H11251_50cm_D_Final.hns	50cm	Cube	QC
H11251_FinComb_Thres_2m.hns	2m	Cube	Not a deliverable
H11251_50cm_mosaic.sum	1m	Mosaic	Coverage

This survey was processed using the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm. Grids were processed for each field sheet depending on the areas's resolution requirement for depths less than or greater 20 meters. Less than 20m was at 50cm Order 1 Shallow CUBE parameters. Greater than 20m were at 2m Order 1 deep CUBE parameters. All grids were finalized and combined into a 2m grid at a threshold of 0.0-22.0m for the 50cm grid and 19.0 – 50.0m for the 2m grid. The final combined grid imported into PYDRO for analysis. Refer to the 2008 Data Acquisition and Processing Report, 2008 Field Procedures Manual, and CARIS HIPS/SIPS 6.1 manual for further discussion of cube grids.

C. VERTICAL AND HORIZONTAL CONTROL *See also Evaluation Report*

As per FPM section 5.2.3.2.3 guidance (see Appendix V*), a HVCR report was not filed as no horizontal control stations were established by the field party for this survey. A summary of horizontal and vertical control for this survey follows. ***Filed with original field records.***

C.1 HORIZONTAL CONTROL

The horizontal datum for this project is the North American Datum of 1983 (NAD83), zone 18. Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacons at Acushnet MA, 306 kHz; and Moriches NY, 293 kHz; were used during this survey.

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

C.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 8461490, New London, CT and 8465705, New Haven, CT will serve as datum control for H11251. Observed tide data with final zoning were applied to all sounding data.

A request for delivery of final approved (verified) tides for this survey was forwarded to N/OPS1 on October 29, 2008 in accordance with the FPM and project letter instructions. Final Tides note was received and dated November 6, 2008. CO-OPS accepted the preliminary zoning as the final zoning for the project which was dated August 4, 2008. Verified water levels with final approved zoning were applied to all sounding data on 11/17/2009.

D. RESULTS AND RECOMMENDATIONS *See also Evaluation Report*

D.1 CHART COMPARISON

Survey H11251 was compared with the following charts 12358 (20th Ed.; April 2008, 1:40,000 inset 1:10,000). 12354 42th Ed 12/01/06 80,000 and US4NY1GM. Charts 12300, 13003, 13006, and 5161 were at a small scale such that a comparison was not warranted. Chart comparisons were performed in CARIS, in PYDRO using survey-scale excessed soundings, and in MapInfo using survey-scale and chart-scale excessed soundings exported from PYDRO.

D.1.1 CHART 12358_1

The chart revealed an even distribution of soundings either comparable, or on average 2 feet shoal or deep of the charted depths. Specific items can be found in the Pydro Feature Report. ***Concur.***

D.1.2 CHART 12354_1

The chart revealed an even distribution of soundings either comparable, or on average 2 feet shoal or deep of the charted depths. Specific items can be found in the Pydro Feature Report. ***Concur.***

D.1.3 US4NY1GM

The Chart revealed an even distribution of sounding either comparable, shoal or deep of the charted depths. Specific items can be found in the Pydro Feature Report appendix II. ***Concur.***

D.2 ADDITIONAL RESULTS

D.2.1 AUTOMATED WRECK AND OBSTRUCTION INFORMATION SERVICE (AWOIS) ITEMS

Three assigned AWOIS items were located within the limits of H11251 and investigated during this survey. The items were covered by 100% item detection multibeam. ***See Appendix II.***

D.2.4 SHORELINE

The limits of survey were to the 4m curve and reports from the launches indicate that in many places the actual shoreline was closer than charted. Shoreline verification was not required; however, submerged rocks precluded a traditional inspection at discrete locations. Observations indicate that shoreline verification should be performed with contemporary aerial photography or satellite imaging.

D.2.5 CHARTED FEATURES

There are 5 features that clearly fall within the survey area of H11251. Some Features were either un-reachable or detected by side scan sonar only. Charted features are addressed in the

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

D.2.6 Charted Pipelines and Cables

There are no charted pipelines or cables in the survey area.

D.2.7 Bridges, Ferry Routes, and Overhead Cables

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

D.3 DANGERS TO NAVIGATION AND SHOALS

D.3.1 Dangers to Navigation

Dangers to Navigation (DToN) submitted (16 DToNs on 10 Mar 09) from this survey are the most significant (see, appendix I). There are numerous other features which technically meet the definition for DToNs, however there are navigationally less significant and are not reported as DToNs to avoid cluttering the navigation product (see, appendix II). ***Five Dangers to Navigation were edited by office personnel. See Appendix I for all updated DtoN Reports.***

D.3.2 Shoals

Shoaling has been found on the southeast side of Orient Shoal and extends for 0.75nm in a northeast- southwest direction. The charted foul line on chart 12358_1 near shore from Parker Rock to Truman Beach needs to be extended seaward. A geo referenced tiff was used as back ground in the PYDRO PSS and in BASE EDITOR. A HOB file was created for the corrected shore line. The Hob file and tif are close approximations of the foul area's. A close inspection should be made to ascertain shoal rocks that may alter the foul line position. *See H11251\HOB\H11251_Foul_Areas.hob and H11251_Foulline.tif.* ***See Appendix II for recommendations for Parker Rock and Orient Shoal.***

D.4 AIDS TO NAVIGATION

There is one Aid to Navigation (ATON) within the limits of H11251 and is located on the north side of Orient Shoal.

D.5 COAST PILOT INFORMATION

The Hydrographer has no recommendations to the Coast Pilot.

D.6 MISCELLANEOUS

D.6.1 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 H11251

is contained in the PYDRO PSS. A list of all bottom samples acquired during Survey H11251 is contained in Appendix V. ***Concur. Bottom Samples listing is added to the end of the Feature Report, Appendix II.***

D.6.2 Environmental Conditions and Notes

The Hydrographer has no recommendations.

D.8 ADEQUACY OF SURVEY

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

D.8.1 Summary and Recommendations for Additional Work

The sea bottom covered by H11251 is rocky and dynamic. There are high cliffs on the shores of Long Island created from glacial till and submerged glacial erratics. There are sand waves in the survey area, which is evidence of the high tidal currents. ***See Appendix II for recommendations for charting sand wave areas.***

E. APPROVAL

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

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

Survey H11251 is adequate to supersede charted soundings in their common areas.

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

Title	Date Sent	Office
Data Acquisition and Processing Report Spring Addendem 2008	4 Feb 2009	N/CS33
Horizontal and Vertical Control Report for OPR-B370-TJ-08	n/a	N/CS33
Tides and Water Levels Package for OPR-B370-TJ-08	n/a	N/OPS1
Coast Pilot Report for OPR-B370-TJ-08	n/a	N/CS26

Approved and Forwarded:

jasper.schaer
I have reviewed this document
2009.03.12 21:45:45 Z

LT Jasper D. Schaer, NOAA
Field Operations Officer

CDR P. Tod Schattgen
I am approving this document
2009.03.12 21:49:59 Z

CDR P. Tod Schattgen, NOAA
Commanding Officer

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

Survey Manager:

SST Peter Lewit
Senior Survey Tech, NOAA

Appendix I

Dangers to Navigation

H11251 Dangers to Navigation

Registry Number: H11251

State: New York

Locality: Eastern Long Island Sound

Sub-locality: Truman Beach to Inlet point

Project Number: OPR-B370-TJ-08

Survey Dates: 10/05/2008 - 10/25/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12358	20th	04/01/2008	1:40,000 (12358_1)	NGA NTM: None (06/07/2008) USCG LNM: None (06/03/2008) CHS NTM: None (04/25/2008)
12354	42nd	12/01/2006	1:80,000 (12354_1)	USCG LNM: 04/29/2008 (06/03/2008) CHS NTM: None (04/25/2008) NGA NTM: 12/04/1999 (06/07/2008)
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	DTON 1 - chart a dang. 10 Rk	Rock	3.09 m	41° 07' 31.7" N	072° 22' 00.3" W	---
1.2	DTON 2 - chart a dang. 19 Rk	Rock	5.89 m	41° 07' 52.7" N	072° 21' 45.9" W	---
1.3	DTON 3 - chart a dang. 35 Rk	Rock	10.86 m	41° 08' 45.5" N	072° 21' 19.3" W	---
1.4	DTON 4 - chart a dang. 36 Rk	Shoal	11.18 m	41° 08' 21.6" N	072° 21' 39.7" W	---
1.5	DTON 5 - chart a dang. 12 Rk	Rock	3.72 m	41° 08' 10.8" N	072° 21' 26.3" W	---
1.6	DTON 6 - chart a dang. 29 Wk	Wreck	8.83 m	41° 07' 16.1" N	072° 23' 01.3" W	---
1.7	DTON 7 - chart a dang. 38 Rk	Rock	11.64 m	41° 08' 19.4" N	072° 21' 53.1" W	---
1.8	DTON 8 - chart a dang. 8 Rk	Rock	2.55 m	41° 06' 15.8" N	072° 23' 23.4" W	---
1.9	DTON 10 - 6 ft. shoal on Orient Shoal	Shoal	1.92 m	41° 08' 45.7" N	072° 19' 53.0" W	---

1.10	DTON 11 - 7 ft. shoal on Orient Shoal	Shoal	2.31 m	41° 08' 51.1" N	072° 19' 44.6" W	---
1.11	DTON 12 - chart a dang. 6 Rk	Shoal	1.78 m	41° 07' 16.6" N	072° 22' 17.3" W	---
1.12	DTON 13 - chart a dang. 7 Rk	Rock	2.26 m	41° 07' 10.0" N	072° 22' 38.2" W	---
1.13	DTON 14 - chart a dang. 36 Rk	Rock	11.19 m	41° 08' 33.5" N	072° 21' 36.7" W	---
1.14	DTON 15 - south end of Orient Shoal, chart 10 ft. shoal sndg.	Shoal	3.17 m	41° 08' 38.4" N	072° 20' 04.8" W	---
1.15	DTON 16 - north end of Orient Shoal, chart 31 ft. shoal sndg.	Shoal	9.65 m	41° 09' 07.2" N	072° 19' 45.4" W	---
1.16	228/1 - DTON 9 replacement - chart a dang. 4 Rk	Rock	1.33 m	41° 08' 34.2" N	072° 20' 23.6" W	---

1 - DR_DToN

1.1) DTON 1 - chart a dang. 10 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 07' 31.7" N, 072° 22' 00.3" W

Least Depth: 3.09 m (= 10.12 ft = 1.687 fm = 1 fm 4.12 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.401 m

Timestamp: 2008-297.13:07:30.376 (10/23/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-297 / 004_1305

Profile/Beam: 2094/232

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8125 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 10.12ft (3.09m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-297/004_1305	2094/232	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-297/169_1632	247/166	19.79	060.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-300/024_1538	652/162	23.65	343.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/169_1632	475/67	27.79	202.3	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1530	0030	33.80	293.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/003_1257	5192/86	48.37	243.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/004_1305	1942/210	48.84	038.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/616_1713	3537/5	62.72	316.8	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/003_1257	5679/226	73.14	030.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/001_1241	2812/238	76.82	266.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/001_1241	2886/52	78.40	282.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/169_1632	780/133	86.14	220.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/002_1245	1931/205	88.80	252.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/616_1713	3668/95	91.19	320.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/001_1241	3246/26	93.52	344.3	Secondary (grouped)

h11251/tj_3101_reson8125/2008-297/001_1241	2750/3	99.63	269.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	14741/41	106.28	284.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/002_1245	1415/240	107.82	007.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/003_1257	5830/225	113.75	031.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/003_1257	4860/60	128.22	229.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/002_1245	2101/239	140.38	240.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	14481/85	157.97	251.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

10ft (12358_1, 12354_1)

1 ½fm (12300_1, 13006_1, 13003_1)

3.1m (5161_1)

S-57 Data

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

Attributes:

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.086 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a dangerous 10 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.2) DTON 2 - chart a dang. 19 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 07' 52.7" N, 072° 21' 45.9" W

Least Depth: 5.89 m (= 19.31 ft = 3.219 fm = 3 fm 1.31 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.401 m

Timestamp: 2008-297.14:12:55.231 (10/23/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-297 / 009_1408

Profile/Beam: 4365/168

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8125 and corrected to MLLW using observed water levels. Final water levels and zoning were applied and resolved the sounding to 19.31ft (5.89m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-297/009_1408	4365/168	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-297/170_1558	4004/235	95.29	314.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/013_1453	5798/85	103.67	100.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/005_1317	3013/18	109.83	306.2	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1530	0031	137.43	264.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12358_1, 12354_1)

3 ¼fm (12300_1, 13006_1, 13003_1)

5.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 5.886 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a 19 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.3) DTON 3 - chart a dang. 35 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 45.5" N, 072° 21' 19.3" W

Least Depth: 10.86 m (= 35.62 ft = 5.936 fm = 5 fm 5.62 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.985 m ; **TVU (TPEv)** ±0.398 m

Timestamp: 2008-282.18:05:49.204 (10/08/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-282 / 587_1801

Profile/Beam: 1191/89

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 and corrected to MLLW using observed water levels. Final water levels and zoning were applied and resolved the sounding to 35.62ft (10.86m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-282/587_1801	1191/89	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

35ft (12358_1, 12354_1)

5 ¾fm (12300_1, 13006_1, 13003_1)

10.9m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 10.856 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a dangerous 35 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.4) DTON 4 - chart a dang. 36 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 21.6" N, 072° 21' 39.7" W

Least Depth: 11.18 m (= 36.68 ft = 6.113 fm = 6 fm 0.68 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.988 m ; **TVU (TPEv)** ±0.414 m

Timestamp: 2008-288.13:01:11.437 (10/14/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-288 / 533_1257

Profile/Beam: 2387/15

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8125 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 36.68ft (11.18m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-288/533_1257	2387/15	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-288/533_1257	2283/34	29.24	029.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/533_1257	2475/130	33.63	247.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/535_2116	1027/41	45.28	182.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/535_2116	1099/230	55.23	129.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/534_2123	2671/60	62.48	054.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/532_1304	1349/49	65.04	283.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/531_1311	2236/51	70.98	306.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/532_1304	1229/193	76.17	245.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/531_1311	2425/28	83.47	267.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/533_1257	2655/110	88.92	231.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/535_2116	932/169	93.09	191.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/530_1317	1369/126	100.81	301.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/537_2015	2001/6	143.42	125.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

36ft (12358_1, 12354_1)

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

11.2m (5161_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VERDAT - 12:Mean lower low water

Office Notes

Do not concur, currently charted as a 36 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. During office processing this DtoN was not deemed necessary to chart as a Rk. Chart a 36 ft. sounding in Latitude 41°08'21.638"N, Longitude 72°21'39.677"W.

1.5) DTON 5 - chart a dang. 12 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 10.8" N, 072° 21' 26.3" W

Least Depth: 3.72 m (= 12.20 ft = 2.034 fm = 2 fm 0.20 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.980 m ; **TVU (TPEv)** ±0.400 m

Timestamp: 2008-297.14:08:01.386 (10/23/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-297 / 008_1359

Profile/Beam: 7452/53

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8125 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 12.20ft(3.72m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-297/008_1359	7452/53	0.00	000.0	Primary
h11251/tj_3102_klein5000_sss100/2008-287/100_1531	0003	1.14	331.0	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1531	0004	21.10	188.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/007_1335	1226/15	30.13	285.2	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1531	0001	30.81	065.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/009_1408	1305/49	32.52	071.2	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1531	0002	32.91	106.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/009_1408	1164/229	34.19	111.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/007_1335	1391/89	37.78	342.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/010_1419	9520/235	49.21	164.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	16799/5	50.95	328.7	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	9704/12	57.98	242.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/007_1335	7/70	63.63	353.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/008_1359	7184/238	69.01	029.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/011_1431	1177/232	81.19	145.3	Secondary (grouped)

h11251/tj_3101_reson8125/2008-297/006_1326	8228/161	81.23	358.9	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1531	0015	92.37	351.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	10249/5	92.56	349.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/007_1335	710/28	96.90	195.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	10319/96	101.42	011.0	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1531	0005	116.59	232.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	9436/1	118.28	224.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

12ft (12358_1, 12354_1)

2fm (12300_1, 13006_1, 13003_1)

3.7m (5161_1)

S-57 Data

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

Attributes:

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.719 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a dangerous 12 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.6) DTON 6 - chart a dang. 29 Wk

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 07' 16.1" N, 072° 23' 01.3" W
Least Depth:	8.83 m (= 28.96 ft = 4.827 fm = 4 fm 4.96 ft)
TPU (±1.96σ):	**THU (TPEh)** ±0.986 m ; **TVU (TPEv)** ±0.401 m
Timestamp:	2008-279.19:22:11.054 (10/05/2008)
Survey Line:	h11251 / tj_3102_reson8101 / 2008-279 / 516_1914
Profile/Beam:	2167/10
Charts Affected:	12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Submerged Wreck. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 28.96ft (8.83m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-279/516_1914	2167/10	0.00	000.0	Primary

Hydrographer Recommendations

Wreck is that of a vessel measuring 4.3m wide, 20m long with a height of 2.85m.

Cartographically-Rounded Depth (Affected Charts):

29ft (12358_1, 12354_1)

4 ¾fm (12300_1, 13006_1, 13003_1)

8.8m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 2:dangerous wreck
	CONVIS - 2:not visual conspicuous
	QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 8.828 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a dangerous 29 Wk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted. Add the unidentified wreck to the AWOIS database.

1.7) DTON 7 - chart a dang. 38 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 19.4" N, 072° 21' 53.1" W

Least Depth: 11.64 m (= 38.19 ft = 6.364 fm = 6 fm 2.19 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.005 m ; **TVU (TPEv)** ±0.482 m

Timestamp: 2008-279.20:59:28.247 (10/05/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-279 / 539_2051

Profile/Beam: 3033/4

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 38.19ft(11.64m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-279/539_2051	3033/4	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-295/132_1741	3420/77	22.78	134.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/617_1652	217/97	40.26	200.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/132_1741	3324/213	40.43	040.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/542_2015	31/6	44.29	099.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/126_1650	635/15	54.92	344.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/126_1650	757/54	64.63	281.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/205_1310	9227/211	73.54	176.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/126_1650	570/13	78.14	006.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/538_1953	1198/28	84.94	319.5	Secondary (grouped)
ChartGPs - ENC US4NY1GM	Depth 42	91.36	350.8	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/126_1650	582/195	94.65	349.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/617_1652	314/17	103.12	230.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/617_1652	388/64	103.13	259.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/538_1953	1257/10	104.50	331.1	Secondary (grouped)

h11251/tj_3101_reson8125/2008-295/131_1252	884/180	119.07	291.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/131_1252	913/196	127.98	285.8	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/536_1604	1753/105	141.17	300.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/617_1652	393/4	145.49	245.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/131_1252	1080/91	157.39	256.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/536_1604	1575/120	168.13	271.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/617_1652	500/3	180.84	258.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/540_2038	466/6	183.76	233.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/534_2123	2336/60	198.72	286.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/535_2116	1338/121	210.81	269.7	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/617_1652	588/6	216.48	274.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

38ft (12358_1, 12354_1)

6 ¼fm (12300_1, 13006_1, 13003_1)

11.6m (5161_1)

S-57 Data

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

Attributes:

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 11.639 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a 38 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.8) DTON 8 - chart a dang. 8 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 06' 15.8" N, 072° 23' 23.4" W

Least Depth: 2.55 m (= 8.35 ft = 1.392 fm = 1 fm 2.35 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.980 m ; **TVU (TPEv)** ±0.388 m

Timestamp: 2008-287.17:38:48.714 (10/13/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-287 / 100_1648

Profile/Beam: 33210/83

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 8.35ft(2.55m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-287/100_1648	33210/83	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-287/100_1648	33206/74	1.17	246.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	33104/1	27.13	226.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1739	226/17	52.27	184.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1739	217/1	59.78	178.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	32914/69	79.12	213.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1739	375/95	93.61	204.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

8ft (12358_1, 12354_1)

1 ¼fm (12300_1, 13006_1, 13003_1)

2.5m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 2.546 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a dangerous 8 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.9) DTON 10 - 6 ft. shoal on Orient Shoal

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 45.7" N, 072° 19' 53.0" W

Least Depth: 1.92 m (= 6.29 ft = 1.049 fm = 1 fm 0.29 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.982 m ; **TVU (TPEv)** ±0.395 m

Timestamp: 2008-288.12:44:20.995 (10/14/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-288 / 473_1243

Profile/Beam: 581/2

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 6.29ft(1.92m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-288/473_1243	581/2	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-288/474_1353	791/4	20.24	220.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/471_1345	4321/1	21.53	039.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/469_1234	4556/2	74.23	040.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/476_1402	3643/1	94.74	139.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/477_1252	3858/1	100.07	148.7	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/479_1419	1324/3	106.59	160.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/473_1243	936/1	117.06	088.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/081_1343	257/2	123.97	044.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/479_1419	1019/91	127.50	195.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/471_1345	3872/1	133.75	081.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-295/064_1652	3944/2	145.98	173.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/469_1234	4127/1	165.00	070.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/151_1341	764/1	169.81	044.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/482_1444	1050/1	173.38	195.6	Secondary (grouped)

h11251/tj_3102_reson8101/2008-297/079_1658	2280/1	183.49	177.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/h11251_3101_dp	2/1	183.54	041.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/483_1428	2938/9	212.13	195.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-295/085_1942	588/4	220.72	042.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/485_1309	2928/3	268.35	200.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/503_1434	762/1	285.13	199.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/546_1315	814/1	325.13	198.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/089_1553	54/3	386.28	201.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

6ft (12358_1, 12354_1)

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

1.9m (5161_1)

S-57 Data

Geo object 1: Sand waves (SNDWAV)

Attributes: INFORM - Orient Shoal

Geo object 2: Sounding (SOUNDG)

Attributes: QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

Concur w/clarification. Delete the charted dangerous 6 Rk. This is the shoalest depth of Orient Shoal, chart a shoal sounding of 6 ft. in Latitude 41°08'45.740"N, Longitude 72°19'52.966"W. Refer to AWOIS Item #12417 for charting recommendations of Orient Shoal. See Evaluation Report for original DtoN report sent from the Atlantic Hydrographic Branch.

resubmitted as DtoN modification #1 on 3/24/2009

1.10) DTON 11 - 7 ft. shoal on Orient Shoal

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 51.1" N, 072° 19' 44.6" W

Least Depth: 2.31 m (= 7.58 ft = 1.264 fm = 1 fm 1.58 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.983 m ; **TVU (TPEv)** ±0.404 m

Timestamp: 2008-288.14:45:06.159 (10/14/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-288 / 482_1444

Profile/Beam: 646/1

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 7.58ft(2.31m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-288/482_1444	646/1	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-288/483_1428	3502/11	41.75	204.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/087_1547	1052/3	43.05	024.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/485_1309	3507/99	73.24	202.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/485_1309	3574/2	100.19	202.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/476_1402	4377/1	112.89	038.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-288/477_1252	4427/4	133.92	056.7	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/087_1547	102/1	136.43	201.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/088_1550	1527/101	193.41	208.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-295/161_1454	877/2	261.29	221.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/149_1703	891/6	310.38	218.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

7ft (12358_1, 12354_1)

1 ¼fm (12300_1, 13006_1, 13003_1)

2.3m (5161_1)

S-57 Data

Geo object 1:	Sand waves (SNDWAV)
Attributes:	INFORM - Orient Shoal
Geo object 2:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam
	VERDAT - 12:Mean lower low water

Office Notes

Concur w/clarification. Delete the charted dangerous 7 Rk. This is a shoal depth on Orient Shoal, chart a shoal sounding of 7 ft. in Latitude 41°08'51.099"N, Longitude 72°19'44.607"W. Refer to AWOIS Item #12417 for charting recommendations of Orient Shoal. See Evaluation Report for original DtoN report sent from the Atlantic Hydrographic Branch.

resubmitted as DtoN modification #1 on 3/24/2009

1.11) DTON 12 - chart a dang. 6 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 07' 16.6" N, 072° 22' 17.3" W
Least Depth:	1.78 m (= 5.85 ft = 0.975 fm = 0 fm 5.85 ft)
TPU (±1.96σ):	**THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.389 m
Timestamp:	2008-299.14:26:37.976 (10/25/2008)
Survey Line:	h11251 / tj_3102_reson8101 / 2008-299 / 018_1352
Profile/Beam:	17147/7
Charts Affected:	12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Foul Area, Needs to be moved. Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 5.85ft(1.78m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-299/018_1352	17147/7	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

6ft (12358_1, 12354_1)

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

1.8m (5161_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

Concur, currently charted as a dangerous 6 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.12) DTON 13 - chart a dang. 7 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 07' 10.0" N, 072° 22' 38.2" W

Least Depth: 2.26 m (= 7.42 ft = 1.236 fm = 1 fm 1.42 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.980 m ; **TVU (TPEv)** ±0.389 m

Timestamp: 2008-299.15:48:03.479 (10/25/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-299 / 075_1542

Profile/Beam: 190/35

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 7.42ft (2.26m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-299/075_1542	190/35	0.00	000.0	Primary
h11251/tj_3102_klein5000_sss100/2008-287/100_1530	0001	3.52	061.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/075_1542	262/7	22.52	005.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/396_1428	14431/219	23.92	176.8	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/397_1413	1702/222	40.83	176.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/396_1428	14826/236	41.97	067.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	25408/1	43.14	260.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	25780/3	56.13	023.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/122_1546	212/72	75.51	245.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1739	6289/1	75.90	219.7	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1530	0026	83.67	221.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/396_1428	14025/229	86.05	205.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/396_1428	15257/184	91.52	045.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/183_1548	716/1	95.98	235.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/398_1348	14571/6	97.54	062.0	Secondary (grouped)

h11251/tj_3102_reson8101/2008-287/100_1739	6500/5	142.53	233.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

7ft (12358_1, 12354_1)

1 ¼fm (12300_1, 13006_1, 13003_1)

2.3m (5161_1)

S-57 Data

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

Attributes:

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 2.261 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a dangerous 7 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.13) DTON 14 - chart a dang. 36 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 33.5" N, 072° 21' 36.7" W

Least Depth: 11.19 m (= 36.70 ft = 6.117 fm = 6 fm 0.70 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.066 m ; **TVU (TPEv)** ±0.803 m

Timestamp: 2008-280.20:22:59.071 (10/06/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-280 / 537_2015

Profile/Beam: 2455/1

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8125 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 36.70ft (11.19m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-280/537_2015	2455/1	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-297/125_1918	311/38	8.19	316.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/125_1918	288/18	12.66	050.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/125_1918	319/9	16.45	146.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/125_1918	271/9	27.10	075.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/125_1918	389/7	47.96	193.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/125_1918	267/96	51.55	328.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/205_1310	7844/123	52.17	287.1	Secondary (grouped)
h11251/tj_s222_reson7125_port/2008-268/004_1515	11937/195	66.52	154.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/539_2051	3955/7	69.66	069.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/538_1953	403/8	78.56	322.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/131_1252	1982/200	83.94	329.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/131_1252	1979/230	94.31	327.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/131_1252	1900/127	97.28	352.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/539_2051	3927/1	112.16	068.6	Secondary (grouped)

h11251/tj_3102_reson8101/2008-280/537_2015	2559/5	112.27	229.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/536_1604	387/79	112.32	287.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/538_1953	501/11	112.55	003.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/205_1310	8198/204	115.11	035.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/536_1604	612/122	115.97	336.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/534_2123	3733/5	131.02	313.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/205_1310	7597/68	134.01	252.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-287/534_2123	4027/1	158.18	270.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

36ft (12358_1, 12354_1)

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

11.2m (5161_1)

S-57 Data

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

Attributes:

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 11.186 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur, currently charted as a dangerous 36 Rk on chart 12358, 20th Ed., Apr./08, Corrected through NM Apr. 12/08, Corrected through LNM Apr. 1/08. Retain as charted.

1.14) DTON 15 - south end of Orient Shoal, chart 10 ft. shoal sndg.

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 38.4" N, 072° 20' 04.8" W

Least Depth: 3.17 m (= 10.41 ft = 1.736 fm = 1 fm 4.41 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.389 m

Timestamp: 2008-295.20:18:01.950 (10/21/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-295 / 089_2016

Profile/Beam: 1012/79

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and Final zoning were applied and resolved the sounding to 10.41ft(3.17m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-295/089_2016	1012/79	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-295/087_2008	741/10	52.99	207.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/h11251_3101_dp	1/1	88.33	207.6	Secondary (grouped)

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

10ft (12358_1, 12354_1)

1 ¾fm (12300_1, 13006_1, 13003_1)

3.2m (5161_1)

S-57 Data

Geo object 1: Sand waves (SNDWAV)

Attributes: INFORM - Orient Shoal

Geo object 2: Sounding (SOUNDG)

Attributes: QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

Do not concur. Delete the charted dangerous 10 Rk. This is the south end point of Orient Shoal, chart a shoal sounding of 10 ft. in Latitude 41°08'38.356"N, Longitude 72°20'04.774"W. Refer to AWOIS Item #12417 for charting recommendations of Orient Shoal. See Evaluation Report for original DtoN report sent from the Atlantic Hydrographic Branch.

1.15) DTON 16 - north end of Orient Shoal, chart 31 ft. shoal sndg.

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 09' 07.2" N, 072° 19' 45.4" W

Least Depth: 9.65 m (= 31.66 ft = 5.277 fm = 5 fm 1.66 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.989 m ; **TVU (TPEv)** ±0.415 m

Timestamp: 2008-295.17:46:55.979 (10/21/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-295 / 169_1745

Profile/Beam: 491/96

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted Dangerous Submerged Rock. The sounding was acquired by Reson 8101 multibeam and corrected to MLLW using observed water levels. Final Verified Water Levels and final zoning were applied and resolved the sounding to 31.66ft(9.65m).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-295/169_1745	491/96	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-295/169_1745	217/10	148.90	261.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-295/170_1753	3004/14	262.61	241.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-281/599_2109	1171/1	272.11	235.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

31ft (12358_1, 12354_1)

5 ¼fm (12300_1, 13006_1, 13003_1)

9.7m (5161_1)

S-57 Data

Geo object 1:	Sand waves (SNDWAV)
Attributes:	INFORM - Orient Shoal
Geo object 2:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam
	VERDAT - 12:Mean lower low water

Office Notes

Do not concur. Delete the charted 31 Rk. This is the north end point of Orient Shoal, chart a shoal sounding of 31 ft. in Latitude 41°09'07.245"N, Longitude 72°19'45.377"W. Refer to AWOIS Item #12417 for charting recommendations of Orient Shoal. See Evaluation Report for original DtoN report sent from the Atlantic Hydrographic Branch.

1.16) 228/1 - DTON 9 replacement - chart a dang. 4 Rk

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 08' 34.2" N, 072° 20' 23.6" W

Least Depth: 1.33 m (= 4.35 ft = 0.725 fm = 0 fm 4.35 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.390 m

Timestamp: 2008-297.15:10:51.529 (10/23/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-297 / 093_1510

Profile/Beam: 228/1

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-297/093_1510	228/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

4ft (12358_1, 12354_1)

0 ¾fm (12300_1, 13006_1, 13003_1)

1.3m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 1.325 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart a dang. Rk with a depth of 4 ft. in Latitude 41°08'34.172"N, Longitude 72°20'23.586"W. See Evaluation Report for original DtoN report sent from the Atlantic Hydrographic Branch.

Submitted by AHB as DtoN_9_replacement 3/24/2009

Appendix II

Survey Features Report

1. **Charted Features**
2. **Uncharted Features**
3. **AWOIS Items**

H11251 Features Report

Registry Number: H11251

State: New York

Locality: Eastern Long Island Sound

Sub-locality: Truman Beach to Inlet point

Project Number: OPR-B370-TJ-08

Survey Dates: 10/05/2008 - 10/26/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12358	20th	04/01/2008	1:40,000 (12358_1)	NGA NTM: None (06/07/2008) USCG LNM: None (06/03/2008) CHS NTM: None (04/25/2008)
12354	42nd	12/01/2006	1:80,000 (12354_1)	USCG LNM: 04/29/2008 (06/03/2008) CHS NTM: None (04/25/2008) NGA NTM: 12/04/1999 (06/07/2008)
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	Parker Rk - revise position to 12 Rk	Rock	3.59 m	41° 06' 28.3" N	072° 23' 16.0" W	---
1.2	Charted 53ft disproved, chart 41 Rk	Rock	12.71 m	41° 07' 56.2" N	072° 22' 19.0" W	---
1.3	Charted 65ft disproved, chart 54 sndg	Shoal	16.57 m	41° 09' 23.8" N	072° 19' 46.7" W	---
1.4	Charted 18ft disproved	Shoal	6.77 m	41° 07' 25.9" N	072° 22' 29.3" W	---
2.1	1632/102 - chart a 14 ft. Rk	Rock	4.41 m	41° 07' 38.3" N	072° 21' 53.5" W	---
2.2	150/32 - chart a 14 ft. Rk	Rock	4.26 m	41° 08' 39.3" N	072° 20' 29.6" W	---
2.3	851/137 - chart a 17 ft. Rk	Rock	5.35 m	41° 08' 25.6" N	072° 21' 23.5" W	---
2.4	77/148 - chart a 35 ft. Rk	Rock	11.23 m	41° 09' 14.4" N	072° 19' 15.6" W	---
2.5	255/128 - chart a 24 ft. Rk	Rock	7.43 m	41° 08' 29.5" N	072° 21' 20.7" W	---

2.6	295/234 - chart a 60 ft. Obstn	Obstruction	18.51 m	41° 07' 20.2" N	072° 24' 13.2" W	---
2.7	340/10 - chart a 16ft. sndg, add sandwaves note	Shoal	4.84 m	41° 08' 39.1" N	072° 20' 56.9" W	---
2.8	2059/3 - chart a 46 ft. sounding	Shoal	14.21 m	41° 08' 57.2" N	072° 20' 57.4" W	---
3.1	18 ft. sounding - disproved	AWOIS	[no data]	[no data]	[no data]	---
3.2	AWOIS #12417 - Orient Shoal	Shoal	1.95 m	41° 08' 46.4" N	072° 19' 57.2" W	12417
3.3	AWOIS #12415 - Wk PA/ Chart 55-ft Rk	Rock	16.96 m	41° 09' 28.4" N	072° 19' 20.2" W	12415

1 - Charted Features

1.1) Parker Rk - revise position to 12 Rk

Survey Summary

Survey Position: 41° 06' 28.3" N, 072° 23' 16.0" W

Least Depth: 3.59 m (= 11.77 ft = 1.962 fm = 1 fm 5.77 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.983 m ; **TVU (TPEv)** ±0.396 m

Timestamp: 2008-287.17:41:59.155 (10/13/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-287 / 100_1739

Profile/Beam: 1355/4

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Charted 14 ft sounding disproved by MB and SSS, instead an uncharted rock with a 12ft least depth found. Sounding corrected to MLLW using verified water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-287/100_1739	1355/4	0.00	000.0	Primary
h11251/tj_3102_klein5000_sss100/2008-287/100_1529	0009	2.58	085.4	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-281/120_1703	0002	8.76	106.7	Secondary (grouped)
ChartGPs - ENC US4NY1GM	Danger 1	33.48	149.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/112_1834	1004/6	34.74	094.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1451	5863/100	46.70	134.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/010_1933	6790/159	51.16	057.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/112_1834	1091/123	51.19	076.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	31321/5	61.46	135.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/116_1832	325/131	63.32	104.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1451	5574/18	71.01	216.3	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-281/120_1703	0003	71.02	216.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/055_1924	811/172	71.81	067.1	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/010_1933	6949/202	74.15	050.1	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1529	0010	77.17	142.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/012_1913	5631/94	81.91	145.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	31982/11	84.41	349.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	32088/101	98.91	013.9	Secondary (grouped)

h11251/tj_3102_reson8101/2008-287/100_1739	2091/96	99.82	208.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/012_1913	5433/2	104.54	167.8	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/009_1943	1105/240	108.46	203.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/112_1834	1419/230	115.02	046.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/112_1834	1420/228	115.10	046.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/010_1933	7263/6	116.63	031.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/116_1832	1104/40	118.84	192.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1739	2151/11	121.56	200.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1451	6680/92	121.67	007.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/012_1913	6273/180	124.30	061.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/055_1924	492/240	125.92	044.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/010_1933	7502/77	157.12	032.2	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1529	0008	163.39	026.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/115_1505	746/94	167.44	022.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1739	839/3	169.51	022.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/115_1505	928/100	172.30	029.8	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/111_1829	656/217	175.88	044.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	32439/18	201.85	012.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1739	733/99	206.07	015.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/115_1505	1135/4	212.41	021.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

12ft (12358_1, 12354_1)

2fm (12300_1, 13006_1, 13003_1)

3.6m (5161_1)

S-57 Data

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

Attributes: OBJNAM - Parker Rk

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.589 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur, revise the charted position of Parker Rk to the dang. Rk with depth of 12 ft. in Latitude 41°06'28.325"N, Longitude 72°23'16.042"W.

1.2) Charted 53ft disproved, chart 41 Rk

Survey Summary

Survey Position: 41° 07' 56.2" N, 072° 22' 19.0" W

Least Depth: 12.71 m (= 41.70 ft = 6.950 fm = 6 fm 5.70 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.013 m ; **TVU (TPEv)** ±0.528 m

Timestamp: 2008-279.20:23:05.534 (10/05/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-279 / 542_2015

Profile/Beam: 2042/3

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Charted 53 ft sounding disproved by MB, instead an uncharted rock with a 41 ft least depth found. Sounding corrected to MLLW using verified water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-279/542_2015	2042/3	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-295/132_1741	1435/217	38.68	275.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/541_2028	828/1	56.58	127.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/541_2028	860/1	58.67	151.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/541_2028	739/12	59.14	051.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/134_1726	1212/229	62.68	081.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/542_2015	1900/10	67.20	205.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/541_2028	906/1	77.64	173.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/135_1714	1627/212	92.78	109.1	Secondary (grouped)
ChartGPs - ENC US4NY1GM	Depth 39	96.06	074.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/542_2015	2183/99	109.64	098.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/542_2015	2199/100	120.30	092.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-282/544_1938	985/11	129.68	087.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

41ft (12358_1, 12354_1)

7fm (12300_1, 13006_1, 13003_1)

12.7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 12.711 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur, chart a submerged Rk with a depth of 41 ft. in Latitude 41°07'56.248"N, Longitude 72°22'18.981"W.

1.3) Charted 65ft disproved, chart 54 sndg

Survey Summary

Survey Position: 41° 09' 23.8" N, 072° 19' 46.7" W

Least Depth: 16.57 m (= 54.35 ft = 9.058 fm = 9 fm 0.35 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.987 m ; **TVU (TPEv)** ±0.405 m

Timestamp: 2008-279.15:32:12.608 (10/05/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-279 / 615_1531

Profile/Beam: 130/22

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Charted 65 ft sounding disproved by MB, instead an unchartd rock with a 54 ft least depth found. Sounding corrected to MLLW using verified water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-279/615_1531	130/22	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-280/627_2019	941/14	41.88	148.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-280/627_2019	894/53	60.07	191.9	Secondary (grouped)
ChartGPs - ENC US4NY1GM	Depth 68	81.34	243.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/058_1741	496/1	102.65	279.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-280/624_2042	2078/19	168.85	030.7	Secondary (grouped)
h11251/tj_s222_reson7125_port/2008-268/013_1352	4450/60	172.29	131.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-280/622_2056	1207/232	225.38	287.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

54ft (12358_1, 12354_1)

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

16.6m (5161_1)

S-57 Data

Geo object 1:	Sand waves (SNDWAV)
Attributes:	INFORM - northern end of Orient Shoal sandwaves
Geo object 2:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam
	VERDAT - 12:Mean lower low water

Office Notes

Do not concur. This is the extreme northern end of Orient Shoal. Chart a 54 ft. sounding and refer to AWOIS Item #12417 for charting recommendations of Orient Shoal.

1.4) Charted 18ft disproved

Survey Summary

Survey Position: 41° 07' 25.9" N, 072° 22' 29.3" W

Least Depth: 6.77 m (= 22.20 ft = 3.701 fm = 3 fm 4.20 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.401 m

Timestamp: 2008-295.18:44:08.004 (10/21/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-295 / 023_1840

Profile/Beam: 2522/149

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Charted 18 ft, disproved with MB. Corrected soundings to MLLW using verified water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-295/023_1840	2522/149	0.00	000.0	Primary
ChartGPs - ENC US4NY1GM	Depth 37	38.05	316.9	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: INFORM - 18 ft. shoal sounding disproven.

Geo object 2: Sounding (SOUNDG)

Attributes: QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

Concur, chart present survey soundings.

2 - New Features

2.1) 1632/102 - chart a 14 ft. Rk

Survey Summary

Survey Position: 41° 07' 38.3" N, 072° 21' 53.5" W

Least Depth: 4.41 m (= 14.46 ft = 2.410 fm = 2 fm 2.46 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.980 m ; **TVU (TPEv)** ±0.400 m

Timestamp: 2008-297.16:33:21.528 (10/23/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-297 / 169_1632

Profile/Beam: 1632/102

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Chart as survey sounding. Not considered Group 2 Object.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-297/169_1632	1632/102	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-297/169_1632	1849/40	43.37	214.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/003_1257	4116/73	52.27	243.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/001_1241	1984/114	67.82	309.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	13980/100	77.02	272.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/007_1335	5897/196	88.68	128.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	20932/99	90.22	250.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	14210/87	90.30	329.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	20933/96	97.49	255.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	21076/9	100.64	283.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	14113/1	104.49	304.4	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1530	0017	106.79	307.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/002_1245	2199/230	108.29	008.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/100_1648	21332/1	109.07	328.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/005_1317	4509/159	127.88	202.5	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/003_1257	3781/32	130.14	228.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	14350/6	139.18	343.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/001_1241	1404/18	162.65	243.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	14550/19	179.71	003.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

14ft (12358_1, 12354_1)

2 ¼fm (12300_1, 13006_1, 13003_1)

4.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	OBJNAM - DTON2
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 4.407 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Chart a Rk with a depth of 14 ft. in Latitude 41°07'38.290"N, Longitude 72°21'53.526"W.

2.2) 150/32 - chart a 14 ft. Rk

Survey Summary

Survey Position: 41° 08' 39.3" N, 072° 20' 29.6" W

Least Depth: 4.26 m (= 13.99 ft = 2.331 fm = 2 fm 1.99 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.980 m ; **TVU (TPEv)** ±0.390 m

Timestamp: 2008-297.13:58:52.348 (10/23/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-297 / 024_1358

Profile/Beam: 150/32

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted rock with a least depth sounding of 13.99ft (4.26m). Least depth acquired by Reson 8125 and corrected to MLLW using final water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-297/024_1358	150/32	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-297/026_1406	190/43	55.11	314.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/156_1400	196/1	56.76	245.7	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/024_1358	315/5	60.66	073.3	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/463_1843	3242/108	60.99	098.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/033_1357	150/3	61.19	159.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/459_1956	4399/87	64.29	347.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/025_1402	79/20	66.74	274.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/460_1921	5641/126	68.82	044.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/031_1355	367/1	70.98	120.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/027_1404	53/1	71.67	283.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/033_1357	73/9	77.77	139.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/023_1514	462/36	78.81	346.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/465_1734	3810/37	82.14	228.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/026_1406	93/38	85.67	300.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/461_1907	2632/114	96.92	072.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/031_1355	442/13	99.49	118.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/464_1722	8067/107	100.47	103.0	Secondary (grouped)

h11251/tj_3102_reson8101/2008-297/029_1349	18/3	101.12	236.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/461_1907	3319/138	106.82	284.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/466_2023	4897/2	109.48	247.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/461_1907	3367/3	118.17	277.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-287/467_2033	2554/95	127.99	237.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/028_1352	295/38	128.50	236.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/458_2009	5645/217	128.65	051.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/461_1907	3481/228	153.26	282.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/463_1843	4139/37	156.97	261.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

14ft (12358_1, 12354_1)

2 ¼fm (12300_1, 13006_1, 13003_1)

4.3m (5161_1)

S-57 Data

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

Attributes:

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.263 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a Rk with a depth of 14 ft. in Latitude 41°08'39.258" N, Longitude 72°20'29.581"W.

2.3) 851/137 - chart a 17 ft. Rk

Survey Summary

Survey Position: 41° 08' 25.6" N, 072° 21' 23.5" W

Least Depth: 5.35 m (= 17.54 ft = 2.924 fm = 2 fm 5.54 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.980 m ; **TVU (TPEv)** ±0.401 m

Timestamp: 2008-288.13:50:02.843 (10/14/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-288 / 398_1348

Profile/Beam: 851/137

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted rock with a least depth sounding of 17.54 ft (5.35m). Least depth acquired by Reson 8125 and corrected to MLLW using final water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-288/398_1348	851/137	0.00	000.0	Primary
h11251/tj_3102_klein5000_sss100/2008-281/041_1805	0001	2.14	196.4	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-281/115_1746	0002	2.27	123.7	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-281/114_2059	0002	4.41	306.6	Secondary (grouped)
h11251/tj_3102_klein5000_sss100/2008-287/100_1531	0009	13.20	320.7	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/406_1338	674/178	28.80	113.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/049_2010	9393/6	38.62	304.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-299/018_1352	7667/101	55.44	294.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/398_1348	1093/95	61.20	034.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-295/049_2010	9312/189	63.79	326.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/527_1334	2923/111	65.31	087.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-297/015_1518	1531/202	79.31	336.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12358_1, 12354_1)

2 ¾fm (12300_1, 13006_1, 13003_1)

5.3m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 5.347 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a Rk with a depth of 17 ft. in Latitude 41°08'25.550"N, Longitude 72°21'23.492"W.

2.4) 77/148 - chart a 35 ft. Rk

Survey Summary

Survey Position: 41° 09' 14.4" N, 072° 19' 15.6" W

Least Depth: 11.23 m (= 36.83 ft = 6.138 fm = 6 fm 0.83 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.982 m ; **TVU (TPEv)** ±0.404 m

Timestamp: 2008-282.14:39:52.050 (10/08/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-282 / 593_1439

Profile/Beam: 77/148

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted rock with a least depth sounding of 36.83ft (11.23m). Least depth acquired by Reson 8125 and corrected to MLLW using final water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-282/593_1439	77/148	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-282/593_1439	87/240	16.14	161.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

37ft (12358_1, 12354_1)

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

11.2m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - 11.225 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Junction analysis with survey H11446 revealed a shoaler rock 16 meters to the north. Chart a dangerous Rk with a depth of 35 ft. (10.805m) in Latitude 41°09'14.920"N, Longitude 72°19'15.765"W.

2.5) 255/128 - chart a 24 ft. Rk

Survey Summary

Survey Position: 41° 08' 29.5" N, 072° 21' 20.7" W

Least Depth: 7.43 m (= 24.36 ft = 4.061 fm = 4 fm 0.36 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.402 m

Timestamp: 2008-288.13:39:15.818 (10/14/2008)

Survey Line: h11251 / tj_3101_reson8125 / 2008-288 / 406_1338

Profile/Beam: 255/128

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Chart as survey sounding. Not considered Group 2 Object.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3101_reson8125/2008-288/406_1338	255/128	0.00	000.0	Primary
h11251/tj_3101_reson8125/2008-288/406_1338	337/3	31.36	014.8	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/398_1348	321/31	32.69	281.8	Secondary (grouped)
h11251/tj_3101_reson8125/2008-288/406_1338	354/172	35.78	053.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

24ft (12358_1, 12354_1)

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

7.4m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 7.426 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Chart a Rk with a depth of 24 ft. in Latitude 41°08'29.504"N, Longitude 72°21'20.665"W.

2.6) 295/234 - chart a 60 ft. Obstn

Survey Summary

Survey Position: 41° 07' 20.2" N, 072° 24' 13.2" W

Least Depth: 18.51 m (= 60.73 ft = 10.121 fm = 10 fm 0.73 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.016 m ; **TVU (TPEv)** ±0.411 m

Timestamp: 2008-300.14:12:24.440 (10/26/2008)

Survey Line: h11251 / tj_s222_reson7125_port / 2008-300 / 059_1412

Profile/Beam: 295/234

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted rock with a least depth sounding of 60.73ft (18.51m). Least depth acquired by Reson 7125 and corrected to MLLW using final water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_s222_reson7125_port/2008-300/059_1412	295/234	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

60ft (12358_1, 12354_1)

10fm (12300_1, 13006_1, 13003_1)

18.5m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 18.510 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur w/clarification. Object is unidentifiable, chart an Obstn with a depth of 60 ft. in Latitude 41°07'20.151"N, Longitude 72°24'13.199"W.

2.7) 340/10 - chart a 16ft. sndg, add sandwaves note

Survey Summary

Survey Position: 41° 08' 39.1" N, 072° 20' 56.9" W

Least Depth: 4.84 m (= 15.86 ft = 2.644 fm = 2 fm 3.86 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.982 m ; **TVU (TPEv)** ±0.391 m

Timestamp: 2008-297.19:57:15.941 (10/23/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-297 / 062_1956

Profile/Beam: 340/10

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

There is a uncharted rock with a 15.86 ft least depth found 205 meters away and a bearing of 49.0° to the disproved charted 18ft (AWOIS 12416). Soundings corrected to MLLW using verified water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-297/062_1956	340/10	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-297/060_1959	2082/2	67.79	016.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-282/459_1956	806/145	93.29	035.6	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

16ft (12358_1, 12354_1)

2 ½fm (12300_1, 13006_1, 13003_1)

4.8m (5161_1)

S-57 Data

Geo object 1: Sand waves (SNDWAV)

Geo object 2: Sounding (SOUNDG)

Attributes: QUASOU - 1:depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

Do not concur. Sounding is on a sandwave crest. Chart a sounding with a depth of 16 ft. in Latitude 41°08'39.111"N, Longitude 72°20'56.932"W and add sandwave notation.

2.8) 2059/3 - chart a 46 ft. sounding

Survey Summary

Survey Position: 41° 08' 57.2" N, 072° 20' 57.4" W

Least Depth: 14.21 m (= 46.60 ft = 7.767 fm = 7 fm 4.60 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.020 m ; **TVU (TPEv)** ±0.554 m

Timestamp: 2008-297.19:03:49.867 (10/23/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-297 / 124_1856

Profile/Beam: 2059/3

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted rock with a least depth sounding of 46.60ft(14.21m). Least depth acquired by on Reson 8101 and corrected to MLLW using final water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-297/124_1856	2059/3	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-297/124_1856	2085/8	31.01	250.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/073_1922	2251/86	34.53	170.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/072_1906	406/6	43.99	289.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/073_1922	2163/41	64.76	119.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/585_2036	1137/7	94.59	068.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/073_1922	2249/5	95.44	149.9	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/583_2050	1223/7	104.08	018.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/124_1856	2238/8	109.76	231.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/584_2042	285/13	113.02	267.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/068_1810	2092/5	113.64	333.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/073_1922	1983/14	122.72	085.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/124_1856	2301/11	131.61	233.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/124_1856	1792/2	131.85	051.6	Secondary (grouped)
h11251/tj_3101_reson8125/2008-300/039_1458	499/59	134.15	314.7	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/072_1906	183/10	134.44	241.2	Secondary (grouped)
h11251/tj_3101_reson8125/2008-300/039_1458	373/95	136.12	298.6	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/068_1810	2052/13	139.42	337.5	Secondary (grouped)

h11251/tj_3102_reson8101/2008-297/073_1922	2415/5	140.80	182.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-282/582_1810	2021/21	147.69	351.3	Secondary (grouped)
h11251/tj_s222_reson7125_port/2008-268/005_1637	12600/180	156.08	113.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/124_1856	2280/100	163.08	264.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/068_1810	1899/3	166.05	005.3	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/073_1922	1955/1	168.95	091.7	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/072_1906	69/3	170.56	242.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-279/619_1558	339/4	192.96	077.7	Secondary (grouped)
h11251/tj_3102_reson8101/2008-282/582_1810	2407/96	193.22	287.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/073_1922	1886/1	195.69	083.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/071_1833	463/3	201.56	271.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/124_1856	1576/92	240.46	027.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/124_1856	1547/13	244.55	040.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-280/583_2050	976/6	275.42	035.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

46ft (12358_1, 12354_1)

7 ¾fm (12300_1, 13006_1, 13003_1)

14.2m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: QUASOU - 1:depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

Concur w/clarification. Chart a sounding with a depth of 46 ft. in Latitude 41°08'57.234"N, Longitude 72°20'57.444"W.

3 - AWOIS Features

3.1) AWOIS #12416 - 18 ft. sounding - disproved

No Primary Survey Feature for this AWOIS Item

Search Position: 41° 08' 43.5" N, 072° 20' 50.3" W

Historical Depth: 5.49 m

Search Radius: 100

Search Technique: S2,MB

Technique Notes: [None]

History Notes:

H01590b (1883)-- 18 FT LEAD-LINE DEPTH NOW CHARTED IN POSITION: 41°08'43.50" N 072°20'50.27" W [NAD 83] [ENTERED 4/19/04 JCM]

Survey Summary

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Disproved AWOIS 12416, a charted 18 ft, with MB and SSS. Soundings corrected to MLLW using verified water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS_B370-TJ-08	AWOIS # 12416	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: INFORM - AWOIS Item #12416 - charted 18 ft. shoal sounding is considered disproven.

Office Notes

Concur. AWOIS Item #12416, charted 18 ft. shoal sounding is considered disproved. Recommend to chart present survey soundings and update the AWOIS database with H11251 results.

3.2) AWOIS #12417 - Orient Shoal

Primary Feature for AWOIS Item #12417

Search Position: 41° 08' 48.5" N, 072° 19' 58.7" W

Historical Depth: 2.13 m

Search Radius: 100

Search Technique: S2,MB

Technique Notes: Search not required in less than 4 meters water depth

History Notes:

H01590b (1883) -- 7 FT LEAD-LINE DEPTH NOW CHARTED IN POSITION: 41°08'48.52" N 072°19'58.72" W [NAD 83] [ENTERED 4/19/04 JCM]

Survey Summary

Survey Position: 41° 08' 46.4" N, 072° 19' 57.2" W

Least Depth: 1.95 m (= 6.41 ft = 1.068 fm = 1 fm 0.41 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.983 m ; **TVU (TPEv)** ±0.401 m

Timestamp: 2008-288.14:12:45.120 (10/14/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-288 / 177_1410

Profile/Beam: 1186/1

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Disproved AWOIS 12417, a charted 7 ft sounding, with MB and SSS. Soundings corrected to MLLW using verified water levels and final zoning was applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-288/177_1410	1186/1	0.00	000.0	Primary
AWOIS_B370-TJ-08	AWOIS # 12417	74.51	151.2	Secondary (grouped)
ChartGPs - ENC US4NY1GM	Depth 66	142.53	132.7	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: INFORM - AWOIS Item 12417, Orient Shoal - add area limits for sandwaves to properly map the extents of Orient Shoal.

Office Notes

Do not concur. Orient Shoal has migrated to the East and Northeast. Revise the 12-ft and 18-ft. depth curves within the common area of Orient Shoal based on present survey data. Recommend to add area limits for sandwaves to properly portray the extents of Orient Shoal.

3.3) AWOIS #12415 - Wk PA/ Chart 55-ft Rk

Primary Feature for AWOIS Item #12415

Search Position: 41° 09' 30.4" N, 072° 19' 28.3" W

Historical Depth: [None]

Search Radius: 200

Search Technique: S2,MB

Technique Notes: [None]

History Notes:

LNM 12/91 CGD1 (3/20/91) -- WRECK, POSITION APPROXIMATE, NEAR: 41°09'30.40" N 072°19'28.30" W [NAD 83] [ENTERED 4/19/04 JCM]

Survey Summary

Survey Position: 41° 09' 28.4" N, 072° 19' 20.2" W

Least Depth: 16.96 m (= 55.65 ft = 9.275 fm = 9 fm 1.65 ft)

TPU (±1.96σ): **THU (TPEh)** ±0.999 m ; **TVU (TPEv)** ±0.431 m

Timestamp: 2008-297.17:29:59.075 (10/23/2008)

Survey Line: h11251 / tj_3102_reson8101 / 2008-297 / 055_1729

Profile/Beam: 114/10

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12415, a charted wreck PA, was covered by MB and SSS, but only 80% of the required 200 meter search radius was covered. Soundings corrected to MLLW using verified water levels and final zoning was applied. Retain as charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11251/tj_3102_reson8101/2008-297/055_1729	114/10	0.00	000.0	Primary
h11251/tj_3102_reson8101/2008-297/055_1729	92/6	18.62	095.0	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/055_1729	80/1	43.40	118.8	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/056_1735	346/98	82.55	102.7	Secondary (grouped)
h11251/tj_s222_reson7125_port/2008-268/012_1714	802/256	97.49	173.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-280/625_2029	389/105	102.97	124.9	Secondary (grouped)
h11251/tj_3101_reson8125/2008-280/626_2024	1393/240	122.05	143.5	Secondary (grouped)

h11251/tj_3102_reson8101/2008-297/056_1735	537/19	123.21	178.7	Secondary (grouped)
h11251/tj_s222_reson7125_port/2008-268/012_1714	1104/98	124.00	109.4	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/056_1735	337/26	133.40	119.9	Secondary (grouped)
h11251/tj_s222_reson7125_port/2008-268/013_1352	5905/241	150.65	122.1	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/056_1735	646/27	154.28	205.0	Secondary (grouped)
h11251/tj_3101_reson8125/2008-280/626_2024	1625/210	162.11	195.2	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/056_1735	295/13	162.28	115.5	Secondary (grouped)
ChartGPs - ENC US4NY1GM	Danger 4	186.95	117.5	Secondary (grouped)
AWOIS_B370-TJ-08	AWOIS # 12415	199.14	108.5	Secondary (grouped)
h11251/tj_3102_reson8101/2008-297/056_1735	195/11	201.80	104.4	Secondary (grouped)
h11251/tj_3101_reson8125/2008-280/627_2019	387/2	211.21	114.4	Secondary (grouped)
h11251/tj_s222_reson7125_port/2008-268/014_1257	3085/8	243.27	117.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

55ft (12358_1, 12354_1)

9 ¼fm (12300_1, 13006_1, 13003_1)

17.0m (5161_1)

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: INFORM - AWOIS Item 12415 - dang. Wk PA is disproven, remove from chart.

Geo object 2: Underwater rock / awash rock (UWTROC)

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 16.962 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Full SWMB coverage was obtained by surveys H11251 and survey H11997 (junctions to the north). Based on the full MB coverage and Side Scan imagery from MB lines, it is recommended the dangerous Wk PA is considered disproved. Recommend to delete charted dangerous Wk PA from the chart. Update AWOIS database with H11251 results.

Recommend to chart a Rk with a least depth of 55-ft. in Latitude 41°09'28.352"N, Longitude 72°19'20.210"W. Add a rocky area feature (SBDARE) based on the rocky sea floor as displayed in the final CUBE surface.

H11251 Bottom Samples

Registry Number: H11251

State: New York

Locality: Eastern Long Island Sound

Sub-locality: Truman Beach to Inlet point

Project Number: OPR-B370-TJ-08

Survey Dates: 10/08/2008 - 10/26/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12358	20th	04/01/2008	1:40,000 (12358_1)	NGA NTM: None (06/07/2008) USCG LNM: None (06/03/2008) CHS NTM: None (04/25/2008)
12354	42nd	12/01/2006	1:80,000 (12354_1)	USCG LNM: 04/29/2008 (06/03/2008) CHS NTM: None (04/25/2008) NGA NTM: 12/04/1999 (06/07/2008)
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	med br S Sh P	Bottom Sample	[None]	41° 08' 36.5" N	072° 21' 19.9" W	---
1.2	fne br S	Bottom Sample	[None]	41° 07' 18.2" N	072° 23' 30.1" W	---
1.3	fne br S	Bottom Sample	[None]	41° 06' 49.0" N	072° 23' 43.0" W	---
1.4	crs br S	Bottom Sample	[None]	41° 06' 32.8" N	072° 23' 23.9" W	---
1.5	fne dk gy M	Bottom Sample	[None]	41° 07' 51.4" N	072° 22' 44.9" W	---
1.6	sml P	Bottom Sample	[None]	41° 08' 10.4" N	072° 21' 51.8" W	---
1.7	sml P	Bottom Sample	[None]	41° 08' 41.8" N	072° 20' 28.9" W	---
1.8	fne br S brk Sh	Bottom Sample	[None]	41° 08' 44.7" N	072° 19' 22.4" W	---
1.9	lrg P	Bottom Sample	[None]	41° 09' 20.0" N	072° 19' 21.8" W	---

1.10	brk Sh sml P	Bottom Sample	[None]	41° 09' 15.5" N	072° 20' 06.4" W	---
1.11	brk Sh crs S	Bottom Sample	[None]	41° 09' 03.7" N	072° 21' 08.3" W	---
1.12	brk Sh	Bottom Sample	[None]	41° 08' 46.8" N	072° 21' 54.9" W	---
1.13	crs S sml Sh	Bottom Sample	[None]	41° 08' 38.7" N	072° 22' 43.6" W	---
1.14	sml P lrg P	Bottom Sample	[None]	41° 08' 26.5" N	072° 23' 36.5" W	---

Subject: Re: [Fwd: Tide zoning issues on two TJ's survey projects]
From: Carolyn Lindley <Carolyn.Lindley@noaa.gov>
Date: Mon, 20 Oct 2008 15:18:18 -0400
To: jasper schaer <jasper.schaer@noaa.gov>
CC: NOS.COOPS.HPT@noaa.gov, "james.m.crocker" <James.M.Crocker@noaa.gov>, tod schattgen <Tod.Schattgen@noaa.gov>

Hi Jasper,
The TPE value is the 95% value.
Thanks,
Carolyn

jasper schaer wrote:
> Our data analysis has revealed that we are at IHO-2, if we use the 0.38 TPE value for B370. Is this tpe value, 0.38m, a 1-sigma or 95% value?
>
> thanks-js
>
> jasper schaer wrote:
>
>> Thanks, Craig for your quick response. -js
>>
>> Craig Martin wrote:
>>
>>> Jeremy / Jasper,
>>>
>>> In response to your email on two of TJ's survey projects:
>>>
>>> 1) The error estimate that should be used for the tides portion of the TPE on the B370 project is 0.38 meters.
>>>
>>> 2) Generally, no revision to preliminary tide zones is conducted, unless the mission is drastically beyond the scope of the original project submitted to CO-OPS. Short overages outside of the preliminary zoning is addressed and covered in the Smooth Tide process. We have not received a request for smooth tides for any B370 sheets to date. Once HPT receives these requests we will adjust the zoning and send back to the ship for application.
>>>
>>> 3) Due to total lack of tide information inside Menemsha Pond, CO-OPS is unable to provide reliable tide correctors to meet OCS specs beyond the southern border of Edy's Island. The TCARI grid was adjusted to the point where information could be confidentially extrapolated to meet these standards. This was annotated in the "Notes" section on the Final Tide note for the H-11920 in which the data was collected. In addition, CO-OPS informed HSD of this lack of tide information when the data was collected.
>>>
>>> Regards,
>>> Craig
>>>
>>> Jeremy McHugh wrote:
>>>
>>>> Hi HPT,
>>>> Could you please address each of Jasper's three concerns and copy everyone on the reply. Thanks!
>>>> Jeremy
>>>>
>>>> -------- Original Message --------
>>>> Subject: Tide zoning issues on two TJ's survey projects
>>>> Date: Sat, 27 Sep 2008 16:39:25 -0400
>>>> From: jasper schaer <jasper.schaer@noaa.gov>
>>>> Organization: NOAA-TJ
>>>> To: Smooth.Tides@noaa.gov

CC: Jeremy McHugh <Jeremy.McHugh@noaa.gov>
References: <ae8627f11e4ab567.48db6d84@noaa.gov>
<48DBB8BE.3000703@noaa.gov> <48DBC7AE.9080302@noaa.gov>
<48DBDC75.9000507@noaa.gov> <48DBF32E.10601@noaa.gov>
<ad3413f430b07cf.48dcb168@noaa.gov> <48DD051E.6050609@noaa.gov>
<48DD1459.2010202@noaa.gov>

Tide zoning issues on B370 & B307.

1. We were looking for the error estimates to apply to our TPE on B370. There were none given in the tide letter part of the project instruction because at the time it was being determined. If we apply zero, we run the risk of data dropping out in our grid surfaces. We need error estimate for our discreet zoning for B370 or at the very least a high.

2. TJ 's launches survey to the 4m curve and at times we acquire data outside the preliminary tide zone in getting to the 4 m curve. This is the case for B370. Will need a revision for discreet tide zoning for B370. What do you need from us?

3. Data from survey B307 was collected in Menemsha Pond, an area that was not original planned, hence why the B307's tcari files were revised. When we try to apply the verified WL data to the TCARI file, we encounter a host of problems, see attached.

r-js

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

Carolyn Lindley <Carolyn.Lindley@noaa.gov>
Oceanographer
NOAA/National Ocean Service
CO-OPS

Subject: Re: for the Appendix V record, OPR-B307, H11920 & H11921
From: "shep.smith" <smith.shepard@gmail.com>
Date: Sat, 26 Jul 2008 14:26:28 -0400
To: jasper schaer <jasper.schaer@noaa.gov>

Sounds like a good approach.

jasper schaer wrote:

> Sir,
>
> Will AHB accept object detection MB coverage, in place of complete MB coverage, in the 4-20 meter survey area of the project, which already been covered by 100% SSS?
>
> V/r-js

Subject: Re: H11821 Deliverables
From: Shepard Smith <Shep.Smith@noaa.gov>
Date: Fri, 30 May 2008 11:56:42 -0400
To: daniel wright <Daniel.Wright@noaa.gov>
CC: megan nadeau <Megan.Nadeau@noaa.gov>, jasper schaer <jasper.schaer@noaa.gov>, Castle E Parker <Castle.E.Parker@noaa.gov>, Wesley Kitt <Wesley.Kitt@noaa.gov>

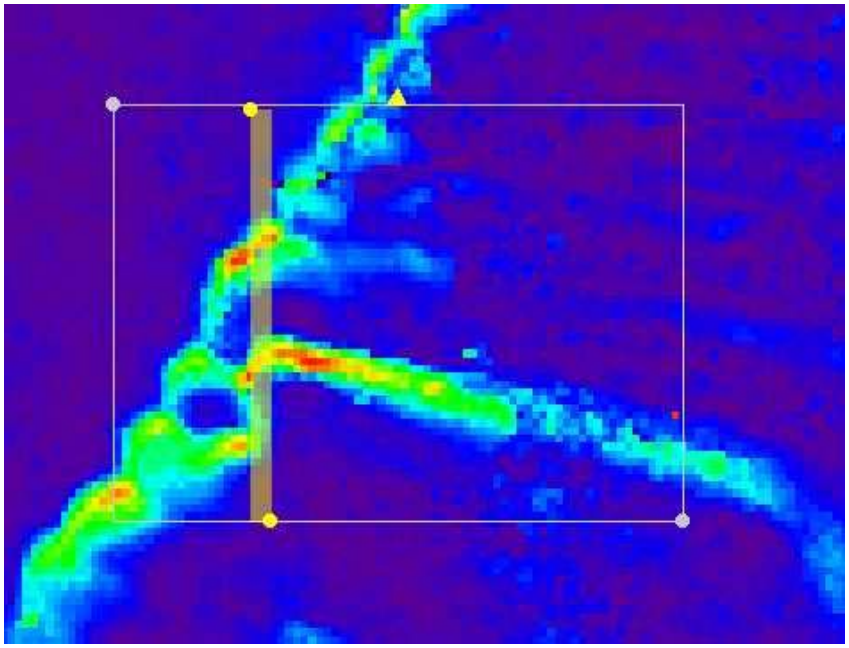
TJ,

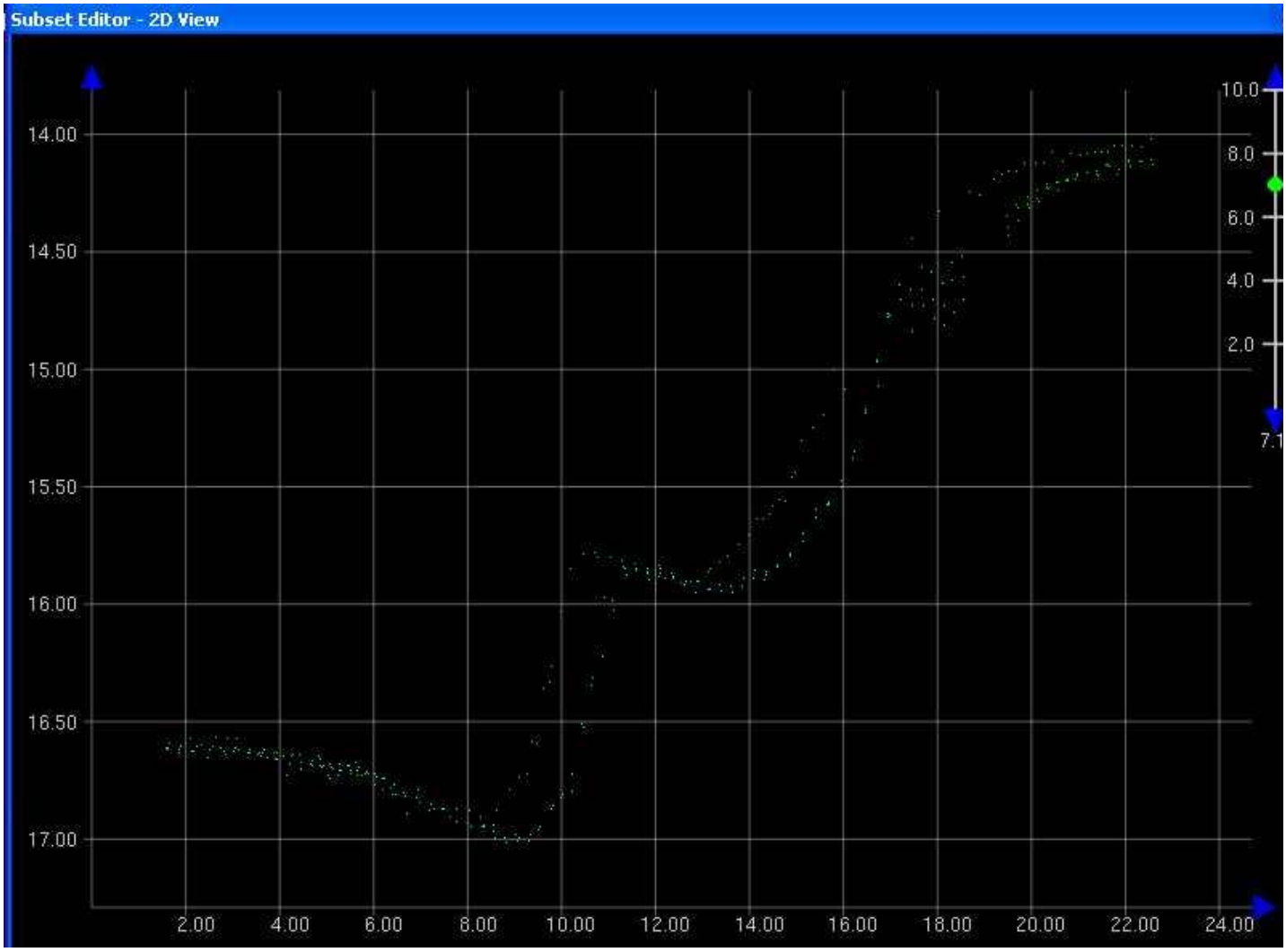
Yes, please.

I envision something along these lines:

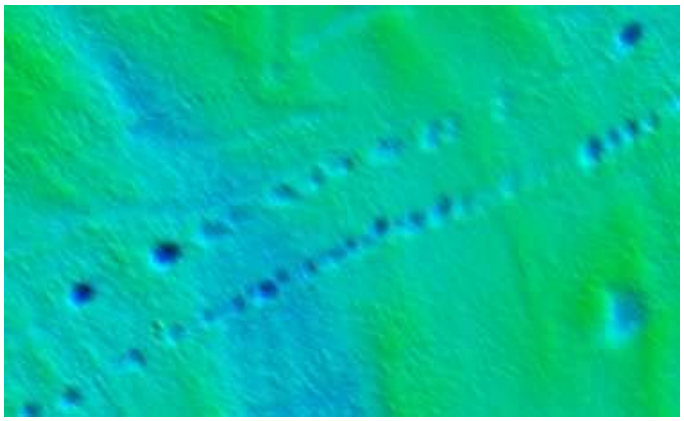
"The standard deviation layer of each grid was examined for areas of unusually high uncertainty that might indicate unresolved systematic errors. The colors in the following screen captures are scaled from 0 to 0.5m *(adjust as appropriate)*. Comments to follow:

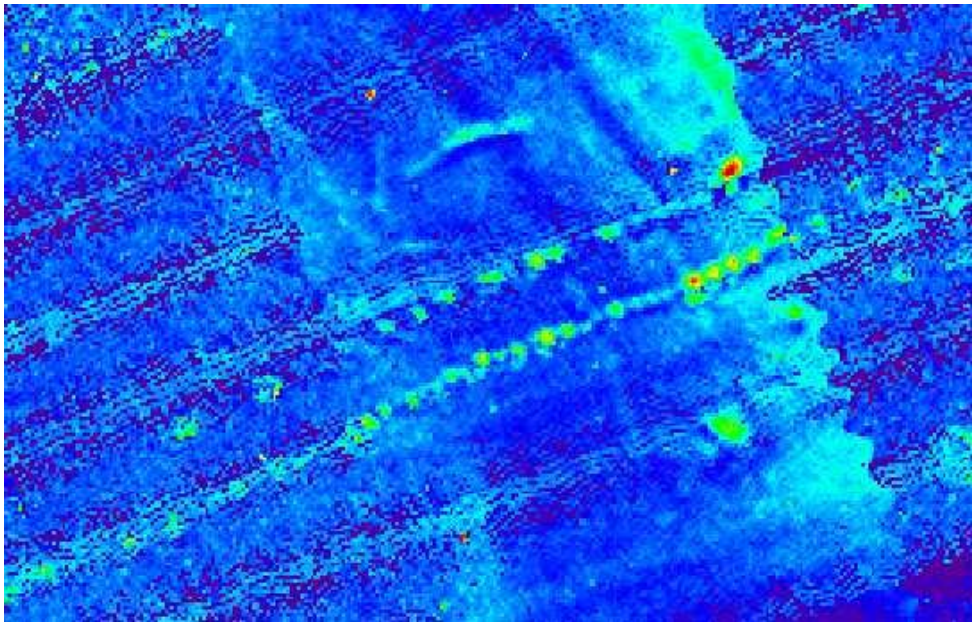
In areas of steep slopes and on the edges of dredged scours, horizontal errors between adjacent lines on the order of 1m caused std deviation of around 0.5m



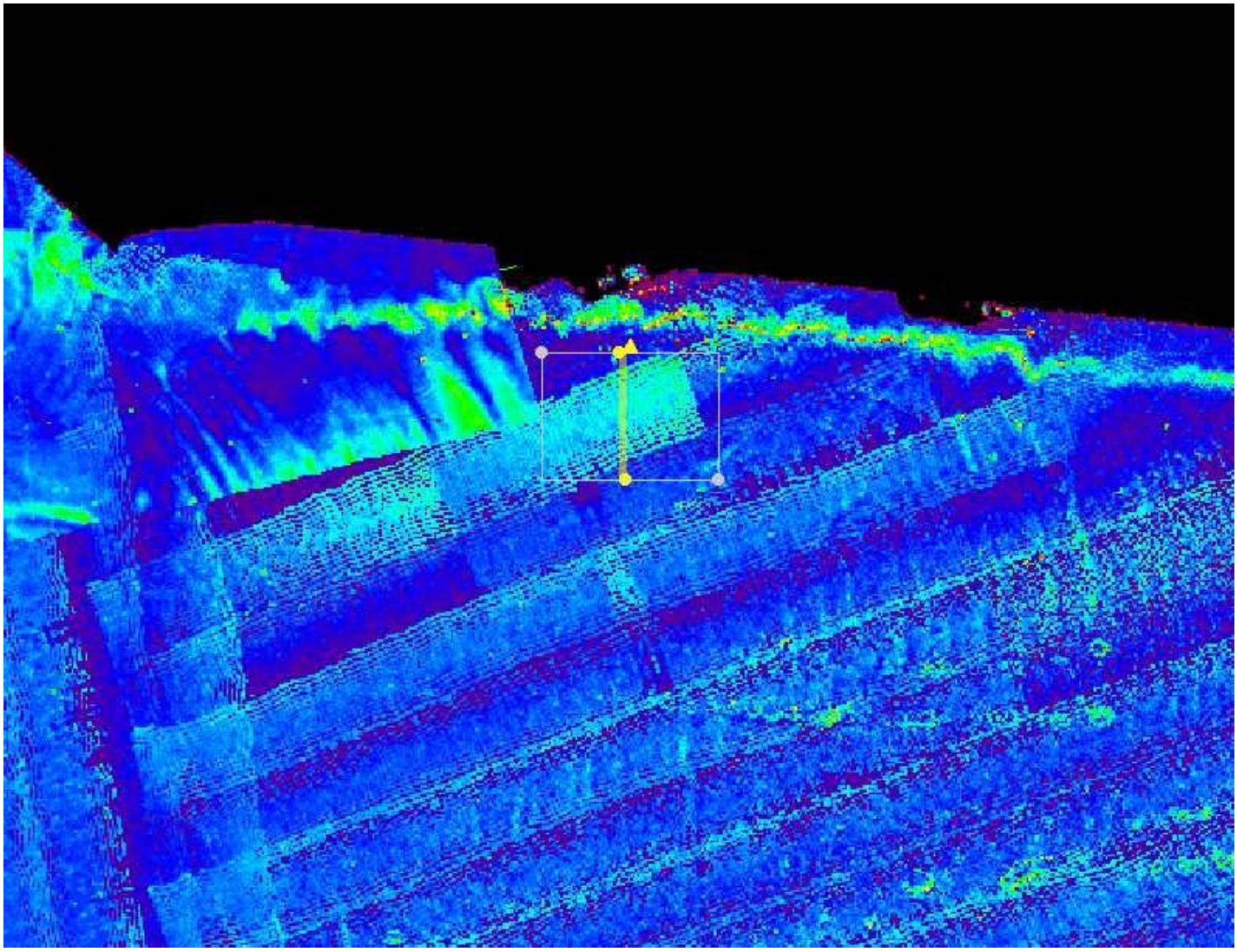


Lines of spudprints show up as lines of high std deviation that happened to coincide with the direction of the mainscheme lines.





Some areas of overlapping mainscheme lines show a std deviation of up to 0.15m, associated with an offset between the lines. We don't fully understand this offset, especially because it is on the same vessel just a few minutes apart.



etc, etc...

daniel wright wrote:

> Hello Shep,
>
> We are preparing our deliverables for H11821, Approaches to Jacksonville, and we would like confirmation/clarification on the following:
>
> 1. In our discussion regarding crossline comparisons, we agreed that an analysis of areas of high standard deviation in the BASE surface would be preferable over Pydro crossline stats, or a crossline to mainscheme surface differencing. Do you still concur?
>
> 2. Section 5.1.2 of the Specs and Deliverables;
>
> "If single beam and multibeam are specified in the Hydrographic Survey Project Instructions or Statement of Work and they both fall in a common
> area, then a separate single beam surface is required."
>
> In 2 of the 5 field sheets we collected both MB and SB for mainscheme bathy. If the soundings will be generated from the combined data, wouldn't this be better submitted as 1 combined surface? Or would you prefer 2 separate surfaces? Currently we have them combined.
>
> Please let us know your thoughts on this.
>
> Br,
> Dan

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : November 6, 2008

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B370-TJ-2008
HYDROGRAPHIC SHEET: H11251

LOCALITY: Truman Beach to Inlet Point, Long Island Sound, NY
TIME PERIOD: September 24 - October 27, 2008

TIDE STATION USED: 846-1490 New London, CT
Lat. 41° 21.3′ N Long. 72° 5.2' 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: 846-5705 New Haven, CT
Lat. 41° 17.0' N Long. 72° 54.5' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.949 meters

REMARKS: RECOMMENDED ZONING

Preliminary zoning is accepted as the final zoning for project OPR-B370-TJ-2008.

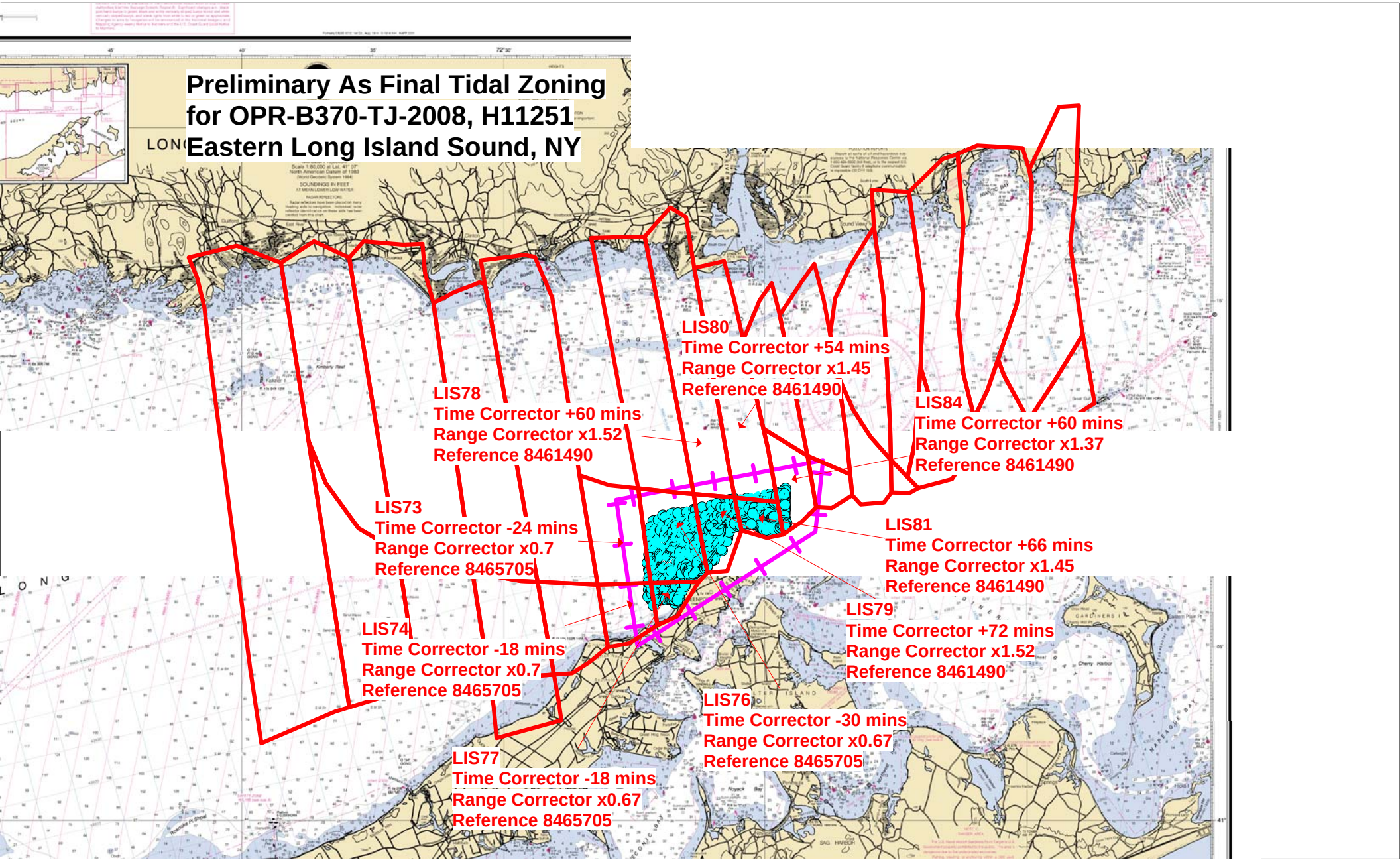
Please use the zoning file "B370TJ2008CORP" submitted with the project instructions for B370TJ2008. Zones LIS73, LIS74, LIS76, LIS77, LIS78, LIS79, LIS80, LIS81, & LIS84 are the applicable zones for H11251.

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

Peter J. Stone

Digitally signed by Peter J. Stone
DN: cn=Peter J. Stone, o=CO-OPS, ou=NOAA/NOS, email=peter.stone@noaa.gov, c=US
Date: 2008.11.17 12:54:48 -05'00'

CHIEF, OCEANOGRAPHIC DIVISION


Preliminary As Final Tidal Zoning
for OPR-B370-TJ-2008, H11251
Eastern Long Island Sound, NY
LIS80
Time Corrector +54 mins
Range Corrector x1.45
Reference 8461490
LIS78
Time Corrector +60 mins
Range Corrector x1.52
Reference 8461490
LIS84
Time Corrector +60 mins
Range Corrector x1.37
Reference 8461490
LIS73
Time Corrector -24 mins
Range Corrector x0.7
Reference 8465705
LIS81
Time Corrector +66 mins
Range Corrector x1.45
Reference 8461490
LIS79
Time Corrector +72 mins
Range Corrector x1.52
Reference 8461490
LIS74
Time Corrector -18 mins
Range Corrector x0.7
Reference 8465705
LIS76
Time Corrector -30 mins
Range Corrector x0.67
Reference 8465705
LIS77
Time Corrector -18 mins
Range Corrector x0.67
Reference 8465705

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to Accompany
Survey H11251

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

B. DATA ACQUISITION AND PROCESSING

B.1 DATA PROCESSING

The following software was used to process and review data at the Atlantic Hydrographic Branch (AHB):

CARIS HIPS/SIPS version 6.1 SP2 hotfix 7
Pydro version 9.4 (r2691)
CARIS BASE Manager 2.1 SP1 hotfix 10
CARIS S-57 Composer 2.0 hotfix 2
dKart Inspector V. 5.0 Build 732 (SP1)

B.2. QUALITY CONTROL

H-Cell

The AHB source depth grid was a 2m resolution combined BASE surface extracted from the field submitted surfaces for survey H11251. Survey scale soundings were extracted from a 5m resolution product surface(1:20,000 scale, 50 m generalization) at 1:40,000 scale using a radius of 1m. Depth curves were created by hand at the depth intervals represented on chart 12358. Soundings were selected for charting by hand using the latest raster charts and depth contours used as background for sounding placement. Soundings were then checked for conflicts, corrected to remove conflicts, and edited to allow for proper sounding compilation placement with respect to existing charted depths outside the survey area.

The compilation products and Stand Alone HOB Files (SAHOB) are detailed in the Compilation Process Log of this document. All individual SAHOB files were assembled in BASE Editor during H-Cell compilation.

The completed H-Cell was exported as a Base Cell File (ENC.000) in S-57 format with all values in metric units. The metric equivalent ENC.000 file was then converted to

NOAA chart units (ENC_CU.000) with all values measured in feet following NOAA sounding rounding rules.

Chart compilation was performed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

The H11251 CARIS H-Cell final deliverables include the following products:

H11251_CS.000	**1:40,000 Scale**	**H11251 H-Cell with Chart Scale Soundings**
H11251_SS.000	**1:10,000 Scale**	**H11251 Survey Scale Soundings**

B.2. Junctions

Survey H11251 junctions with survey H11446 of the same project to the East, survey H11999 to the West, and survey H11997 to the North. Present survey soundings compare within 0 to 1 feet with all junctional surveys.

C. VERTICAL AND HORIZONTAL CONTROL

Final vertical correction processing was completed by field personnel. Sounding datum is Mean Lower Low Water (MLLW). Vertical datum is Mean High Water (MHW). Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 18.

D. RESULTS AND RECOMMENDATIONS

Chart Comparison

12358 (20th Edition, Apr./08)
Corrected through NM Apr. 12/08
Corrected through LNM Apr. 1/08
Scale 1:40,000

ENC Comparison

US4NY1GM
Long Island Sound – Eastern Part
Edition 17
Update Application Date 2009-03-19
Issue Date 2009-04-08
References: Chart 12354 (Scale 1:80,000)

Hydrography

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section “D” and Appendices 1 & 2 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.

Bryan Chauveau
Physical Scientist
Verification of Data
Evaluation and Analysis Report

H11251 COMPILATION LOG

Registry No.	H11251
Project No.	OPR-B370-TJ-08
Field Unit	NOAA SHIP THOMAS JEFFERSON
Compilation	Bryan Chauveau
Largest Scale Chart	**12358 (20th Edition, Apr./08)** Corrected through NM Apr. 12/08 Corrected through LNM Apr. 1/08 Scale 1:40,000 **US4NY1GM** Long Island Sound – Eastern Part Edition 17 Update Application Date 2009-03-19 Issue Date 2009-04-08 References: Chart 12354 (Scale 1:80,000)
Chart Scale	1:40,000
Survey Scale	1:10,000
Date Of Survey	20081027

Components	File Names
Contour Layer	H11251_Contours
Survey Scale Soundings	H11251_SS_Soundings.hob
Chart Scale Soundings	H11251_CS_Soundings.hob
Feature Layer	H11251_DepAre.hob H11251_Obstrn.hob H11251_Wreck.hob H11251_Rocks.hob H11251_BottomSamples.hob H11251_Sandwaves.hob H11251_Rocky_Areas.hob
Meta-Objects Layer	H11251_M_COVR.hob H11251_M_QUAL.hob
Blue Notes	H11251_BlueNotes.hob

META-OBJECTS:

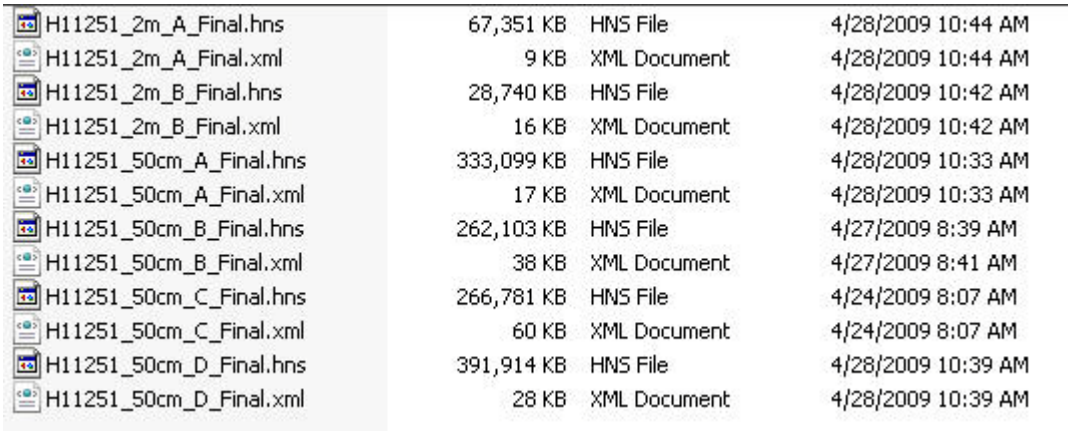
M_COVR attributes

Acronym	Value
CATCOV	1 – coverage available
SORDAT	20081027
SORIND	US,US,survy,H11251

M_QUAL attributes

Acronym	Value
CATZOC	6
INFORM	H11251,NOAA Ship Thomas Jefferson
POSACC	10
SORDAT	20081027
SORIND	US,US,survy,H11251
SUREND	20081027
SURSTA	20081007

Final Grids Listing –



H11251_2m_A_Final.hns	67,351 KB	HNS File	4/28/2009 10:44 AM
H11251_2m_A_Final.xml	9 KB	XML Document	4/28/2009 10:44 AM
H11251_2m_B_Final.hns	28,740 KB	HNS File	4/28/2009 10:42 AM
H11251_2m_B_Final.xml	16 KB	XML Document	4/28/2009 10:42 AM
H11251_50cm_A_Final.hns	333,099 KB	HNS File	4/28/2009 10:33 AM
H11251_50cm_A_Final.xml	17 KB	XML Document	4/28/2009 10:33 AM
H11251_50cm_B_Final.hns	262,103 KB	HNS File	4/27/2009 8:39 AM
H11251_50cm_B_Final.xml	38 KB	XML Document	4/27/2009 8:41 AM
H11251_50cm_C_Final.hns	266,781 KB	HNS File	4/24/2009 8:07 AM
H11251_50cm_C_Final.xml	60 KB	XML Document	4/24/2009 8:07 AM
H11251_50cm_D_Final.hns	391,914 KB	HNS File	4/28/2009 10:39 AM
H11251_50cm_D_Final.xml	28 KB	XML Document	4/28/2009 10:39 AM

APPROVAL SHEET
H11251

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development 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 NOS requirements except where noted in the Evaluation Report.

Bryan Chauveau

Digitally signed by Bryan Chauveau
DN: cn=Bryan Chauveau, o=Atlantic Hydrographic Branch, ou=NOAA, email=bryan.chauveau@noaa.gov, c=US
Date: 2009.07.09 13:38:02 -04'00'

Bryan Chauveau
Physical Scientist,
Atlantic Hydrographic Branch

All final products have undergone a comprehensive review as per the Atlantic Hydrographic Branch Processing Manual and are verified to be accurate and complete except where noted in the Evaluation Report.

I have reviewed the Base Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved:

Digitally signed by Shepard Smith
DN: cn=Shepard Smith, o=NOAA, ou=AHB, email=shep.smith@noaa.gov, c=US
Date: 2009.07.09 14:23:44 -04'00'

Commander Shepard M. Smith, NOAA
Chief, Atlantic Hydrographic Branch

Jeremy McHugh
AWOIS/SURF Check Completed
2009.07.21 12:07:15 -04'00'