

H11441

<p>NOAA FORM 76-35A</p> <p>U.S. DEPARTMENT OF COMMERCE          NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION          NATIONAL OCEAN SURVEY</p> <p><b>DESCRIPTIVE REPORT</b></p>	
<i>Type of Survey:</i>	<b>Navigable Area</b>
<i>Registry Number:</i>	<b>H11441</b>
<p><b>LOCALITY</b></p> <p><i>State:</i> Connecticut &amp; New York</p> <p><i>General Locality:</i> Eastern Long Island Sound</p> <p><i>Sub-locality:</i> New London Harbor and Approaches</p>	
<p><b>2005</b></p> <p>CHIEF OF PARTY</p> <p><b>CAPT Emily B. Christman, NOAA</b></p>	
DATE	LIBRARY & ARCHIVES

NOAA FORM 77-28 (11-72)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:  <p style="text-align: center; font-size: 1.2em;"><b>H11441</b></p>	
<p style="font-size: 1.2em; margin: 0;"><b>HYDROGRAPHIC TITLE SHEET</b></p>			
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:	<p style="margin: 0;"><b>Connecticut and New York</b></p>		
General Locality:	<p style="margin: 0;"><b>Eastern Long Island Sound</b></p>		
Sub-Locality:	<p style="margin: 0;"><b>New London Harbor and Approaches</b></p>		
Scale:	<p style="margin: 0;"><b>1:10,000</b></p>	Date of Survey:	<p style="margin: 0;"><b>04/27/2005 to 5/22/2005</b></p>
Instructions Dated:	<p style="margin: 0;"><b>3/25/2005</b></p>	Project Number:	<p style="margin: 0;"><b>OPR-B370-TJ-05</b></p>
Change No. 1 Dated:	<p style="margin: 0;"><b>04/12/2005</b></p>		
Change No. 2 Dated:	<p style="margin: 0;"><b>04/29/2005</b></p>		
Vessel:	<p style="margin: 0;"><b>NOAA Ship THOMAS JEFFERSON, S-222</b></p>		
Chief of Party:	<p style="margin: 0;"><b>Capt Emily B. Christman, NOAA</b></p>		
Surveyed by:	<p style="margin: 0;"><b>THOMAS JEFFERSON Personnel</b></p>		
Soundings by:	<p style="margin: 0;"><b>Reson SeaBat 8101 multibeam sonar</b></p> <p style="margin: 0;"><b>Reson SeaBat 8125 multibeam sonar</b></p>		
Graphic record checked by:	<p style="margin: 0;"><b>N/A</b></p>		
Protracted by:	<p style="margin: 0;"><b>N/A</b></p>	Automated Plot:	<p style="margin: 0;"><b>N/A</b></p>
Verification by:	<p style="margin: 0;"><b><i>Atlantic Hydrographic Branch</i></b></p>		
Soundings in:	<p style="margin: 0;"><b>Meters at MLLW</b></p>		
Remarks: <p style="margin: 0;"><b><i>Bold, Italic, Red notes in the Descriptive Report were made during office processing.</i></b></p> <p style="margin: 0;"><b><i>1) All Times are UTC.</i></b></p> <p style="margin: 0;"><b><i>2) This is a Navigable Area Hydrographic Survey.</i></b></p> <p style="margin: 0;"><b><i>3) Projection is North American Datum 83 (NAD83), UTM Zone 18</i></b></p>			

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**DESCRIPTIVE REPORT**

to accompany  
HYDROGRAPHIC SURVEY H11441

Scale of Survey: 1:10,000  
Year of Survey: 2005  
NOAA Ship THOMAS JEFFERSON  
Capt Emily B. Christman, Commanding

**A. AREA SURVEYED**

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project OPR-B370-TJ-05. The original instructions are dated March 25, 2005. Two letters describing changes to these instructions were received by the THOMAS JEFFERSON on April 12<sup>th</sup>, 2005 and April 29<sup>th</sup> 2005 respectively.

This Descriptive Report (DR) applies to sheet "A" of project OPR-B370-TJ-05 which covers the approaches to the Thames River, and New London, Connecticut. The registry number of this sheet is H11441 and the survey area includes the north east corner of Long Island Sound, the Lower Thames River and the western edge of Fisher's Island Sound. See survey area chart: figure A.

Safe navigation of this waterway is important for national security and is critical for the economy of the region. The Thames River and its approaches provide access to the US Navel Base, Groton, US Coast Guard Base, New London, the US Coast Guard Academy, General Dynamics, several shipping terminals, a fuel depot which serves Eastern Long Island, many pleasure boat marinas and ferry access to Fisher's Island, Long Island and Block Island. Long Island and Fisher's Island Sounds are also valuable lobster and fishing grounds. Future cruise ship docking is also proposed near Fort Trumbull south of New London.

**B: Purpose**

As stated in the *Hydrographic Survey Letter Instructions* of March 25, 2005; the four goals of this survey are:

- 1: "To provide contemporary surveys to update National Ocean Service (NOS) nautical charts thus reducing the critical survey backlog in the Long Island Sound Region"
- 2: "to address a specific request from the Northeast Marine Pilots for updated surveys in the vicinity of New London and New Haven, Connecticut; particularly in the vicinity of Fort Trumbull in New London Harbor where cruise ships are expected to begin docking"

3: “to evaluate the efficacy of the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm for post-processing bathymetric data,”

4: “to conduct a comprehensive comparison and evaluation of recent vintage LIDAR data to ascertain the reliability and effectiveness of LIDAR for near shore survey work in the east coast survey paradigm.”

As goal 4 (comparison to LIDAR datum) has already been addressed in the Descriptive Report for registry number H1 1442B it will not be discussed extensively in this report. Many of the contacts presented in this survey, however, do have LIDAR as well as SONAR coverage. Where they exist, LIDAR descriptions are attached to contacts presented in this DR.

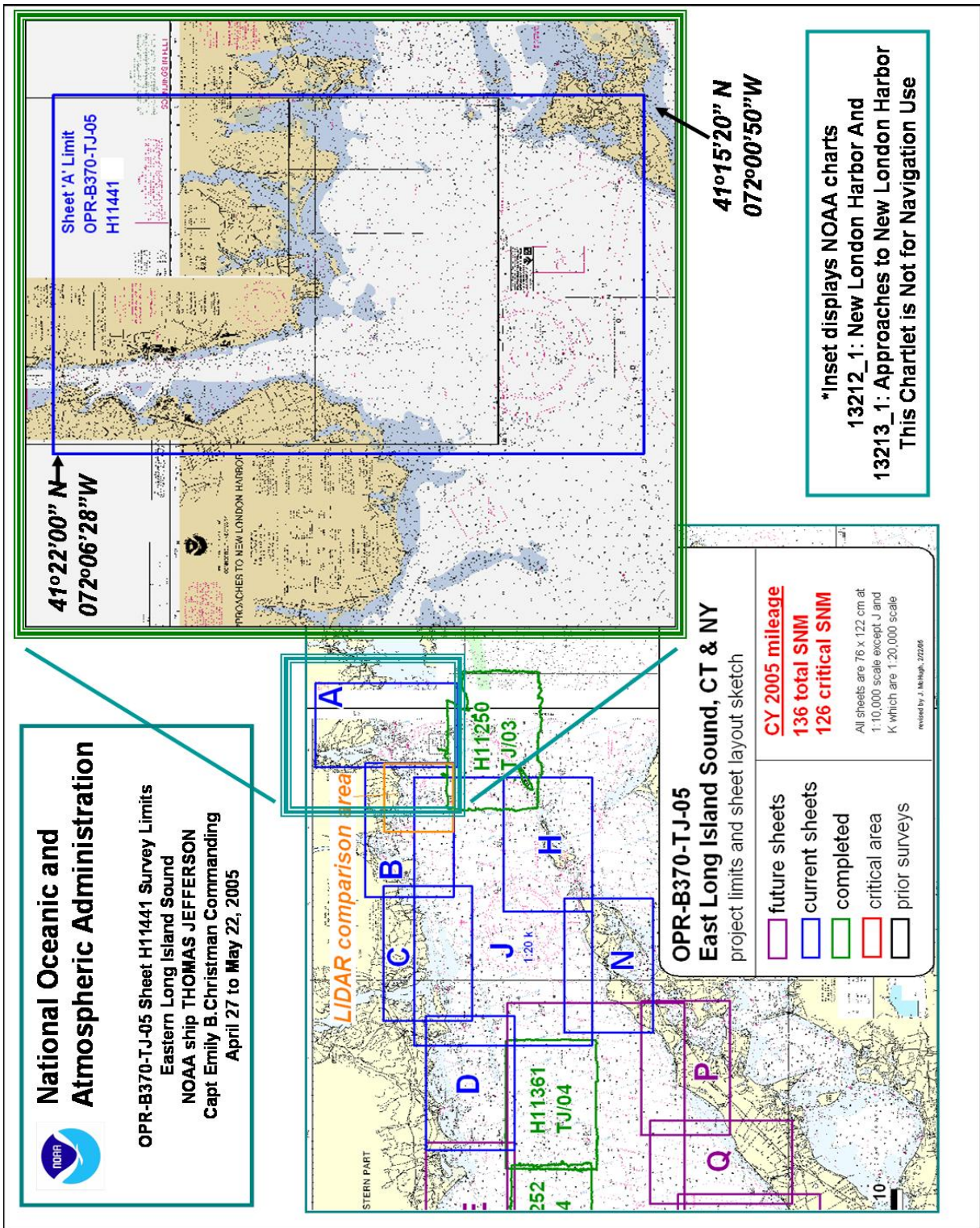


Figure A: Survey area

## **C. DATA ACQUISITION AND PROCESSING** *See also the Evaluation Report.*

### **EQUIPMENT**

All data for this survey were acquired with NOAA Launch 1005 and NOAA launch 1014. Both launches are 8.5 meter Jensen vessels with approximately 0.5 meter draft.

Launch 1005 was equipped with a Reson, Seabat 8101 Multibeam Echo Sounder (MBES) and Launch 1014 was equipped with a Reson Seabat 8125 MBES. For each launch, attitude and position were monitored by a Applainx TSS POS/MV 320 Version 3 GPS aided navigation system.

Where Side Scan Sonar (SSS) acquisition was acquired, a Klein 5000 SONAR was mounted on the starboard side of Launch 1005 slightly aft of the Reson Seabat 8101 transducer. See DAPR\* submitted on April 1<sup>st</sup>, 2005 for equipment quality tests and calibration procedures; and see figure 'B' to see where each type of data acquisition was made.

*\* Data filed at Atlantic Hydrographic Branch*

### **QUALITY CONTROL**

#### **Side Scan Sonar Quality Control**

As each side scan sonar line of data was examined for potential contacts it was also scrutinized for data quality. Often there were dotted interference patterns visible on the port side presumed to be noise from the 8101 MBES; these did not, however, significantly obscure the image. Some refraction due to radical temperature variation in the water column was observed over some of the survey area. This is to be expected in shallow water in the spring and summer months in New England and it was not too extreme to allow contact detection. There were 215 lineal nautical miles of 100% side scan sonar supplemented with 13 lineal nautical miles of 200% Side Scan Sonar (SSS) data collected for this survey, see figure 'B' for SSS coverage area

No problems were observed which would have prevented contact detection over the surveyed area.

#### **Shallow Water Multibeam Quality Control**

To check the precision of the MBES survey a total of approximately 53 lineal nautical miles of crosslines were run. This equals about 6% of the total 875 nautical of multi beam echo sounding data collected for this survey. 460 nm of the total SSS data were acquired with Launch 1005 and 415 nm with Launch 1014. In more than 50 random locations throughout the sheet crosslines were inspected with CARIS subset editor and their reported depths compared to the line that they crossed. These comparisons were made after verified tide data, and sound velocity corrections were applied. In areas of less than 20 meters no vertical variation of more than 0.2 meters was



observed. In areas of over 20 meters in depth the maximum observed vertical difference was 0.3 meters. In all cases the vertical difference between a cross line and main lines that it crossed were less than 2% of the water depth.

During the time that this survey was being conducted, the THOMAS JEFFERSON was also conducting surveys on registry number H11442 in, and around Niantic Bay, Connecticut, immediately to the west. The junction between this sheets and H11441 was studied along its length with CARIS subset editor. No variation greater than 3% of the water depth was found between these two surveys where they overlap.

Water column sound velocity checks were made with a CTD cast from each launch by hand and the Sound Velocity Profile (SVP) data were applied to the MBES data in post processing. Casts were made at least every three hours during acquisition, however, casts were generally made much more often as the launches frequently changed survey locations or tidal movement of water masses caused artifacts in the data.

During this survey there were a few MBES survey lines where along track breaks in bathymetric data collection occurred. These data gaps were referred to as 'stutter'. The cause of this problem is not yet known but where there were significant gaps in the data a line was re-acquired.

Refer to this project's attached DAPR for a detailed description of each launches MBES system calibrations and quality checks and CTD procedures.

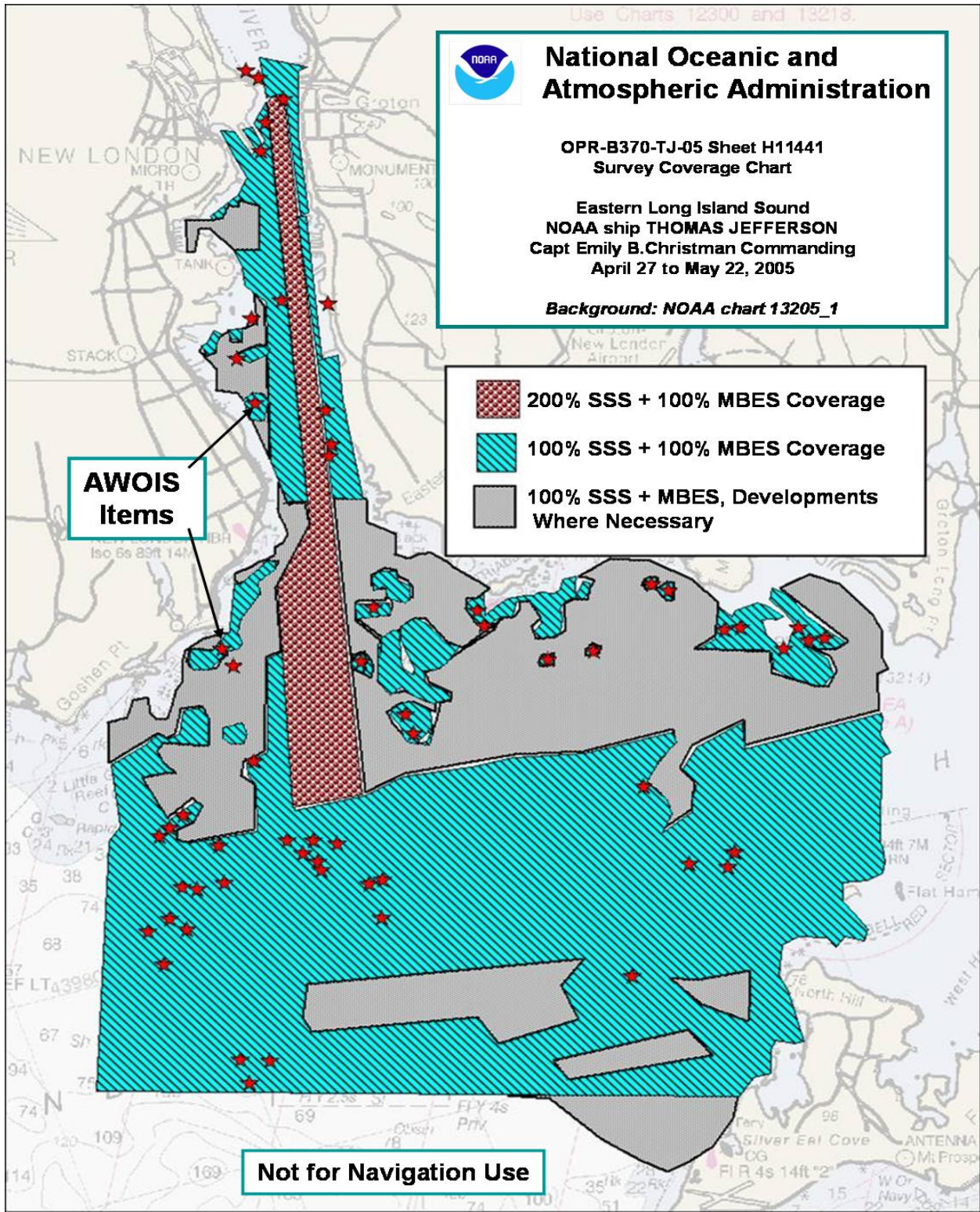


Figure B: survey coverage with AWOIS item locations.

**CUBE Surfaces**

MBES data from Launch 1005 and Launch 1014 were combined and divided using the CARIS HIPS program into 60 field sheets. MBES data points within the bounds of each of these field sheets were made into a CUBE surface at a 40 or 80 cm grid resolution depending on the water depth. These combined surfaces were finalized then combined into 2.5 meter surfaces which were subsequently imported into the Pydro program. See table 1 for a list of surfaces and figure 'C' for a chart of the location of each field sheet.

Combined Surface	Field Sheet	Resolution
H11441_Combined_River_250cm	H11441_1	40cm
	H11441_2	40cm
	H11441_3	40cm
	H11441_4	40cm
	H11441_5	40cm
	H11441_6	40cm
	H11441_7	40cm
	H11441_8	40cm
	H11441_9	40cm
	H11441_10	40cm
H11441_Combined_NorthWest_250cm	H11441_11	40cm
	H11441_12	40cm
	H11441_13	40cm
	H11441_14	40cm
	H11441_22	40cm
	H11441_23	40cm
	H11441_24	40cm
	H11441_25	40cm
H11441_26	40cm	
H11441_Combined_NorthEast_250cm	H11441_15	40cm
	H11441_16	40cm
	H11441_17	40cm
	H11441_18	40cm
	H11441_19	40cm
	H11441_20	40cm
H11441_Combined_EastCentral_250cm	H11441_21	40cm
	H11441_33	40cm
	H11441_34	40cm
	H11441_35	40cm
	H11441_41B_80cm	40cm
	H11441_41A_80cm	80cm
H11441_42B	80cm	

H11441_Combined_Central_250cm	H11441_30	40cm
	H11441_31	40cm
	H11441_32	40cm
	H11441_36	40cm
	H11441_37	80cm
	H11441_42A	80cm
	H11441_43	80cm
H11441_Combined_CentralWest_250cm	H11441_29	40cm
	H11441_38	40cm
	H11441_39B	80cm
	H11441_44A	80cm
	H11441_44B	80cm
H11441_Combined_WestCentral_250cm	H11441_27	40cm
	H11441_28	40cm
	H11441_39A	40cm
	H11441_40	40cm
H11441_Combined_SouthEast_250cm	H11441_46	40cm
	H11441_52	40cm
	H11441_53	80cm
H11441_Combined_SouthCentral_250cm	H11441_55	80cm
	H11441_54	80cm
H11441_Combined_Central_South_250cm	H11441_47	80cm
	H11441_48	80cm
	H11441_49	80cm
H11441_Combined_SouthWest_250cm	H11441_45	80cm
	H11441_50	80cm
	H11441_51	80cm
	H11441_56	80cm

Table 1: base surfaces and grid resolution.

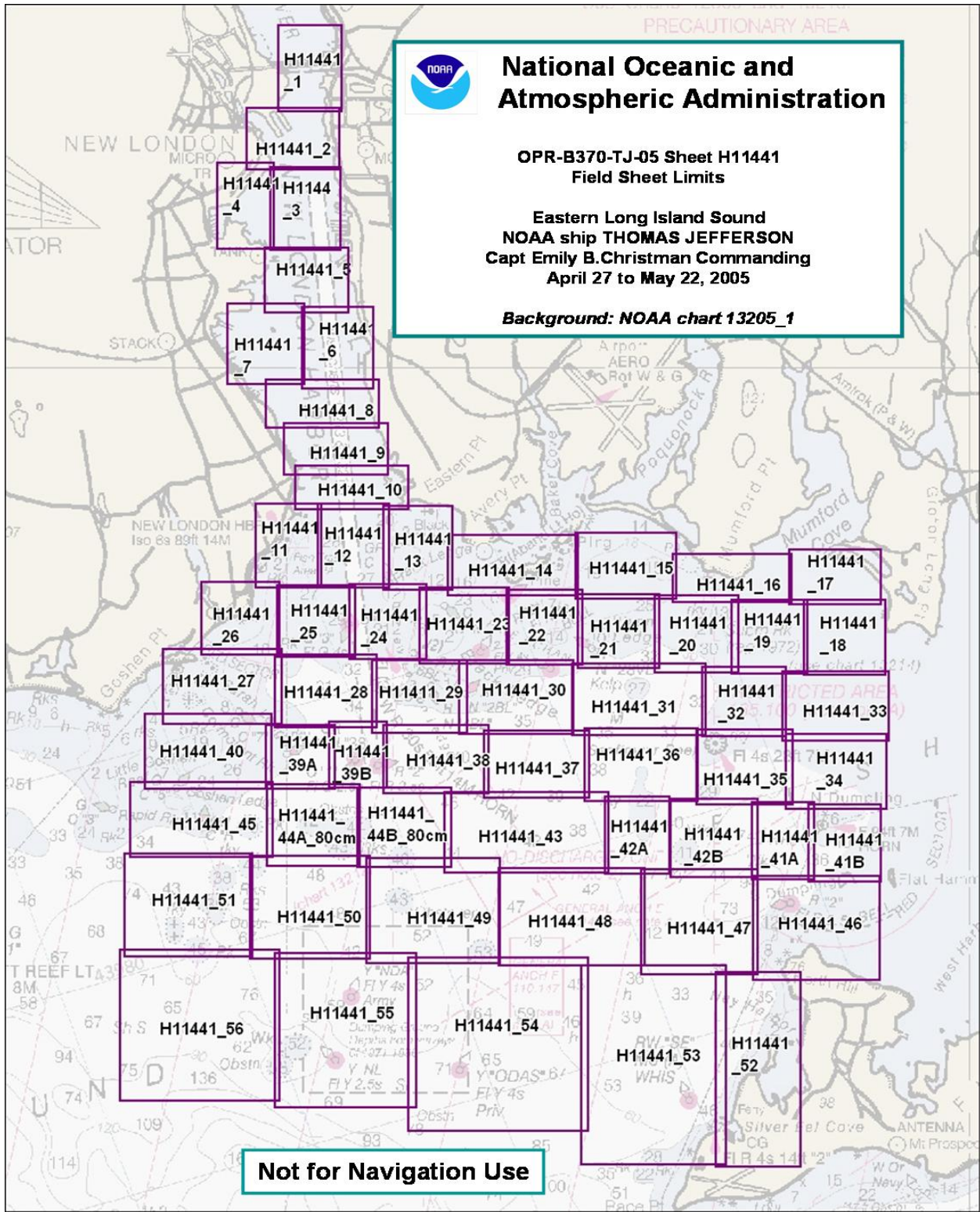


Figure C: field sheet coverage

## **D. VERTICAL AND HORIZONTAL CONTROL** *See also the Evaluation Report.*

### **VERTICAL CONTROL**

A Request for Approved Tides letter was sent to N/OPS1 on May 23, 2005, see appendix IV. Verified tides from the N/OPS1 CO-OPS website were subsequently downloaded and applied to all sounding data.

Soundings in this survey are all presented relative to Mean Low Lower Water (MLLW) tidal datum. Tidal information was received from National Water Level Observation Network (NWLON) stations at New London, Connecticut (846-1490) and Montauk, New York (851-0560). The Physical Oceanographic Real Time System (PORTS) station at New Haven, Connecticut (846-5705) provided a control datum for the survey and for its subordinate station at Silver Eel Pond, Fisher's Island, New York (851-0719). *Approved tides and zoning were applied during field operations.*

### **HORIZONTAL CONTROL**

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83) projected using UTM zone 18.

Horizontal position was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon stations. Two DGPS beacons were used for this survey: Moriches, New York (site ID = 803, transmission frequency = 293 kHz) and Sandy Hook, New Jersey (site ID = 804, transmission frequency = 286 kHz). No horizontal control stations were established for this survey.

Horizontal dilution of precision (HDOP) was monitored daily on the both launches. The observed HDOP values did not exceed 4.00 during data acquisition.

## **E: RESULTS AND RECOMMENDATIONS** *See also the Evaluation Report.*

### **CHART COMPARISON**

There are nine charts affected by this survey:

<b>Number</b>	<b>Version</b>	<b>Edition Date</b>	<b>Scale</b>
12354	41	04/01/2004	1:80,000
13212_1	36	03/01/2004	1:20,000
13213_1	41	03/01/04	1:10,000
13214_1	27	06/01/02	1:20,000
13205_1	37	09/01/2004	1:80,000
12300_1	45	03/01/2005	1:400,000
13006_1	32	02/01/2005	1:675,000
13003_1	48	10/01/2004	1:1,200,000
5161_1	13	10/01/2003	1:1,058,400

Table 2: NOAA charts affected by this survey.

### **General Agreement with Charted soundings**

In areas where the water depth is greater than 8 meters this survey nearly always concurred with the current published charts. Specific areas where significant differences between charted depth and observed depth were observed are addressed in following sections of this report. Along the shoals and reefs with depths of less than 8 meters many reefs and outcrops were found to have contacts which were shoal of the charted depths. The current surveys MBES DTM should be carefully consulted to update these shallow regions.

One area of significant change is at the Fisher's Island Ferry Warf in New London, CT. At approximately 41°21'10.5" north by 072°05'33.7 west there has been considerable shoreline development which has encroached into New London Harbor. Consult the MBES DTM in this area to locate the bottom edge of the seawall protecting the recently expanded parking lot.

Other specific differences between this survey and current charts are addressed in the DToN, AWOIS, Un-Charted Features and Charted Features appendices of this report.

## **AWOIS Items and Significant Contacts**

There are 52 AWOIS items addressed in this report. Of these three could not be developed by MBES coverage because they were either in water which was too shoal or in a security area where launches could not go. See appendix I-2 for details on these.

## **Dangers to Navigation**

3 potential Dangers to Navigation (DTon) are listed in this report. Two of these are locations which are significantly shoal of the charted soundings in areas where there could be large vessels transiting in the future. One Dton is a wreck or debris shoal of charted soundings but near shore and likely to remain outside of large vessel traffic. None of these contacts are within channels, their direct approaches or anchorage areas. These Dton's were submitted on May 16<sup>th</sup>, 2006, see appendix I-1 for details.

## **Charted Features**

Some features were found to significantly differ from the current published charts. See appendix I-3 for information on these.

## **Significant Non-Charted Features**

Shoals and features which were found but do not appear on the current charts are reported in appendix I-4.

## **ADDITIONAL RESULTS**

### **Aids to Navigation and Other Detached Positions**

All charted aids to navigation were found to be on station with three exceptions: Chart 13212\_1 displays two buoys labeled "FI Y 4S" south-east of Black Ledge. These buoys are described in appendix I-4.62 and I-4.63 respectively. Neither of these buoys was observed at or near their charted locations during this survey and it is recommended that they be removed from the chart. *Defer to MCD Nautical Data Branch for charting recommendations.*

In Green Harbor on the west side of the Thames River, nun "2A" appears to be charted to the east-north-east of the position where it was observed. The observed location of this buoy during the survey is described in appendix I.4.40. *Defer to MCD Nautical Data Branch for charting recommendation.*



### **Bridges and Overhead Cables**

US Route 95 and Amtrak have bridges which span the Thames River at the very northern edge of this survey. Route 95 crosses with two separate spans and Amtrak has one with a drawbridge over the dredged channel. The buttresses of the Amtrak drawbridge appear to be charted approximately 8 meters east of the location that this survey observed them at. It is recommended that the charts be updated to reflect this change.

Amtrak also crosses the survey area with a swing bridge which provides access to the marina in Shaw Cove. This appears to be charted correctly.

### **Ferry Routes**

New London Harbor supports ferry service to Orient Point, Long Island, and Block Island from Winthrop Cove. The ferry to Fisher's Island leaves from the new development south of City Pier and north of Shaw Cove. Each of these services operate many trips per day adding considerable traffic to the Thames River.

### **Submarine Cables and Pipelines**

A charted sewer outflow is located in the Thames River east of the main channel at a position described in appendix I.2.2. There is 100% MBES coverage over this feature.

A second submerged pipe was charted in the Thames River about 440 meters north-east of Powder Island. This item is described in appendix I.2.44, it slopes gradually upward toward shore to the west. There is full MBES coverage over its eastern 150 meters.

Spanning the main channel 100 meters north of buoy '7' and buoy '8' is a ship degaussing range. This consists of a cable or cables set in a cross-channel dredged trench. There is full MBES coverage of this feature and all contacts are deeper than the surrounding channel. This does not appear to be an obstruction to marine traffic; see appendix I.3.22 for details.

There is also an additional exposed sub-marine cable or pipeline observed by Klein SSS imagery. This item is described in appendix I.4.1 and is unlikely to be navigationally significant.

# APPROVAL SHEET

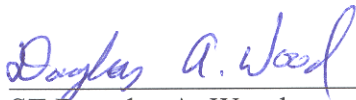
**OPR-B370-TJ-05**  
**New London Harbor and Approaches**  
**Survey Registry No: H11441**

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.

This survey is adequate to supersede all prior surveys in common areas, and for application to the relevant NOS nautical charts.

Respectfully,

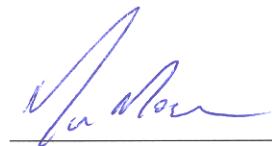
Submitted:



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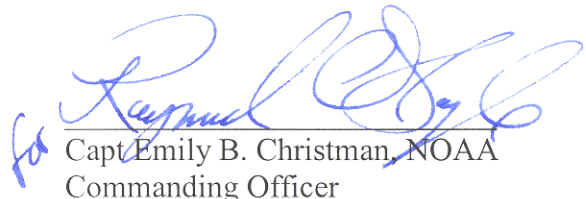
ST Douglas A. Wood  
Hydrographer

Approved and Forwarded:



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Lt Marc S. Moser, NOAA  
Field Operations Officer



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Capt Emily B. Christman, NOAA  
Commanding Officer

## **APPENDIX I**

### **Dangers to Navigation (DToN)**

Following are item investigation reports detailing Dangers to Navigation (DToNs).

# H11441 DTON

**Registry Number:** H11441  
**State:** Connecticut and New York  
**Locality:** Eastern Long Island Sound  
**Sub-locality:** Approaches to New London, CT  
**Project Number:** OPR-B370-TJ-05  
**Survey Dates:** 05/16/2005 - 05/22/2005

## Charts Affected

Number	Version	Date	Scale
13213	41st Ed.	03/01/2004	1:10000
13212	36th Ed.	03/01/2004	1:20000
13214	27th Ed.	06/01/2002	1:20000
12372	33rd Ed.	08/01/2004	1:40000
12354	41st Ed.	04/01/2004	1:80000
13205	37th Ed.	09/01/2004	1:80000
12300	44th Ed.	07/01/2004	1:400000
13006	32nd Ed.	02/01/2005	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
1.1	532/34	Rock	6.45 m	041° 17' 52.104" N	72° 02' 27.132" W
1.2	658/106	Rock	6.01 m	041° 17' 55.702" N	72° 05' 38.235" W
1.3	463/200	Obstruction	3.48 m	041° 21' 00.145" N	72° 05' 45.334" W

## **1 - Danger To Navigation**

**1.1) 532/34****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 041° 17' 52.104" N, 72° 02' 27.132" W  
**Least Depth:** 6.45 m  
**Timestamp:** 2005-136.17:34:26.883 (05/16/2005)  
**Survey Line:** b370\_tj\_05\_h11441a / 1014\_mb / 2005-136 / 557\_1733  
**Profile/Beam:** 532/34  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Rock cluster, RESON 8125 shows this to be significantly shoal of nearest reported sounding. This is an area where there is the potential for large ship traffic.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_05_h11441a/1014_mb/2005-136/557_1733	532/34	0.00	000.0	Primary
H11224_LIDAR_OK.csv	7	3.01	348.8	Secondary (grouped)
b370_tj_05_h11441a/1005_100/2005-131/291_2116	0002	13.10	200.2	Secondary (grouped)
b370_tj_05_h11441a/1005_100/2005-131/290_2135	0001	13.84	326.5	Secondary (grouped)
b370_tj_05_h11441a/1005_100/2005-131/290_2135	0002	53.38	132.8	Secondary (grouped)

**Hydrographer Recommendations**

Chart per digital data.

**Cartographically-Rounded Depth (Affected Charts):**

21ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

3 ½fm (12300\_1, 13006\_1, 13003\_1)

6.4m (5161\_1)

**S-57 Data**

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** QUASOU - 1:depth known  
TECSOU - 2:found by side scan sonar; 3:found by multi-beam  
VALSOU - 6.449 m  
WATLEV - 3:always under water/submerged

**1.2) 658/106****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 041° 17' 55.702" N, 72° 05' 38.235" W  
**Least Depth:** 6.01 m  
**Timestamp:** 2005-142.18:55:25.779 (05/22/2005)  
**Survey Line:** b370\_tj\_05\_h11441a / 1014\_mb / 2005-142 / 214\_1854  
**Profile/Beam:** 658/106  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Rock, 8125 MBES shows it to be significantly shoal of charted soundings.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_05_h11441a/1014_mb/2005-142/214_1854	658/106	0.00	000.0	Primary
H11224_LIDAR_OK.csv	1	5.36	162.0	Secondary
b370_tj_05_h11441a/1005_100/2005-134/262_2020	0001	14.40	229.0	Secondary

**Hydrographer Recommendations**

Chart per digital data, consider moving buoy '7' to the east to keep ship traffic clear of this rock.

**Cartographically-Rounded Depth (Affected Charts):**

19ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

3 ¼fm (12300\_1, 13006\_1, 13003\_1)

6.0m (5161\_1)

**S-57 Data**

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2:found by side scan sonar; 3:found by multi-beam  
 VALSOU - 6.008 m



WATLEV - 3:always under water/submerged

**1.3) 463/200****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 041° 21' 00.145" N, 72° 05' 45.334" W  
**Least Depth:** 3.48 m  
**Timestamp:** 2005-141.15:41:55.391 (05/21/2005)  
**Survey Line:** b370\_tj\_05\_h11441a / 1014\_mb / 2005-141 / 169\_1541  
**Profile/Beam:** 463/200  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Debris with mast or pile tipped at angle toward shore. Foul area around.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_05_h11441a/1014_mb/2005-141/169_1541	463/200	0.00	000.0	Primary
b370_tj_05_h11441a/1005_100/2005-135/222_1338	0002	3.01	172.3	Secondary
b370_tj_05_h11441a/1005_100/2005-135/216_1037	0015	8.06	009.8	Secondary

**Hydrographer Recommendations**

Chart obstruction at this location.

**Cartographically-Rounded Depth (Affected Charts):**

11ft (13213\_1, 12372\_4, 12354\_1, 13205\_1)

1 ¾fm (12300\_1, 13006\_1, 13003\_1)

3.5m (5161\_1)

**S-57 Data**

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2:found by side scan sonar; 3:found by multi-beam  
 VALSOU - 3.485 m

WATLEV - 3:always under water/submerged

## **APPENDIX II**

### **FEATURES**

Complete listing of features from field survey operations and branch compilation processing.

# H11441 Features Report

**Registry Number:** H11441  
**State:** Connecticut and New York  
**Locality:** Eastern Long Island Sound  
**Sub-locality:** New London Harbor and Approaches  
**Project Number:** OPR-B370-TJ-05  
**Survey Dates:** 04/27/2005 - 11/12/2005

## Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
13213	41st	03/01/2004	1:10,000 (13213_1)	[L]NTM: ?
12372	33rd	08/01/2004	1:40,000 (12372_1) 1:20,000 (12372_4)	[L]NTM: ?
13214	27th	06/01/2002	1:20,000 (13214_1)	[L]NTM: ?
13212	37th	11/01/2005	1:20,000 (13212_1)	USCG LNM: 06/05/2007 (11/27/2007) CHS NTM: None (11/30/2007) NGA NTM: 03/29/2003 (12/01/2007)
13205	37th	09/01/2004	1:80,000 (13205_1)	[L]NTM: ?
12354	41st	04/01/2004	1:80,000 (12354_1)	[L]NTM: ?
12300	44th	07/01/2004	1:400,000 (12300_1)	[L]NTM: ?
13006	32nd	02/01/2005	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	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	0004 RSD verified	Rock	[None]	41° 18' 20.9" N	072° 04' 39.2" W	---
1.2	685/81 - Chart 69Wk	Wreck	21.10 m	41° 17' 12.5" N	072° 01' 46.1" W	---
1.3	1107/101 - Chart 6 Rk	Rock	1.78 m	41° 17' 34.9" N	072° 06' 23.1" W	---
1.4	1530/53 - Delete 53 Obstrn	Rock	16.16 m	41° 16' 31.3" N	072° 03' 49.9" W	---
1.5	599/124 - Revise location of charted 44 Rk and danger curve	Rock	13.45 m	41° 16' 59.2" N	072° 05' 38.4" W	---
1.6	Rock 6483/54 - Delete 35Rk	Rock	13.59 m	41° 16' 45.9" N	072° 05' 58.7" W	---

1.7	770/169 - Chart 17 Rk	Rock	5.22 m	41° 18' 30.6" N	072° 01' 43.4" W	---
1.8	190/190 - Revise location of 5Rk	Rock	1.60 m	41° 17' 50.0" N	072° 06' 08.6" W	---
1.9	Sndg 472/184 - Chart 3 Rk	Rock	1.13 m	41° 17' 53.0" N	072° 06' 24.6" W	---
1.10	0002 - Delete 91Wk	Wreck	[None]	41° 17' 13.9" N	072° 01' 46.4" W	---
1.11	216_1037_0019 - Retain visible wreck	Wreck	[None]	41° 20' 54.4" N	072° 05' 45.3" W	---
1.12	231_1047_0008 - Retain ruins	Stationary structure, floating or fixed	[None]	41° 19' 44.6" N	072° 05' 25.5" W	---
1.13	0003 - Retain rock cov/uncov	Rock	[None]	41° 20' 10.1" N	072° 05' 35.9" W	---
1.14	200_2113_0004 - Degaussing Range, Retain as charted	Stationary structure, floating or fixed	[None]	41° 20' 22.8" N	072° 05' 04.1" W	---
1.15	306/95 - Retain as charted	Rock	3.61 m	41° 21' 31.4" N	072° 05' 30.3" W	---
1.16	Buoy 2195/49 - Defer to MCD	Red buoy	4.07 m	41° 20' 01.8" N	072° 05' 28.4" W	---
1.17	2445/15 98 Obstn - Disproven	Obstruction	30.29 m	41° 17' 18.2" N	072° 01' 46.1" W	---
1.18	874/1 - Delete 7 Rk - Chart 6 Rk	Rock	1.88 m	41° 18' 35.7" N	072° 03' 16.0" W	---
1.19	745/192 - Chart 45 Wk	Wreck	13.83 m	41° 17' 15.9" N	072° 02' 09.7" W	---
1.20	1279/15 - Chart 50 Rk	Rock	15.41 m	41° 17' 25.9" N	072° 04' 47.8" W	---
1.21	AWOIS 12421 - Delete 33 Rk - Chart 30 Rk	Rock	9.07 m	41° 17' 57.4" N	072° 04' 13.3" W	---
1.22	1156/240 - Revise location of charted 9Rk	Rock	2.73 m	41° 17' 44.1" N	072° 06' 22.0" W	---
1.23	Black Ledge Lighted Research Buoy Disproved - Defer to MCD	Open buoy	[None]	41° 18' 18.0" N	072° 03' 50.0" W	---
1.24	Vixens Ledge Lighted Research Buoy Disproved - Defer to MCD	Open buoy	[None]	41° 18' 12.0" N	072° 03' 17.0" W	---
1.25	ENC_US4CN21M_#58 RSD shoreline	Stationary structure, floating or fixed	[None]	41° 18' 54.1" N	072° 03' 48.5" W	---
1.26	903/109 - Revise location of 5Rk	Rock	1.63 m	41° 20' 13.3" N	072° 05' 44.7" W	---
1.27	531/113 - Chart 2Rk	Rock	0.82 m	41° 20' 17.9" N	072° 05' 43.5" W	---
2.1	859_2157_0002 - chart per LIDAR data	Rock	[None]	41° 18' 19.1" N	072° 05' 24.4" W	---
2.2	235_1812_0007 - chart area foul as per LIDAR	Rock	[None]	41° 19' 38.3" N	072° 04' 40.8" W	---
2.3	245_1728_0001 - Rk as per Lidar	Rock	[None]	41° 19' 05.0" N	072° 04' 35.2" W	---
2.4	253_1118_0001 - chart area Rky	Rock	[None]	41° 18' 26.2" N	072° 05' 55.2" W	---
2.5	16460/101 - Chart 12 Rk	Rock	3.80 m	41° 18' 49.9" N	072° 02' 16.8" W	---
2.6	1692/19 - Chart 19 Rk	Rock	5.76 m	41° 18' 21.3" N	072° 02' 23.6" W	---
2.7	1727/5 - Chart 5 Rk	Rock	1.67 m	41° 16' 44.9" N	072° 01' 23.0" W	---
2.8	719/34 - Chart dang. 17 Rk	Rock	5.37 m	41° 17' 23.8" N	072° 06' 18.5" W	---
2.9	570/5 - Chart 13 Rk	Rock	4.14 m	41° 19' 05.8" N	072° 04' 28.5" W	---
2.10	273/13 - Chart 11 Rk	Rock	3.55 m	41° 18' 42.0" N	072° 04' 13.1" W	---
2.11	1019/2 - Chart 10 Obstn	Obstruction	3.13 m	41° 18' 58.5" N	072° 04' 22.5" W	---
2.12	504/237 - Chart 39 Rk	Rock	11.88 m	41° 17' 01.8" N	072° 06' 12.8" W	---
2.13	2753/199 - Chart 17 Obstn	Obstruction	5.22 m	41° 21' 54.3" N	072° 05' 03.5" W	---
2.14	2507/87 - Chart 26 ft. Shoal	Obstruction	8.06 m	41° 21' 27.4" N	072° 05' 26.1" W	---
2.15	329/180 - Chart 24 Rks	Rock	7.32 m	41° 18' 04.6" N	072° 02' 38.1" W	---

2.16	271/85 - Chart 28 Rk	Rock	8.62 m	41° 18' 00.7" N	072° 04' 08.5" W	---
2.17	391/88 - Chart 10 Rk	Rock	3.10 m	41° 17' 55.4" N	072° 06' 12.1" W	---
2.18	523/77 - Chart 8 Rk	Rock	2.64 m	41° 17' 55.6" N	072° 06' 05.1" W	---
2.19	1159/187 - Chart 10 Rk	Rock	3.02 m	41° 21' 27.7" N	072° 05' 31.6" W	---
2.20	1268/5 - SEE GOOGLE EARTH, defer to MCD/RSD	Sounding	6.09 m	41° 21' 34.9" N	072° 05' 23.1" W	---
2.21	ENC_US4CN21M_#88 - Delete wreck from ENC	Wreck	28.60 m	41° 16' 55.7" N	072° 01' 43.8" W	---
2.22	777/3 - Chart 9 ft rock	Rock	2.84 m	41° 19' 14.2" N	072° 05' 13.9" W	---
2.23	4550/1 Chart 24 Rk	Rock	7.52 m	41° 18' 51.4" N	072° 05' 07.1" W	---
2.24	754/212 - Chart 15 Obstn	Obstruction	4.50 m	41° 20' 50.4" N	072° 05' 19.3" W	---
3.1	AWOIS 11885 - Chart 15 ft depth	Shoal	4.57 m	41° 19' 50.8" N	072° 04' 53.4" W	11885
3.2	AWOIS 12164 - Chart 14 ft depth	Shoal	4.31 m	41° 17' 43.8" N	072° 05' 25.7" W	12164
3.3	AWOIS 11913 - Chart a 57Wk	Wreck	17.57 m	41° 15' 56.2" N	072° 05' 17.6" W	11913
3.4	AWOIS 12405 - Chart 44Rk and danger curve	Rock	13.40 m	41° 17' 08.0" N	072° 04' 57.4" W	12405
3.5	AWOIS 12407 - Chart a 40 Rk	Rock	12.28 m	41° 17' 01.1" N	072° 04' 26.4" W	12407
3.6	AWOIS 12408 - Chart 7 Rk	Rock	2.07 m	41° 18' 19.6" N	072° 04' 37.1" W	12408
3.7	AWOIS 12165 - Chart a 9Rk	Rock	2.82 m	41° 18' 38.6" N	072° 03' 46.1" W	12165
3.8	AWOIS 12170 - Chart 15 ft Rk	Rock	4.66 m	41° 18' 48.7" N	072° 02' 28.1" W	12170
3.9	AWOIS 7109 - Chart 51 Wks	Wreck	15.58 m	41° 17' 07.4" N	072° 02' 11.9" W	7109
3.10	AWOIS 12160 - Chart 13 ft rock	Rock	3.98 m	41° 18' 23.3" N	072° 05' 40.7" W	12160
3.11	AWOIS 12174 - Chart 11 Rk	Rock	3.42 m	41° 18' 28.3" N	072° 01' 18.8" W	12174
3.12	AWOIS 12175 - Chart 12 Rk	Rock	3.69 m	41° 18' 28.6" N	072° 01' 12.0" W	12175
3.13	AWOIS 8346 - Chart 70Wk	Wreck	21.36 m	41° 17' 11.8" N	072° 01' 51.3" W	8346
3.14	AWOIS 12167 - Chart 16 Rk	Rock	4.94 m	41° 19' 38.9" N	072° 04' 51.9" W	12167
3.15	AWOIS 8345 - Chart 54 Wk	Wreck	16.46 m	41° 17' 06.6" N	072° 01' 54.5" W	8345
3.16	AWOIS 12162 - Chart 10 ft Rk (Rapid Rock)	Rock	3.19 m	41° 17' 16.4" N	072° 06' 07.5" W	12162
3.17	AWOIS 12163 - Chart 14 ft Rk	Rock	4.36 m	41° 17' 20.8" N	072° 06' 01.4" W	12163
3.18	AWOIS 12161 - Chart 14 ft Rk	Rock	4.36 m	41° 17' 24.5" N	072° 05' 57.3" W	12161
3.19	AWOIS 12158 - Chart 11ft. Rk	Rock	3.45 m	41° 18' 40.1" N	072° 04' 32.3" W	12158
3.20	AWOIS 12159 - Chart 17Rk	Rock	5.32 m	41° 18' 18.7" N	072° 05' 34.4" W	12159
3.21	292/235 - Revise location of charted 10Rk Vixen Ledge	Rock	3.11 m	41° 18' 24.2" N	072° 02' 54.3" W	12172
3.22	AWOIS 12171 - Chart 14Rk	Rock	4.47 m	41° 18' 22.1" N	072° 03' 16.3" W	12171
3.23	AWOIS 12406 - Revise location of 44Rk	Rock	13.59 m	41° 17' 05.4" N	072° 04' 56.6" W	12406
3.24	AWOIS 8769 - Chart 45 Obstn	Obstruction	13.95 m	41° 17' 15.1" N	072° 04' 58.7" W	8769
3.25	AWOIS 8768 - Chart 45 Obstn	Obstruction	13.65 m	41° 17' 11.1" N	072° 05' 03.1" W	8768
3.26	AWOIS 8312 - chart 43 Obstn	Obstruction	13.20 m	41° 17' 15.9" N	072° 05' 10.4" W	8312
3.27	AWOIS 1855 - Chart 37Rk	Rock	11.37 m	41° 16' 58.3" N	072° 05' 50.8" W	1855

3.28	AWOIS 12404 - Revise location of charted 40Rk and danger curve	Rock	12.40 m	41° 17' 14.4" N	072° 05' 40.4" W	12404
3.29	AWOIS 12422 - Delete 48 Obstn - Chart 48 Rk	Rock	14.60 m	41° 16' 42.4" N	072° 05' 57.0" W	12422
3.30	AWOIS 11914- Delete 59 Obstn - Chart 60 Obstn	Obstruction	18.23 m	41° 15' 47.9" N	072° 05' 26.7" W	11914
3.31	AWOIS 7073 Not charted	Rock	6.24 m	41° 17' 17.3" N	072° 02' 33.1" W	7073
3.32	AWOIS 12173 - Chart 10Rk	Rock	3.26 m	41° 18' 32.4" N	072° 01' 57.2" W	12173
3.33	AWOIS 12169 - Chart 17 ft depth	Shoal	5.39 m	41° 18' 46.3" N	072° 02' 21.0" W	12169
3.34	AWOIS 11883 - Delete 2 Subm pipes PA	Sounding	6.25 m	41° 20' 29.7" N	072° 05' 14.6" W	11883
3.35	AWOIS 12423 - Delete 45 Rk - Chart 47Rk	Rock	14.29 m	41° 16' 31.5" N	072° 06' 07.5" W	12423
3.36	AWOIS 1847 - Not charted	AWOIS	[no data]	[no data]	[no data]	---
3.37	AWOIS 1857 - Not charted -Not seen	AWOIS	[no data]	[no data]	[no data]	---
3.38	AWOIS #6957 - Subm Rk rep 1972 disproven	AWOIS	[no data]	[no data]	[no data]	---
3.39	AWOIS 11844 -Delete notation Rks	AWOIS	[no data]	[no data]	[no data]	---
3.40	AWOIS 11880 - Delete dangerous sunken wreck PA	AWOIS	[no data]	[no data]	[no data]	---
3.41	AWOIS 11881 - RETAIN ROCK AWASH	AWOIS	[no data]	[no data]	[no data]	---
3.42	AWOIS 12166 -Chart 12 ft depth	AWOIS	[no data]	[no data]	[no data]	---
3.43	AWOIS 12176 - Retain as charted rock awash	AWOIS	[no data]	[no data]	[no data]	---
3.44	AWOIS 12177 - Retain 6 ft depth	AWOIS	[no data]	[no data]	[no data]	---
3.45	AWOIS 13001 - Disproved	Rock	14.79 m	41° 17' 00.2" N	072° 05' 55.6" W	13001
3.46	AWOIS 3180 - Delete 43 Obstn rep 1990 and danger curve	Obstruction	13.07 m	41° 16' 48.8" N	072° 04' 28.2" W	3180
3.47	AWOIS 12995 - Delete - dangerous sunken wreck, PA	Shoal	11.31 m	41° 21' 43.6" N	072° 05' 13.6" W	12995
3.48	AWOIS 13002 - Disproved - Delete 44Rk, Chart 42 Rk.	Rock	13.03 m	41° 17' 10.7" N	072° 04' 48.4" W	13002
3.49	AWOIS 12420 - Chart 32 Rk	Rock	9.90 m	41° 18' 02.3" N	072° 04' 18.6" W	12420
4.1	DTON 532/34 - Charted 21 Rk	Rock	6.45 m	41° 17' 52.1" N	072° 02' 27.1" W	---
4.2	DTON 658/106 - Charted 19 Rk	Rock	6.01 m	41° 17' 55.7" N	072° 05' 38.2" W	---
4.3	DTON 463/200 - DTON - Charted 11 Obstn	Obstruction	3.48 m	41° 21' 00.1" N	072° 05' 45.3" W	---



## **1 - Charted Features**

## 1.1) 0004 RSD verified

### Survey Summary

**Survey Position:** 41° 18' 20.9" N, 072° 04' 39.2" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-143.06:01:02 (05/23/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-132 / 247\_1816  
**Contact/Point:** 0004/1  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

This AWOIS is centered on the New London Light. The raster chart shows this to be a shoal when it is a small island, protected with concrete seawalls with two story house with the light. Klein 5000 SSS imagery shows rip-rap surrounding the island.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-132/247_1816	0004	0.00	000.0	Primary
ChartGPs - ENC US4CN21M	AToN 62	13.41	233.5	Secondary (grouped)
h11441/1005_100/2005-132/247_1816	0010	19.97	202.3	Secondary (grouped)
h11441/1005_100/2005-132/247_1814	0003	21.55	192.6	Secondary (grouped)

### Hydrographer Recommendations

Area updated with RSD shoreline project CT0401C, 18 Dec. 2006. No change in charting.

### S-57 Data

**Geo object 1:** Light (LIGHTS)  
**Attributes:** CATLIT - 6:air obstruction light  
 COLOUR - 1:white  
 OBJNAM - New London Light  
**Geo object 2:** Shoreline Construction (SLCONS)  
**Attributes:** HEIGHT - 14 m  
 NATCON - 1:masonry  
 OBJNAM - New London Ledge Lighthouse

## Office Notes

Concur

## 1.2) 685/81 - Chart 69Wk

### Survey Summary

**Survey Position:** 41° 17' 12.5" N, 072° 01' 46.1" W  
**Least Depth:** 21.10 m (= 69.22 ft = 11.537 fm = 11 fm 3.22 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-134.12:28:44.445 (05/14/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-134 / 921\_1227  
**Profile/Beam:** 685/81  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Non dangerous wreck, slightly shoal of charted depth, appears to be barge.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-134/921_1227	685/81	0.00	000.0	Primary
ChartGPs - ENC US4CN21M	Danger 89	36.34	295.0	Secondary (grouped)

### Hydrographer Recommendations

Chart a wreck with a depth of 69 feet in Latitude 41°17'12.549"N, Longitude 072°01'46.063"W.

#### Cartographically-Rounded Depth (Affected Charts):

69ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

11fm (12300\_1, 13006\_1, 13003\_1)

21m (5161\_1)

### S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 1:non-dangerous wreck  
 STATUS - 1:permanent  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 21.099 m  
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur - Chart a 69Wk in Latitude 41°17'12.549"N, Longitude 072°01'46.063"W.

### 1.3) 1107/101 - Chart 6 Rk

#### Survey Summary

**Survey Position:** 41° 17' 34.9" N, 072° 06' 23.1" W  
**Least Depth:** 1.78 m (= 5.84 ft = 0.973 fm = 0 fm 5.84 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-138.22:45:57.016 (05/18/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-138 / 133\_2245  
**Profile/Beam:** 1107/101  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Goshen Ledge, Rocky reef as charted.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-138/133_2245	1107/101	0.00	000.0	Primary
h11441/1005_100/2005-134/262_2021	0001	30.59	207.0	Secondary (grouped)
h11441/1005_100/2005-134/262_2020	0003	33.40	255.7	Secondary (grouped)
h11441/1005_100/2005-134/263_2032	0001	109.10	341.8	Secondary (grouped)
h11441/1005_100/2005-134/260_1946	0001	129.61	185.5	Secondary (grouped)
h11441/1005_mb/2005-138/149_2224	1499/93	151.97	327.3	Secondary (grouped)
h11441/1005_100/2005-134/264_2041	0001	221.45	336.0	Secondary (grouped)
ChartGPs - ENC US4CN21M	AToN 17	230.49	325.4	Secondary (grouped)

#### Hydrographer Recommendations

Chart per datum.

#### Cartographically-Rounded Depth (Affected Charts):

6ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

1.8m (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 - 1.779 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Chart a 6 Rk in Latitude 41°17'34.901"N, Longitude 72°06'23.063"W.

## 1.4) 1530/53 - Delete 53 Obstn

### Survey Summary

**Survey Position:** 41° 16' 31.3" N, 072° 03' 49.9" W  
**Least Depth:** 16.16 m (= 53.00 ft = 8.834 fm = 8 fm 5.00 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-131.22:57:55.827 (05/11/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-131 / 244\_2254  
**Profile/Beam:** 1530/53  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

'Obstn', Rocky area, west of charted 'obstn'

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-131/244_2254	1530/53	0.00	000.0	Primary
h11441/1005_100/2005-133/129_1227	0001	7.21	138.4	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 4	51.29	326.4	Secondary (grouped)

### Hydrographer Recommendations

Move 'obstn' to west per digital data.

#### Cartographically-Rounded Depth (Affected Charts):

53ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

8  $\frac{3}{4}$ fm (12300\_1, 13006\_1, 13003\_1)

16.2m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 16.155 m  
 WATLEV - 3:always under water/submerged



## Office Notes

Do not concur - Obstruction not seen during office processing. Delete charted 53 Obsn anhd danger curve. Chart present survey depths.

## 1.5) 599/124 - Revise location of charted 44 Rk and danger curve

### Survey Summary

**Survey Position:** 41° 16' 59.2" N, 072° 05' 38.4" W  
**Least Depth:** 13.45 m (= 44.12 ft = 7.353 fm = 7 fm 2.12 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-133.14:42:29.754 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 350\_1441  
**Profile/Beam:** 599/124  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock RESON 8125 MBES echosounder shows this rock to be in the position and depth that it's charted at.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/350_1441	599/124	0.00	000.0	Primary
H11224_LIDAR_ReqFldWrk.csv	49	7.76	071.4	Secondary (grouped)
h11441/1005_100/2005-132/124_2009	0003	9.93	280.3	Secondary
h11441/1005_100/2005-132/124_2009	0011	15.19	081.1	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 59	77.81	209.6	Secondary (grouped)
h11441/1005_100/2005-132/123_2024	0007	92.86	135.7	Secondary (grouped)

### Hydrographer Recommendations

Chart a rock with a depth of 44 feet in Latitude 41°16'59.240"N, Longitude 072°05'38.445"W.

#### Cartographically-Rounded Depth (Affected Charts):

44ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

7 ¼fm (12300\_1, 13006\_1, 13003\_1)

13.4m (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 - 13.447 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur with clarification - Revise location of charted 44Rk and danger curve to Latitude 41°16'59.240"N, Longitude 072°05'38.445"W.

## 1.6) Rock 6483/54 - Delete 35Rk

### Survey Summary

**Survey Position:** 41° 16' 45.9" N, 072° 05' 58.7" W  
**Least Depth:** 13.59 m (= 44.57 ft = 7.428 fm = 7 fm 2.57 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-134.13:33:01.289 (05/14/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-134 / 622\_1320  
**Profile/Beam:** 6483/54  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky area which appears to be significantly deeper than charted depth, charted '35' rock to north-east was not seen. 8125 MBES shows this to be shoalest point in area.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-134/622_1320	6483/54	0.00	000.0	Primary
h11441/1005_100/2005-132/127_1908	0009	2.49	032.3	Secondary (grouped)
h11441/1005_100/2005-132/126_1923	0002	5.95	273.8	Secondary (grouped)
h11441/1005_100/2005-132/127_1908	0014	35.78	290.2	Secondary (grouped)
h11441/1005_100/2005-132/127_1908	0015	35.94	308.5	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	47	57.04	220.0	Secondary (grouped)
h11441/1005_100/2005-132/126_1923	0009	68.45	243.2	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 43	84.48	239.3	Secondary (grouped)

### Hydrographer Recommendations

Remove charted '35' rock to north east of this location.

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 3:found by multi-beam  
 VALSOU - 13.585 m

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur - Delete charted 35Rk and danger curve. Chart present survey depths.

## 1.7) 770/169 - Chart 17 Rk

### Survey Summary

**Survey Position:** 41° 18' 30.6" N, 072° 01' 43.4" W  
**Least Depth:** 5.22 m (= 17.12 ft = 2.854 fm = 2 fm 5.12 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-137.18:35:08.229 (05/17/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-137 / 626\_1834  
**Profile/Beam:** 770/169  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

MBES data show that this rock is slightly shoal of charted data. This appears to be the only uncharted obstruction found within AWOIS 6957 circle and it is much deeper than the submerged rock reported in 1972.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-137/626_1834	770/169	0.00	000.0	Primary
h11441/1005_100/2005-134/914_1813	0002	7.23	214.2	Secondary (grouped)
h11441/1005_100/2005-134/913_1809	0002	27.34	195.6	Secondary (grouped)
h11441/1014_mb/2005-137/623_1827	921/165	77.36	274.6	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	66	77.74	270.2	Secondary (grouped)
h11441/1005_100/2005-134/312_1805	0002	114.91	318.3	Secondary (grouped)
h11441/1005_100/2005-134/312_1646	0001	119.42	321.7	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 73	122.62	105.3	Secondary (grouped)
h11441/1014_mb/2005-137/622_1826	687/200	129.54	188.1	Secondary (grouped)
h11441/1005_100/2005-134/317_1819	0002	132.73	186.0	Secondary (grouped)
H11224_LIDAR_OK.csv	21	149.16	115.6	Secondary (grouped)
h11441/1014_mb/2005-137/625_1831	1342/72	150.27	317.0	Secondary (grouped)

### Hydrographer Recommendations

#### Cartographically-Rounded Depth (Affected Charts):

17ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

2 ¾fm (12300\_1, 13006\_1, 13003\_1)

5.2m (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 - 5.219 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

### Office Notes

Chart a Rk with a depth of 17 ft. in Latitude 41°18'30.608"N, Longitude 72°01'43.411"W.

## 1.8) 190/190 - Revise location of 5Rk

### Survey Summary

**Survey Position:** 41° 17' 50.0" N, 072° 06' 08.6" W  
**Least Depth:** 1.60 m (= 5.25 ft = 0.875 fm = 0 fm 5.25 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-142.13:07:06.643 (05/22/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-142 / 171\_1306  
**Profile/Beam:** 190/190  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-142/171_1306	190/190	0.00	000.0	Primary
h11441/1005_100/2005-134/260_1945	0003	9.16	271.4	Secondary
h11441/1005_100/2005-134/252_1858	0002	13.80	197.8	Secondary
ChartGPs - ENC US4CN21M	Danger 55	24.29	084.7	Secondary (grouped)
h11441/1005_100/2005-134/259_1921	0003	42.64	067.8	Secondary
h11441/1014_mb/2005-142/165_1311	763/127	47.09	133.8	Secondary (grouped)

### Hydrographer Recommendations

#### Cartographically-Rounded Depth (Affected Charts):

5ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

0  $\frac{3}{4}$ fm (12300\_1, 13006\_1, 13003\_1)

1.6m (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 - 1.600 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Revise location of charted 5 Rk to Latitude 41°17'50.028"N, Longitude 72°06'08.630"W.

## 1.9) Sndg 472/184 - Chart 3 Rk

### Survey Summary

**Survey Position:** 41° 17' 53.0" N, 072° 06' 24.6" W  
**Least Depth:** 1.13 m (= 3.69 ft = 0.615 fm = 0 fm 3.69 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-142.13:36:10.433 (05/22/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-142 / 183\_1335  
**Profile/Beam:** 472/184  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Shoal rock as charted.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-142/183_1335	472/184	0.00	000.0	Primary
h11441/1005_100/2005-134/258_1918	0002	4.19	226.3	Secondary (grouped)
h11441/1005_100/2005-134/272_1914	0001	17.31	271.9	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 54	24.69	230.9	Secondary (grouped)

### Hydrographer Recommendations

Chart a rock with a depth of 3 feet in Latitude 41°17'52.991"N, Longitude 072°06'24.570"W.

#### Cartographically-Rounded Depth (Affected Charts):

3ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

0 ½fm (12300\_1, 13006\_1, 13003\_1)

1.1m (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 - 1.125 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur.

**1.10) 0002 - Delete 91Wk****Survey Summary**

**Survey Position:** 41° 17' 13.9" N, 072° 01' 46.4" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-142.07:39:14 (05/22/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-134 / 921\_1227  
**Contact/Point:** 0002/1  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

vicinity of wreck symbol

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-134/921_1227	0002	0.00	000.0	Primary

**Hydrographer Recommendations**

No trace of a wreck was seen in the data during office processing. Delete 91 Wk in vicinity of Latitude 41°17'14.30"N, Longitude 072°01'42.50"W.

**S-57 Data**

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 1:non-dangerous wreck  
 WATLEV - 3:always under water/submerged

**Office Notes**

Concur - Delete 91Wk in vicinity of Latitude 41°17'14.30"N, Longitude 072°01'42.50"W.

**1.11) 216\_1037\_0019 - Retain visible wreck****Survey Summary**

**Survey Position:** 41° 20' 54.4" N, 072° 05' 45.3" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-138.06:22:59 (05/18/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-135 / 216\_1037  
**Contact/Point:** 0019/1  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Charted wreck (Barge?) near shore. Shadow off trace, minimum depth unknown.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-135/216_1037	0019	0.00	000.0	Primary
h11441/1005_100/2005-135/216_1037	0018	12.40	170.0	Secondary (grouped)

**Hydrographer Recommendations**

Retain as charted.

**S-57 Data**

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
 CONVIS - 1:visual conspicuous  
 STATUS - 1:permanent  
 TECSOU - 2:found by side scan sonar  
 VERDAT - 12:Mean lower low water  
 WATLEV - 2:always dry

**Office Notes**

Concur

**1.12) 231\_1047\_0008 - Retain ruins****Survey Summary**

**Survey Position:** 41° 19' 44.6" N, 072° 05' 25.5" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-138.06:45:13 (05/18/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-135 / 231\_1047  
**Contact/Point:** 0008/1  
**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Ruins, as charted.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-135/231_1047	0008	0.00	000.0	Primary

**Hydrographer Recommendations**

Retain as charted.

**S-57 Data**

**Geo object 1:** Shoreline Construction (SLCONS)  
**Attributes:** CATSLC - 4:pier (jetty)  
 CONDTN - 2:ruined  
 OBJNAM - ruins

**Office Notes**

Concur

**1.13) 0003 - Retain rock cov/uncov****Survey Summary**

**Survey Position:** 41° 20' 10.1" N, 072° 05' 35.9" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-138.09:58:54 (05/18/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-135 / 237\_1611  
**Contact/Point:** 0003/1  
**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Rock

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-135/237_1611	0003	0.00	000.0	Primary
h11441/1014_mb/2005-141/197_1328	1213/240	6.82	080.4	Secondary
h11441/1005_100/2005-135/240_1553	0001	25.71	007.2	Secondary (grouped)

**Hydrographer Recommendations**

Rock cover or uncover neither verified nor disproved. Retain as charted.

**S-57 Data**

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 2:depth unknown  
 STATUS - 1:permanent  
 TECSOU - 2:found by side scan sonar  
 VERDAT - 12:Mean lower low water  
 WATLEV - 4:covers and uncovers



## Office Notes

Concur

## 1.14) 200\_2113\_0004 - Degaussing Range, Retain as charted

### Survey Summary

**Survey Position:** 41° 20' 22.8" N, 072° 05' 04.1" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-139.05:14:05 (05/19/2005)  
**Survey Line:** h11441 / 1005\_200 / 2005-135 / 200\_2113  
**Contact/Point:** 0004/1  
**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Degaussing Range, as charted. Dredged, cross channel trench with cable assembly within. All cables and structures appear to be set deeper than the surrounding channel.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_200/2005-135/200_2113	0004	0.00	000.0	Primary
h11441/1005_mb/2005-135/200_2113	4948/45	4.85	187.7	Secondary
h11441/1005_100/2005-135/101_1448	0008	7.36	184.5	Secondary (grouped)
h11441/1005_100/2005-135/100_1515	0001	13.12	262.2	Secondary (grouped)
h11441/1014_mb/2005-135/160_1908	268/195	15.49	250.0	Secondary (grouped)
h11441/1005_mb/2005-135/200_2113	4630/81	44.12	151.3	Secondary
h11441/1014_mb/2005-135/162_1856	356/240	53.55	092.0	Secondary (grouped)
h11441/1005_100/2005-135/232_1824	0005	53.98	257.3	Secondary (grouped)
h11441/1014_mb/2005-140/171_1828	1964/1	88.16	263.8	Secondary (grouped)
h11441/1005_100/2005-135/232_1824	0004	162.12	261.2	Secondary (grouped)

### Hydrographer Recommendations

Retain as charted.

### S-57 Data

**Geo object 1:** Pipeline, submarine/on land (PIPSOL)  
**Attributes:** INFORM - submerged cable

OBJNAM - Degaussing Range

STATUS - 1:permanent

## Office Notes

Concur

## 1.15) 306/95 - Retain as charted

### Survey Summary

**Survey Position:** 41° 21' 31.4" N, 072° 05' 30.3" W  
**Least Depth:** 3.61 m (= 11.84 ft = 1.974 fm = 1 fm 5.84 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-134.23:14:27.881 (05/14/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-134 / 215\_2314  
**Profile/Beam:** 306/95  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky foul area, as charted.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-134/215_2314	306/95	0.00	000.0	Primary
h11441/1005_mb/2005-134/215_2314	281/90	3.53	200.5	Secondary (grouped)
h11441/1005_100/2005-134/215_2314	0005	3.75	290.8	Secondary
h11441/1005_mb/2005-134/215_2314	341/97	4.60	004.0	Secondary (grouped)

### Hydrographer Recommendations

Area verified as FOUL. Retain as charted.

#### Cartographically-Rounded Depth (Affected Charts):

12ft (13213\_1, 12372\_4, 12354\_1, 13205\_1)

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

3.6m (5161\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 3.610 m

WATLEV - 3:always under water/submerged

## Office Notes

Concur - No change in charting.

## 1.16) Buoy 2195/49 - Defer to MCD

### Survey Summary

**Survey Position:** 41° 20' 01.8" N, 072° 05' 28.4" W  
**Least Depth:** 4.07 m (= 13.36 ft = 2.227 fm = 2 fm 1.36 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-135.15:52:01.125 (05/15/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-135 / 239\_1550  
**Profile/Beam:** 2195/49  
**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Buoy "2A", located approximately 104 m south-west of charted location.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-135/239_1550	2195/49	0.00	000.0	Primary
h11441/1005_100/2005-135/239_1550	0001	12.06	100.8	Secondary

### Hydrographer Recommendations

Verify with aerial imagery, update buoy position if necessary.

#### Cartographically-Rounded Depth (Affected Charts):

13ft (13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

2 ¼fm (12300\_1, 13006\_1, 13003\_1)

4.1m (5161\_1)

### S-57 Data

**Geo object 1:** Buoy, isolated danger (BOYISD)

**Attributes:** BOYSHP - 1:conical (nun, ogival)

COLOUR - 3:red

## Office Notes

Defer to MCD Nautical Data Branch for charting recommendation.

## 1.17) 2445/15 98 Obstn - Disproven

### Survey Summary

**Survey Position:** 41° 17' 18.2" N, 072° 01' 46.1" W  
**Least Depth:** 30.29 m (= 99.38 ft = 16.563 fm = 16 fm 3.38 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-137.15:42:01.341 (05/17/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-137 / 277\_1535  
**Profile/Beam:** 2445/15  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Appears as Small ridge.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-137/277_1535	2445/15	0.00	000.0	Primary

### Hydrographer Recommendations

Obstruction disproved during office processing. Deleted charted 98 Obstn.

#### Cartographically-Rounded Depth (Affected Charts):

99ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

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

30m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 30.291 m  
 WATLEV - 3:always under water/submerged



**Office Notes**

Concur - Delete 98 Obstn

**1.18) 874/1 - Delete 7 Rk - Chart 6 Rk****Survey Summary**

**Survey Position:** 41° 18' 35.7" N, 072° 03' 16.0" W  
**Least Depth:** 1.88 m (= 6.15 ft = 1.026 fm = 1 fm 0.15 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-139.17:00:27.430 (05/19/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-139 / 205\_1659  
**Profile/Beam:** 874/1  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Rocky reef, 8101 MBES shows this to be shoal of charted depth.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-139/205_1659	874/1	0.00	000.0	Primary
h11441/1005_100/2005-133/279_2104	0001	25.73	286.5	Secondary (grouped)
H11224_LIDAR_OK.csv	27	36.42	280.2	Secondary (grouped)
h11441/1005_100/2005-133/280_2043	0004	39.66	060.6	Secondary (grouped)
h11441/1005_mb/2005-139/211_1649	529/101	39.76	296.0	Secondary (grouped)
h11441/1005_100/2005-133/279_2103	0001	44.35	214.7	Secondary (grouped)
H11224_LIDAR_OK.csv	26	49.79	357.1	Secondary (grouped)
h11441/1005_mb/2005-139/209_1650	816/14	69.46	347.5	Secondary (grouped)
h11441/1005_100/2005-133/281_2021	0001	99.99	002.0	Secondary (grouped)
h11441/1014_mb/2005-142/218_1813	555/137	100.65	188.7	Secondary (grouped)
h11441/1005_mb/2005-141/030_1513	260/101	133.39	215.6	Secondary (grouped)
h11441/1005_100/2005-133/278_2156	0001	142.78	153.9	Secondary (grouped)
h11441/1005_100/2005-132/235_1738	0004	146.63	204.0	Secondary (grouped)
h11441/1005_mb/2005-139/227_1631	1571/15	226.38	186.4	Secondary (grouped)
h11441/1005_mb/2005-139/227_1631	1908/98	230.16	199.5	Secondary (grouped)
h11441/1005_mb/2005-139/225_1641	1396/81	241.66	168.9	Secondary (grouped)
h11441/1005_mb/2005-139/225_1641	1639/97	246.99	163.1	Secondary (grouped)
h11441/1005_mb/2005-139/225_1641	424/81	257.82	194.3	Secondary (grouped)
h11441/1005_mb/2005-139/225_1641	2421/4	260.98	143.9	Secondary (grouped)

h11441/1005_100/2005-132/235_1738	0005	261.50	142.9	Secondary (grouped)
h11441/1005_100/2005-133/273_2227	0002	264.08	207.4	Secondary (grouped)

## Hydrographer Recommendations

### Cartographically-Rounded Depth (Affected Charts):

6ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 12354\_1, 13205\_1)

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

1.9m (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 - 1.876 m  
VERDAT - 11:Nearly lowest low water  
WATLEV - 3:always under water/submerged

## Office Notes

Chart a Rk with a depth of 6 ft. in Latitude 41°18'35.700"N, Longitude 72°03'16.008"W.

## 1.19) 745/192 - Chart 45 Wk

### Survey Summary

**Survey Position:** 41° 17' 15.9" N, 072° 02' 09.7" W  
**Least Depth:** 13.83 m (= 45.37 ft = 7.561 fm = 7 fm 3.37 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-132.15:51:12.000 (05/12/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-132 / 206\_1550  
**Profile/Beam:** 745/192  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Uncharted wreck. SSS imagery shows this to have three parallel ridges oriented in a north-west to south-east direction. The dimensions of this wreck are about 10 by 30 meters and it rises about 2 meters above the sea bottom. Minimum depth is similar to charted sounding.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-132/206_1550	745/192	0.00	000.0	Primary
h11441/1005_100/2005-134/153_1140	0001	10.67	253.0	Secondary (grouped)
h11441/1005_100/2005-133/152_1925	0008	14.22	018.7	Secondary (grouped)
h11441/1005_100/2005-133/153_1934	0002	18.78	325.5	Secondary (grouped)

### Hydrographer Recommendations

#### Cartographically-Rounded Depth (Affected Charts):

45ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

7 ½fm (12300\_1, 13006\_1, 13003\_1)

13.8m (5161\_1)

### S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 1:non-dangerous wreck  
 STATUS - 1:permanent  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 13.828 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Chart a Wk with a depth of 45 ft. in Latitude 41°17'15.864"N, Longitude 72°02'09.710"W.

**1.20) 1279/15 - Chart 50 Rk****Survey Summary**

**Survey Position:** 41° 17' 25.9" N, 072° 04' 47.8" W  
**Least Depth:** 15.41 m (= 50.55 ft = 8.425 fm = 8 fm 2.55 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-133.14:10:43.402 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 450\_1408  
**Profile/Beam:** 1279/15  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Rocky area, shoal of charted sounding.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/450_1408	1279/15	0.00	000.0	Primary
h11441/1005_200/2005-135/206_2139	0006	5.13	330.7	Secondary (grouped)
h11441/1005_100/2005-131/102_1920	0001	10.40	000.4	Secondary (grouped)
h11441/1005_200/2005-135/205_2248	0001	36.58	094.8	Secondary (grouped)
h11441/1005_200/2005-135/205_2248	0002	39.77	049.5	Secondary (grouped)
h11441/1005_100/2005-131/100_1948	0002	54.27	290.1	Secondary (grouped)
h11441/1005_200/2005-135/206_2139	0002	60.32	015.6	Secondary (grouped)
h11441/1005_200/2005-135/205_2248	0003	60.76	077.0	Secondary (grouped)
h11441/1005_200/2005-135/206_2139	0003	78.44	008.1	Secondary (grouped)
h11441/1005_200/2005-135/205_2248	0004	93.98	098.0	Secondary (grouped)

**Hydrographer Recommendations**

Chart per digital data.

**Cartographically-Rounded Depth (Affected Charts):**

50ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

8 ¼fm (12300\_1, 13006\_1, 13003\_1)

15.4m (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 - 15.408 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Chart a 50 Rk in Latitude N, Longitude W.

## 1.21) AWOIS 12421 - Delete 33 Rk - Chart 30 Rk

### Survey Summary

**Survey Position:** 41° 17' 57.4" N, 072° 04' 13.3" W  
**Least Depth:** 9.07 m (= 29.76 ft = 4.960 fm = 4 fm 5.76 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-137.15:43:55.328 (05/17/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-137 / 927\_1543  
**Profile/Beam:** 291/178  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky area, RESON 8125 shows that there is a large rock at this location which is slightly deeper than the charted sounding. There is also a large rock cluster within the AWOIS circle 115 meters north of this point. The rocks to the north is significantly shoal of charted depth

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-137/927_1543	291/178	0.00	000.0	Primary
H11224_LIDAR_ReqFldWrk.csv	8	4.05	238.0	Secondary
h11441/1005_100/2005-131/111_2021	0002	20.07	068.3	Secondary (grouped)
h11441/1014_mb/2005-137/932_1528	464/240	112.41	011.2	Secondary (grouped)

### Hydrographer Recommendations

Chart a rock with a depth of 30 feet in Latitude 41°17'57.389"N, Longitude 072°04'13.281"W.

#### Cartographically-Rounded Depth (Affected Charts):

30ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

9.1m (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 - 9.070 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur - Delete charted 33Rk and danger curve. Chart 30Rk and danger curve in Latitude 41°17'57.389"N, Longitude 072°04'13.281"W.

## 1.22) 1156/240 - Revise location of charted 9Rk

### Survey Summary

**Survey Position:** 41° 17' 44.1" N, 072° 06' 22.0" W  
**Least Depth:** 2.73 m (= 8.95 ft = 1.492 fm = 1 fm 2.95 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-142.14:45:39.148 (05/22/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-142 / 141\_1444  
**Profile/Beam:** 1156/240  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

[None]

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-142/141_1444	1156/240	0.00	000.0	Primary
h11441/1014_mb/2005-142/141_1444	1151/240	0.76	071.9	Secondary (grouped)
h11441/1014_mb/2005-142/141_1444	1139/240	2.65	067.9	Secondary (grouped)
h11441/1005_100/2005-134/260_1945	0004	18.28	024.9	Secondary (grouped)

### Hydrographer Recommendations

#### Cartographically-Rounded Depth (Affected Charts):

9ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

1 ½fm (12300\_1, 13006\_1, 13003\_1)

2.7m (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 - 2.728 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Revise location of charted 9 Rk to Latitude 41°17'44.081"N, Longitude 72°06'22.030"W.

## 1.23) Black Ledge Lighted Research Buoy Disproved - Defer to MCD

### Survey Summary

**Survey Position:** 41° 18' 18.0" N, 072° 03' 50.0" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** [None]  
**GP Dataset:** ChartGPs - ENC US4CN21M  
**GP No.:** AToN 49  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

This Buoy was not visible at or near this location during survey.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - ENC US4CN21M	AToN 49	0.00	000.0	Primary

### Hydrographer Recommendations

disproven

### S-57 Data

**Geo object 1:** Buoy, special purpose/general (BOYSPP)  
**Attributes:** BOYSHP - 4:pillar  
 CATSPM - 10:recording mark  
 COLOUR - 6:yellow  
 OBJNAM - Black Ledge Lighted Research Buoy  
 SORDAT - 19931110  
 STATUS - 8:private  
**Geo object 2:** Light (LIGHTS)  
**Attributes:** COLOUR - 6:yellow  
 LITCHR - 2:flashing  
 SIGGRP - (1)

SIGPER - 4.0 s

SORDAT - 19931110

STATUS - 8:private

## Office Notes

Defer to MSD source Data Branch for charting recommendation.

## 1.24) Vixens Ledge Lighted Research Buoy Disproved - Defer to MCD

### Survey Summary

**Survey Position:** 41° 18' 12.0" N, 072° 03' 17.0" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** [None]  
**GP Dataset:** ChartGPs - ENC US4CN21M  
**GP No.:** AToN 50  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

This buoy was not present during the time of this survey.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - ENC US4CN21M	AToN 50	0.00	000.0	Primary

### Hydrographer Recommendations

Disproven, remove from chart.

### S-57 Data

**Geo object 1:** Buoy, special purpose/general (BOYSPP)  
**Attributes:** BOYSHP - 4:pillar  
 CATSPM - 10:recording mark  
 COLOUR - 6:yellow  
 OBJNAM - Vixens Ledge Lighted Research Buoy  
 SORDAT - 19931110  
 STATUS - 8:private  
**Geo object 2:** Light (LIGHTS)  
**Attributes:** COLOUR - 6:yellow  
 LITCHR - 2:flashing  
 SIGGRP - (1)

SIGPER - 4.0 s

SORDAT - 19931110

STATUS - 8:private

## Office Notes

Defer to MSD source Dta Branch for charting recommendation.

## 1.25) ENC\_US4CN21M\_#58 RSD shoreline

### Survey Summary

**Survey Position:** 41° 18' 54.1" N, 072° 03' 48.5" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** [None]  
**GP Dataset:** ChartGPs - ENC US4CN21M  
**GP No.:** AToN 58  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Lighthouse, this contact is about 30m south of the lighthouse as indicated on raster chart 13212\_1

### Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - ENC US4CN21M	AToN 58	0.00	000.0	Primary

### Hydrographer Recommendations

Adjust ENC.

### S-57 Data

**Geo object 1:** Landmark (LNDMRK)  
**Attributes:** CATLMK - 17:tower  
 CONVIS - 1:visual conspicuous  
 FUNCTN - 33:light support  
 OBJNAM - Aband Avery Pt Lighthouse  
 SORDAT - 19990904  
 STATUS - 4:disused

### Office Notes

[None]



## 1.26) 903/109 - Revise location of 5Rk

### Survey Summary

**Survey Position:** 41° 20' 13.3" N, 072° 05' 44.7" W  
**Least Depth:** 1.63 m (= 5.35 ft = 0.892 fm = 0 fm 5.35 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-141.13:13:03.184 (05/21/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-141 / 503\_1312  
**Profile/Beam:** 903/109  
**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky area, current DTM shows rock to be south of charted location.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-141/503_1312	903/109	0.00	000.0	Primary
h11441/1005_100/2005-135/230_1217	0003	5.88	329.7	Secondary
h11441/1005_100/2005-135/231_1046	0006	6.79	263.0	Secondary (grouped)
h11441/1014_mb/2005-141/500_1321	893/93	18.65	147.2	Secondary (grouped)
h11441/1014_mb/2005-141/498_1313	732/172	21.10	122.8	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	59	27.91	131.0	Secondary (grouped)
h11441/1014_mb/2005-141/496_1319	670/30	34.05	119.3	Secondary (grouped)
h11441/1014_mb/2005-141/495_1322	569/208	39.66	109.7	Secondary (grouped)

### Hydrographer Recommendations

Chart a rock with a depth of 5 feet in Latitude 41°20'13.328"N, Longitude 072°05'44.697"W.

#### Cartographically-Rounded Depth (Affected Charts):

5ft (13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

0  $\frac{3}{4}$ fm (12300\_1, 13006\_1, 13003\_1)

1.6m (5161\_1)

## S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 1:depth known  
TECSOU - 2,3:found by side scan sonar,found by multi-beam  
VALSOU - 1.632 m  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Revise location of 5Rk to Latitude 41°20'13.328"N, Longitude 072°05'44.697"W.

## 1.27) 531/113 - Chart 2Rk

### Survey Summary

**Survey Position:** 41° 20' 17.9" N, 072° 05' 43.5" W  
**Least Depth:** 0.82 m (= 2.70 ft = 0.450 fm = 0 fm 2.70 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-141.13:03:20.801 (05/21/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-141 / 516\_1302  
**Profile/Beam:** 531/113  
**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Large rock cluster, as charted, this rock was surveyed over with launch 1014. This rock may dry during extremely low tides.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-141/516_1302	531/113	0.00	000.0	Primary
H11224_LIDAR_ReqFldWrk.csv	58	1.27	328.4	Secondary
h11441/1005_100/2005-135/231_1046	0004	2.44	188.8	Secondary (grouped)
h11441/1014_mb/2005-141/518_1258	679/190	5.88	143.4	Secondary (grouped)
h11441/1014_mb/2005-141/517_1305	649/135	6.14	075.4	Secondary (grouped)
h11441/1014_mb/2005-141/516_1302	640/4	8.47	022.2	Secondary (grouped)
h11441/1014_mb/2005-141/518_1258	587/162	8.55	091.7	Secondary (grouped)
h11441/1014_mb/2005-141/515_1254	797/225	11.65	340.9	Secondary (grouped)
h11441/1014_mb/2005-141/517_1305	740/213	12.82	069.9	Secondary (grouped)
h11441/1014_mb/2005-141/513_1300	570/164	12.82	001.6	Secondary (grouped)
h11441/1014_mb/2005-141/520_1301	763/1	14.88	142.8	Secondary (grouped)
h11441/1014_mb/2005-141/517_1305	786/14	15.13	050.8	Secondary (grouped)

### Hydrographer Recommendations

Chart a rock with a depth of 2 feet in Latitude 41°20'17.915"N, Longitude 072°05'43.469"W.

#### Cartographically-Rounded Depth (Affected Charts):

2ft (13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

0 ½fm (12300\_1, 13006\_1, 13003\_1)

.8m (5161\_1)

### **S-57 Data**

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

**Attributes:** QUASOU - 1:depth known

TECSOU - 2,3,7:found by side scan sonar,found by multi-beam,found by laser

VALSOU - 0.823 m

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur - Delete 3 Rk. Chart 2Rk in Latitude 41°20'17.915"N, Longitude 072°05'43.469"W.

## **2 - New Features**

## 2.1) 859\_2157\_0002 - chart per LIDAR data

### Survey Summary

**Survey Position:** 41° 18' 19.1" N, 072° 05' 24.4" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-316.04:07:46 (11/12/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-134 / 859\_2157  
**Contact/Point:** 0002/1  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, there is no MBES bathymetry over this contact. LIDAR coverage should be used to determine its depth.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-134/859_2157	0002	0.00	000.0	Primary

### Hydrographer Recommendations

Chart per LiDAR data if available.

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 2:depth unknown  
 TECSOU - 2:found by side scan sonar  
 WATLEV - 3:always under water/submerged

### Office Notes

[None]

## 2.2) 235\_1812\_0007 - chart area foul as per LIDAR

### Survey Summary

**Survey Position:** 41° 19' 38.3" N, 072° 04' 40.8" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-138.10:14:07 (05/18/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-135 / 235\_1812  
**Contact/Point:** 0007/1  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky area, too shoal for safe MBES development.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-135/235_1812	0007	0.00	000.0	Primary
H11224_LIDAR_OK.csv	93	26.13	293.1	Secondary
H11224_LIDAR_OK.csv	49	46.92	331.1	Secondary

### Hydrographer Recommendations

Chart as 'foul'. Use soundings from LIDAR.

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** TECSOU - 2:found by side scan sonar

### Office Notes

[None]

### 2.3) 245\_1728\_0001 - Rk as per Lidar

#### Survey Summary

**Survey Position:** 41° 19' 05.0" N, 072° 04' 35.2" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-316.09:34:39 (11/12/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-135 / 245\_1728  
**Contact/Point:** 0001/1  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

large rock, no bathymetry data over it.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-135/245_1728	0001	0.00	000.0	Primary

#### Hydrographer Recommendations

Verify depth with LIDAR if possible.

#### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 2:depth unknown  
 TECSOU - 2:found by side scan sonar  
 WATLEV - 3:always under water/submerged

#### Office Notes

[None]



## 2.4) 253\_1118\_0001 - chart area Rky

### Survey Summary

**Survey Position:** 41° 18' 26.2" N, 072° 05' 55.2" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-138.07:01:34 (05/18/2005)  
**Survey Line:** h11441 / 1005\_100 / 2005-135 / 253\_1118  
**Contact/Point:** 0001/1  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky, foul area

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_100/2005-135/253_1118	0001	0.00	000.0	Primary

### Hydrographer Recommendations

Chart as rky

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** OBJNAM - Foul area  
 TECSOU - 2:found by side scan sonar  
 WATLEV - 3:always under water/submerged

### Office Notes

Concur

## 2.5) 16460/101 - Chart 12 Rk

### Survey Summary

**Survey Position:** 41° 18' 49.9" N, 072° 02' 16.8" W  
**Least Depth:** 3.80 m (= 12.47 ft = 2.078 fm = 2 fm 0.47 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-132.17:44:57.702 (05/12/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-132 / 235\_1737  
**Profile/Beam:** 16460/101  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock significantly shoal of charted depth.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-132/235_1737	16460/101	0.00	000.0	Primary
h11441/1005_100/2005-134/320_1829	0001	3.97	100.2	Secondary (grouped)
h11441/1005_100/2005-133/877_2212	0002	6.32	243.3	Secondary (grouped)
h11441/1005_100/2005-133/320_2234	0001	6.59	300.7	Secondary (grouped)

### Hydrographer Recommendations

Update sounding at this location per digital data, adjust contour line.

#### Cartographically-Rounded Depth (Affected Charts):

12ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

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

3.8m (5161\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 3.801 m

WATLEV - 3:always under water/submerged

### **Office Notes**

Chart a Rk with a depth of 12 ft. in Latitude 41°18'49.870"N, Longitude 72°02'16.766"W.

## 2.6) 1692/19 - Chart 19 Rk

### Survey Summary

**Survey Position:** 41° 18' 21.3" N, 072° 02' 23.6" W  
**Least Depth:** 5.76 m (= 18.89 ft = 3.149 fm = 3 fm 0.89 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-132.16:46:44.943 (05/12/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-132 / 283\_1637  
**Profile/Beam:** 1692/19  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky area, MBES show it to be shoal of charted sounding and reported LIDAR data at this location

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-132/283_1637	1692/19	0.00	000.0	Primary
h11441/1005_100/2005-133/283_1951	0001	16.45	253.5	Secondary (grouped)
H11224_LIDAR_OK.csv	25	18.16	009.1	Secondary
h11441/1005_100/2005-132/283_1637	0001	41.55	050.0	Secondary (grouped)
h11441/1005_100/2005-133/282_2007	0002	42.90	164.3	Secondary (grouped)
h11441/1005_mb/2005-140/472_2004	1051/30	73.09	170.2	Secondary (grouped)
h11441/1005_100/2005-132/284_1509	0002	74.67	339.5	Secondary (grouped)
h11441/1005_100/2005-133/282_2007	0009	85.88	206.5	Secondary (grouped)

### Hydrographer Recommendations

Chart per digital data.

#### Cartographically-Rounded Depth (Affected Charts):

19ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

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

5.8m (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 - 5.759 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Chart a Rk with a depth of 19 ft. in Latitude 41°18'21.298"N, Longitude 72°02'23.557"W.

## 2.7) 1727/5 - Chart 5 Rk

### Survey Summary

**Survey Position:** 41° 16' 44.9" N, 072° 01' 23.0" W  
**Least Depth:** 1.67 m (= 5.49 ft = 0.915 fm = 0 fm 5.49 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-137.21:25:02.877 (05/17/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-137 / 176\_2124  
**Profile/Beam:** 1727/5  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky shelf which is shoal of charted soundings.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-137/176_2124	1727/5	0.00	000.0	Primary
H11224_LIDAR_ReqFldWrk.csv	36	6.11	279.2	Secondary (grouped)
h11441/1005_100/2005-133/328_1517	0006	46.18	208.7	Secondary (grouped)
h11441/1005_100/2005-133/328_1517	0007	69.08	126.4	Secondary (grouped)
h11441/1005_100/2005-133/328_1517	0005	81.44	276.9	Secondary (grouped)
h11441/1005_100/2005-133/328_1517	0004	121.79	289.9	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	35	125.84	309.7	Secondary (grouped)
h11441/1005_mb/2005-137/207_2044	1764/11	144.83	251.4	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	37	148.91	030.2	Secondary (grouped)

### Hydrographer Recommendations

Chart per digital data.

#### Cartographically-Rounded Depth (Affected Charts):

5ft (13212\_1, 13214\_1, 12372\_1, 13205\_1)

0  $\frac{3}{4}$ fm (12300\_1, 13006\_1, 13003\_1)

1.7m (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 - 1.673 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Chart a Rk with a depth of 5 ft. in Latitude 41°16'44.889"N, Longitude 72°01'23.022"W.

## 2.8) 719/34 - Chart dang. 17 Rk

### Survey Summary

**Survey Position:** 41° 17' 23.8" N, 072° 06' 18.5" W  
**Least Depth:** 5.37 m (= 17.60 ft = 2.934 fm = 2 fm 5.60 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-138.21:48:08.627 (05/18/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-138 / 163\_2147  
**Profile/Beam:** 719/34  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, as charted

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-138/163_2147	719/34	0.00	000.0	Primary
H11225_LIDAR_TestArea.csv	82	94.70	209.1	Secondary (grouped)
H11225_LIDAR_ReqFldWrk.csv	41	101.09	209.8	Secondary (grouped)

### Hydrographer Recommendations

[None]

#### Cartographically-Rounded Depth (Affected Charts):

17ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

2 ¾fm (12300\_1, 13006\_1, 13003\_1)

5.4m (5161\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 2,7:found by side scan sonar,found by laser  
 VALSOU - 5.365 m



VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### Office Notes

[None]

## 2.9) 570/5 - Chart 13 Rk

### Survey Summary

**Survey Position:** 41° 19' 05.8" N, 072° 04' 28.5" W  
**Least Depth:** 4.14 m (= 13.58 ft = 2.263 fm = 2 fm 1.58 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-140.12:46:17.598 (05/20/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-140 / 056\_1245  
**Profile/Beam:** 570/5  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Large rock. shoal of charted sounding..

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-140/056_1245	570/5	0.00	000.0	Primary
h11441/1005_100/2005-135/235_1812	0010	2.60	049.6	Secondary (grouped)
h11441/1005_100/2005-135/246_1725	0002	4.52	152.1	Secondary (grouped)

### Hydrographer Recommendations

Chart per digital data, move charted 18' contour.

#### Cartographically-Rounded Depth (Affected Charts):

13ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

2 ¼fm (12300\_1, 13006\_1, 13003\_1)

4.1m (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 - 4.139 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Chart a 13 Rk in Latitude 41°19'05.812"N, Longitude 72°04'28.508"W.

## 2.10) 273/13 - Chart 11 Rk

### Survey Summary

**Survey Position:** 41° 18' 42.0" N, 072° 04' 13.1" W  
**Least Depth:** 3.55 m (= 11.63 ft = 1.939 fm = 1 fm 5.63 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-140.12:30:48.861 (05/20/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-140 / 341\_1230  
**Profile/Beam:** 273/13  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

group of rocks various sizes,

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-140/341_1230	273/13	0.00	000.0	Primary
h11441/1005_100/2005-133/279_2148	0001	8.31	058.1	Secondary (grouped)
h11441/1005_100/2005-133/279_2104	0004	13.19	272.6	Secondary (grouped)
h11441/1005_100/2005-133/279_2104	0005	23.98	354.1	Secondary (grouped)
h11441/1005_100/2005-133/879_2119	0001	25.15	254.9	Secondary (grouped)
h11441/1005_100/2005-132/676_1544	0020	81.09	047.2	Secondary (grouped)

### Hydrographer Recommendations

Chart per digital data.

#### Cartographically-Rounded Depth (Affected Charts):

11ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

3.5m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known

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

VALSOU - 3.546 m

WATLEV - 3:always under water/submerged

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

**Attributes:** QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.546 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### Office Notes

Chart a Rk with a depth of 11 ft. in Latitude 41°17'10.656"N, Longitude 72°04'48.408"W.

## 2.11) 1019/2 - Chart 10 Obstrn

### Survey Summary

**Survey Position:** 41° 18' 58.5" N, 072° 04' 22.5" W  
**Least Depth:** 3.13 m (= 10.27 ft = 1.712 fm = 1 fm 4.27 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-141.16:02:38.237 (05/21/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-141 / 019\_1602  
**Profile/Beam:** 1019/2  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, or south-west edge of Black Rock, depth comparable to charted sounding.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-141/019_1602	1019/2	0.00	000.0	Primary
h11441/1005_100/2005-132/235_1739	0013	26.78	100.8	Secondary

### Hydrographer Recommendations

Chart per digital datum.

#### Cartographically-Rounded Depth (Affected Charts):

10ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

1  $\frac{3}{4}$ fm (12300\_1, 13006\_1, 13003\_1)

3.1m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known  
 STATUS - 1:permanent  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 3.130 m  
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Chart a 10 ft. Obstn. in Latitude 41°18'58.535"N, Longitude 72°04'22.463"W.

## 2.12) 504/237 - Chart 39 Rk

### Survey Summary

**Survey Position:** 41° 17' 01.8" N, 072° 06' 12.8" W  
**Least Depth:** 11.88 m (= 38.99 ft = 6.498 fm = 6 fm 2.99 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-133.16:04:03.158 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 363\_1602  
**Profile/Beam:** 504/237  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky area, significantly shoal of nearest sounding.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/363_1602	504/237	0.00	000.0	Primary
h11441/1005_100/2005-132/123_2024	0004	24.37	333.2	Secondary (grouped)
h11441/1005_100/2005-132/124_2009	0013	42.44	049.1	Secondary (grouped)
h11441/1005_100/2005-132/123_2024	0005	63.78	090.3	Secondary (grouped)
h11441/1005_100/2005-132/123_2024	0003	121.58	241.8	Secondary (grouped)

### Hydrographer Recommendations

Chart present survey depths.

#### Cartographically-Rounded Depth (Affected Charts):

39ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

6 ½fm (12300\_1, 13006\_1, 13003\_1)

11.9m (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 - 11.883 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Chart a 39 Rk in Latitude 41°17'01.764"N, Longitude 72°06'12.776"W and chart area rocky.

## 2.13) 2753/199 - Chart 17 Obstrn

### Survey Summary

**Survey Position:** 41° 21' 54.3" N, 072° 05' 03.5" W  
**Least Depth:** 5.22 m (= 17.14 ft = 2.857 fm = 2 fm 5.14 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-135.14:29:29.563 (05/15/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-135 / 124\_1427  
**Profile/Beam:** 2753/199  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

obstruction. obstn is deeper than sounding currently on raster chart.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-135/124_1427	2753/199	0.00	000.0	Primary

### Hydrographer Recommendations

Chart per DTM

#### Cartographically-Rounded Depth (Affected Charts):

17ft (13213\_1, 12372\_4, 12354\_1, 13205\_1)

2  $\frac{3}{4}$ fm (12300\_1, 13006\_1, 13003\_1)

5.2m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 3:found by multi-beam  
 VALSOU - 5.224 m  
**Geo object 2:** Sounding (SOUNDG)  
**Attributes:** INFORM - at edge of swath.  
 QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

## Office Notes

Chart an Obstn with a depth of 17 ft. in Latitude 41°21'54.335"N, Longitude 72°05'03.467"W.

## 2.14) 2507/87 - Chart 26 ft. Shoal

### Survey Summary

**Survey Position:** 41° 21' 27.4" N, 072° 05' 26.1" W  
**Least Depth:** 8.06 m (= 26.45 ft = 4.409 fm = 4 fm 2.45 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-135.11:25:37.281 (05/15/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-135 / 191\_1122  
**Profile/Beam:** 2507/87  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Debris, shoal of charted 30 foot contour.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-135/191_1122	2507/87	0.00	000.0	Primary

### Hydrographer Recommendations

Chart per digital data.

#### Cartographically-Rounded Depth (Affected Charts):

26ft (13213\_1, 12372\_4, 12354\_1, 13205\_1)

4 ¼fm (12300\_1, 13006\_1, 13003\_1)

8.1m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 8.063 m  
 WATLEV - 3:always under water/submerged

## Office Notes

Chart a shoal sounding of 26 ft.

## 2.15) 329/180 - Chart 24 Rks

### Survey Summary

**Survey Position:** 41° 18' 04.6" N, 072° 02' 38.1" W  
**Least Depth:** 7.32 m (= 24.01 ft = 4.002 fm = 4 fm 0.01 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-136.17:13:37.795 (05/16/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-136 / 641\_1713  
**Profile/Beam:** 329/180  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky shoal, shoal of charted sounding.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-136/641_1713	329/180	0.00	000.0	Primary
H11224_LIDAR_OK.csv	24	0.35	064.3	Secondary
h11441/1005_100/2005-131/288_2203	0001	25.48	353.7	Secondary (grouped)
h11441/1005_100/2005-131/287_2220	0004	38.36	006.6	Secondary (grouped)
h11441/1014_mb/2005-136/645_1720	209/26	148.35	031.1	Secondary (grouped)
h11441/1005_100/2005-131/289_2150	0003	154.34	028.3	Secondary (grouped)

### Hydrographer Recommendations

Chart present survey depth.

#### Cartographically-Rounded Depth (Affected Charts):

24ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

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

7.3m (5161\_1)

### S-57 Data

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

**Attributes:** INFORM - Chart 24 Rks

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 7.319 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur - Chart 24 ft Rks in Latitude 41°18'04.595"N, Longitude 72°02'38.073"W.

## 2.16) 271/85 - Chart 28 Rk

### Survey Summary

**Survey Position:** 41° 18' 00.7" N, 072° 04' 08.5" W  
**Least Depth:** 8.62 m (= 28.26 ft = 4.711 fm = 4 fm 4.26 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-137.15:56:41.550 (05/17/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-137 / 922\_1556  
**Profile/Beam:** 271/85  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

RESON 8125 shows tall rock at this location. Minimum depth is significantly shoal of charted sounding.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-137/922_1556	271/85	0.00	000.0	Primary
h11441/1005_100/2005-131/112_2027	0001	5.86	162.5	Secondary (grouped)
h11441/1005_100/2005-131/111_2021	0004	13.97	120.6	Secondary (grouped)

### Hydrographer Recommendations

Chart per digital data, adjust 30' charted contour.

#### Cartographically-Rounded Depth (Affected Charts):

28ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

4  $\frac{3}{4}$ fm (12300\_1, 13006\_1, 13003\_1)

8.6m (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 - 8.615 m



VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Chart a Rk with a depth of 28 ft. in Latitude 41°18'00.669"N, Longitude 72°04'08.495"W.

## 2.17) 391/88 - Chart 10 Rk

### Survey Summary

**Survey Position:** 41° 17' 55.4" N, 072° 06' 12.1" W  
**Least Depth:** 3.10 m (= 10.16 ft = 1.693 fm = 1 fm 4.16 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-142.12:50:24.868 (05/22/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-142 / 153\_1249  
**Profile/Beam:** 391/88  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, significantly shoal of charted sounding.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-142/153_1249	391/88	0.00	000.0	Primary
h11441/1005_100/2005-134/252_1858	0003	7.63	195.3	Secondary
h11441/1005_100/2005-134/258_1918	0001	12.36	135.5	Secondary
H11225_LIDAR_OK.csv	80	25.86	225.0	Secondary (grouped)
H11225_LIDAR_TestArea.csv	55	28.56	229.3	Secondary (grouped)
h11441/1014_mb/2005-142/156_1251	159/56	35.43	209.6	Secondary (grouped)

### Hydrographer Recommendations

Chart per digital data.

#### Cartographically-Rounded Depth (Affected Charts):

10ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

1 ¾fm (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 - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 3.096 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Chart a Rk with a depth of 10 ft. in Latitude 41°17'55.438"N, Longitude 72°06'12.088"W.

## 2.18) 523/77 - Chart 8 Rk

### Survey Summary

**Survey Position:** 41° 17' 55.6" N, 072° 06' 05.1" W  
**Least Depth:** 2.64 m (= 8.66 ft = 1.444 fm = 1 fm 2.66 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-142.12:37:08.531 (05/22/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-142 / 175\_1236  
**Profile/Beam:** 523/77  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Large rock, shoal of charted depth.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-142/175_1236	523/77	0.00	000.0	Primary

### Hydrographer Recommendations

Chart per digital data, adjust charted 12 foot contour.

#### Cartographically-Rounded Depth (Affected Charts):

8ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

1 ½fm (12300\_1, 13006\_1, 13003\_1)

2.6m (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 - 2.641 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

## Office Notes

Chart a Rk with a depth of 8 ft. in Latitude 41°17'55.573"N, Longitude 72°06'05.064"W.

## 2.19) 1159/187 - Chart 10 Rk

### Survey Summary

**Survey Position:** 41° 21' 27.7" N, 072° 05' 31.6" W  
**Least Depth:** 3.02 m (= 9.90 ft = 1.651 fm = 1 fm 3.90 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-142.21:12:39.019 (05/22/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-142 / 216\_2111  
**Profile/Beam:** 1159/187  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Large rock on south-west side of Long Dock.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-142/216_2111	1159/187	0.00	000.0	Primary
h11441/1014_mb/2005-135/414_1024	9159/225	15.70	047.0	Secondary
h11441/1014_mb/2005-135/414_1024	9133/226	15.94	056.6	Secondary
h11441/1005_100/2005-135/216_1938	0020	16.29	034.8	Secondary

### Hydrographer Recommendations

Chart per digital data.

#### Cartographically-Rounded Depth (Affected Charts):

10ft (13213\_1, 12372\_4, 12354\_1, 13205\_1)

1 ½fm (12300\_1, 13006\_1, 13003\_1)

3.0m (5161\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 3.019 m

WATLEV - 3:always under water/submerged

### **Office Notes**

Chart a Rk with a depth of 10 ft. in Latitude 41°21'27.720"N, Longitude 72°05'31.579"W.

## 2.20) 1268/5 - SEE GOOGLE EARTH, defer to MCD/RSD

### Survey Summary

**Survey Position:** 41° 21' 34.9" N, 072° 05' 23.1" W  
**Least Depth:** 6.09 m (= 19.97 ft = 3.328 fm = 3 fm 1.97 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-135.18:57:18.668 (05/15/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-135 / 500\_1856  
**Profile/Beam:** 1268/5  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Addition line of pile clusters, These are large dolphins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-135/500_1856	1268/5	0.00	000.0	Primary
h11441/1005_100/2005-134/213_2317	0004	0.51	228.4	Secondary
h11441/1005_100/2005-135/209_1835	0005	5.04	211.2	Secondary
h11441/1005_100/2005-135/500_1856	0003	7.26	125.5	Secondary (grouped)
h11441/1005_100/2005-135/211_1849	0003	9.36	093.3	Secondary
h11441/1005_100/2005-135/211_1849	0004	19.24	104.5	Secondary
h11441/1014_mb/2005-135/142_1152	3186/128	40.86	114.9	Secondary

### Hydrographer Recommendations

Chart a dolphin in Latitude 41°21'34.909"N, Longitude 072°05'23.056"W.

#### Cartographically-Rounded Depth (Affected Charts):

20ft (13213\_1, 12372\_4, 12354\_1, 13205\_1)

3 ¼fm (12300\_1, 13006\_1, 13003\_1)

6.1m (5161\_1)



### **S-57 Data**

[None]

### **Office Notes**

Concur w/clarification. Further research by RSD is required, a visual inspection using Google Earth and Google Maps shows the dolphins in this area have surface mooring over them. Defer to MCD and RSD Shoreline for further inspection via photogrammetry.

## 2.21) ENC\_US4CN21M\_#88 - Delete wreck from ENC

### Survey Summary

**Survey Position:** 41° 16' 55.7" N, 072° 01' 43.8" W  
**Least Depth:** 28.60 m (= 93.83 ft = 15.639 fm = 15 fm 3.83 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** [None]  
**GP Dataset:** ChartGPs - ENC US4CN21M  
**GP No.:** Danger 88  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

ENC shows 'wreck' at this location. 8101 MBES from this survey does not show any object near this location.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - ENC US4CN21M	Danger 88	0.00	000.0	Primary

### Hydrographer Recommendations

Delete wreck from ENC.

### S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 1:non-dangerous wreck  
 SORDAT - 19990904  
 VALSOU - 28.600 m  
 WATLEV - 3:always under water/submerged

### Office Notes

concur

**2.22) 777/3 - Chart 9 ft rock****Survey Summary**

**Survey Position:** 41° 19' 14.2" N, 072° 05' 13.9" W  
**Least Depth:** 2.84 m (= 9.30 ft = 1.550 fm = 1 fm 3.30 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-137.12:08:29.435 (05/17/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-137 / 101\_1208  
**Profile/Beam:** 777/3  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Large rock

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-137/101_1208	777/3	0.00	000.0	Primary
H11224_LIDAR_ReqFldWrk.csv	20	1.16	004.4	Secondary
h11441/1005_100/2005-135/231_1048	0003	8.25	344.8	Secondary
h11441/1005_mb/2005-137/101_1208	610/4	13.87	006.8	Secondary (grouped)
h11441/1005_100/2005-135/231_1048	0004	31.03	102.8	Secondary

**Hydrographer Recommendations**

Bend 12' contour eastward around this obstn.

**Cartographically-Rounded Depth (Affected Charts):**

9ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

1 ½fm (12300\_1, 13006\_1, 13003\_1)

2.8m (5161\_1)

**S-57 Data**

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

**Attributes:** QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 2,7:found by side scan sonar,found by laser

VALSOU - 2.835 m

VERDAT - 12:Mean lower low water

## Office Notes

Chart 9 ft depth.

## 2.23) 4550/1 Chart 24 Rk

### Survey Summary

**Survey Position:** 41° 18' 51.4" N, 072° 05' 07.1" W  
**Least Depth:** 7.52 m (= 24.68 ft = 4.113 fm = 4 fm 0.68 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-140.14:18:55.756 (05/20/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-140 / 442\_1415  
**Profile/Beam:** 4550/1  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock in anchorage 'C', MBES shows minimum depth to be shoal of charted sounding.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-140/442_1415	4550/1	0.00	000.0	Primary
h11441/1005_200/2005-135/205_2249	0001	5.57	188.0	Secondary

### Hydrographer Recommendations

Chart present survey depths.

#### Cartographically-Rounded Depth (Affected Charts):

24ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

7.5m (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 - 7.522 m  
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur, chart a rock with a depth of 24 ft. in Latitude N, Longitude W.

## 2.24) 754/212 - Chart 15 Obstrn

### Survey Summary

**Survey Position:** 41° 20' 50.4" N, 072° 05' 19.3" W  
**Least Depth:** 4.50 m (= 14.78 ft = 2.463 fm = 2 fm 2.78 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-141.14:39:19.848 (05/21/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-141 / 133\_1438  
**Profile/Beam:** 754/212  
**Charts Affected:** 13213\_1, 12372\_4, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Pipe or pile sticking up casting shadow in Klein SSS image, pile does not reach water surface.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-141/133_1438	754/212	0.00	000.0	Primary
h11441/1005_100/2005-135/218_1400	0004	3.95	134.3	Secondary

### Hydrographer Recommendations

#### Cartographically-Rounded Depth (Affected Charts):

15ft (13213\_1, 12372\_4, 12372\_1, 12354\_1, 13205\_1)

2 ½fm (12300\_1, 13006\_1, 13003\_1)

4.5m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 2,3:found by side scan sonar,found by multi-beam  
 VALSOU - 4.505 m  
 WATLEV - 3:always under water/submerged

## Office Notes

Chart a 15 Obsn in Latitude 41°20'50.399"N, Longitude 72°05'19.282"W.



### **3 - AWOIS Features**

### 3.1) AWOIS 11885 - Chart 15 ft depth

#### Primary Feature for AWOIS Item #11885

**Search Position:** 41° 19' 50.7" N, 072° 04' 54.1" W  
**Historical Depth:** 4.88 m  
**Search Radius:** 50  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** SEARCH 50 M RADIUS AROUND EACH OF THE TWO POSITIONS GIVEN BELOW IN HISTORY

#### History Notes:

UNKNOWN SOURCE DOCUMENT-- TWO 16 FT SOUNDINGS AT CHARTED WESTERN END OF PIPELINE. SOUNDINGS NOW CHARTED IN POSITIONS: ■(1) 41°19'50.69" N 072°04'54.14" W (NAD 83)■(2) 41°18'48.12" N 072°03'43.83" W (NAD 83) ■■NOT SEEN ON MOST RECENT PRIOR SURVEY. ENTERED 1/9/04 JCM .■■■ BP102603/77 -- COE; 18 FT SOUNDING FROM AN ARMY CORPS OF ENGINEERS SURVEY OF THE CHANNEL LEADING TO NEW LONDON HARBOR. ENTERED 1/9/04 JCM .

#### Survey Summary

**Survey Position:** 41° 19' 50.8" N, 072° 04' 53.4" W  
**Least Depth:** 4.57 m (= 15.00 ft = 2.501 fm = 2 fm 3.00 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-117.18:44:35.512 (04/27/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-117 / 164\_1840  
**Profile/Beam:** 4977/39  
**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Charted sewer line. RESON 8101 MBES datum show pipe discharges to be slightly shoal of charted soundings suggest.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-117/164_1840	4977/39	0.00	000.0	Primary
h11441/1005_100/2005-135/101_1447	0004	5.04	188.5	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 11885	17.73	075.8	Secondary
h11441/1005_100/2005-135/234_1800	0007	22.22	053.0	Secondary
h11441/1005_100/2005-135/242_1538	0002	25.85	088.1	Secondary
h11441/1005_100/2005-135/243_1740	0003	68.17	286.5	Secondary (grouped)
h11441/1005_mb/2005-117/161_1911	596/101	86.84	012.3	Secondary (grouped)

## Hydrographer Recommendations

Chart a depth of 15 feet in Latitude 41°19'49.119"N, Longitude 072°04'52.821"W.

### Cartographically-Rounded Depth (Affected Charts):

15ft (13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

2 ½fm (12300\_1, 13006\_1, 13003\_1)

4.6m (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 - Delete 16 ft depth. Chart 15 ft depth in Latitude 41°19'50.841"N, Longitude 072°04'53.364"W.

### 3.2) AWOIS 12164 - Chart 14 ft depth

#### Primary Feature for AWOIS Item #12164

**Search Position:** 41° 17' 44.3" N, 072° 05' 25.4" W  
**Historical Depth:** 4.88 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 16 FT SOUNDING NOW CHARTED IN POSITION: 41°17'44.28" N 072°05'25.36" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 17' 43.8" N, 072° 05' 25.7" W  
**Least Depth:** 4.31 m (= 14.14 ft = 2.357 fm = 2 fm 2.14 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-131.18:08:21.611 (05/11/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-131 / 107\_1804  
**Profile/Beam:** 4872/101  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Sarah Ledge, at charted location. RESON 8125 MBES shows it to be slightly shoal of charted depth.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-131/107_1804	4872/101	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12164	16.71	201.0	Secondary
h11441/1005_100/2005-134/266_2100	0001	35.19	345.9	Secondary (grouped)
h11441/1005_100/2005-134/265_2050	0001	43.37	092.1	Secondary (grouped)
h11441/1005_100/2005-131/107_1804	0002	47.61	355.7	Secondary (grouped)
h11441/1005_100/2005-131/107_1804	0001	55.95	316.1	Secondary (grouped)
ChartGPs - ENC US4CN21M	AToN 19	74.05	309.9	Secondary (grouped)
h11441/1005_100/2005-131/106_1812	0001	104.15	263.5	Secondary (grouped)
h11441/1005_100/2005-131/106_1810	0001	119.94	267.4	Secondary (grouped)

## Hydrographer Recommendations

Chart a depth of 14 feet in Latitude 41°17'43.795"N, Longitude 072°05'25.657"W.

### Cartographically-Rounded Depth (Affected Charts):

14ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

2 ¼fm (12300\_1, 13006\_1, 13003\_1)

4.3m (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 - Chart a 14 ft depth in Latitude 41°17'43.795"N, Longitude 072°05'25.657"W.

### 3.3) AWOIS 11913 - Chart a 57Wk

#### Primary Feature for AWOIS Item #11913

**Search Position:** 41° 15' 56.2" N, 072° 05' 17.7" W  
**Historical Depth:** 15.85 m  
**Search Radius:** 100  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

FE343/90; OPR-B660 -- 200% SIDE SCAN SONAR INDICATES A WRECK IN POSITION 41/15/56.2 NORTH LATITUDE, 072/05/17.7 WEST LONGITUDE (NAD83). DIVER INVESTIGATION YIELDED A LEAST DEPTH OF 16-METERS (52-FOOT DANGEROUS WRECK CHARTED). FOUR OTHER SIGNIFICANT CONTACTS WERE LOCATED IN THE IMMEDIATE VICINITY AND WERE DEVELOPED WITH SINGLE BEAM. (ENTERED 8/03 BY CG)

#### Survey Summary

**Survey Position:** 41° 15' 56.2" N, 072° 05' 17.6" W  
**Least Depth:** 17.57 m (= 57.63 ft = 9.606 fm = 9 fm 3.63 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-131.16:56:11.320 (05/11/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-131 / 937\_1652  
**Profile/Beam:** 4010/85  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Wreck as charted, RESON 8101 MBES shows minimum depth to be deeper than charted sounding.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-131/937_1652	4010/85	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 11913	2.19	061.8	Secondary
h11441/1005_100/2005-131/937_1652	0001	3.22	217.3	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	45	6.54	069.7	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 86	7.89	240.8	Secondary (grouped)

## Hydrographer Recommendations

Chart a wreck with as depth of 57 feet in Latitude 41°15'56.233"N, Longitude 072°05'17.617"W.

### Cartographically-Rounded Depth (Affected Charts):

57ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

9 ½fm (12300\_1, 13006\_1, 13003\_1)

17.6m (5161\_1)

### S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 1:non-dangerous wreck  
STATUS - 1:permanent  
TECSOU - 1,2:found by echo-sounder,found by side scan sonar  
VALSOU - 17.567 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

### Office Notes

Concur - Delete 52Wk and danger curve. Chart a 57Wk and danger curve in Latitude 41°15'56.233"N, Longitude 072°05'17.617"W.

### 3.4) AWOIS 12405 - Chart 44Rk and danger curve

#### Primary Feature for AWOIS Item #12405

**Search Position:** 41° 17' 08.0" N, 072° 04' 56.7" W  
**Historical Depth:** 13.11 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

FE-377/92 -- NOS; 43 FT ROCK IN POSITION: 41°17'08.04" N 072°04'56.76" W [NAD 83] [ENTERED 4/19/04 JCM]

#### Survey Summary

**Survey Position:** 41° 17' 08.0" N, 072° 04' 57.4" W  
**Least Depth:** 13.40 m (= 43.96 ft = 7.326 fm = 7 fm 1.96 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-132.20:48:29.950 (05/12/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-132 / 122\_2041  
**Profile/Beam:** 9064/30  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky area, RESON 8101 MBES shows it to be at depth and position comparable to the chart.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-132/122_2041	9064/30	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12405	17.92	270.9	Secondary
ChartGPs - ENC US4CN21M	Danger 60	29.26	220.2	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	4	38.30	247.6	Secondary (grouped)



## Hydrographer Recommendations

Chart a rock with a depth of 44 feet in Latitude 41°17'08.049"N, Longitude 072°04'57.438"W.

### Cartographically-Rounded Depth (Affected Charts):

44ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

7 ¼fm (12300\_1, 13006\_1, 13003\_1)

13.4m (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 - 13.398 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete charted 43Rk and danger curve. Chart a 44Rk and danger curve in Latitude 41°17'08.049"N, Longitude 72°04'57.438"W.

### 3.5) AWOIS 12407 - Chart a 40 Rk

#### Primary Feature for AWOIS Item #12407

**Search Position:** 41° 17' 01.5" N, 072° 04' 28.0" W  
**Historical Depth:** 12.19 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

FE-377 (9/8/93) -- 40 FT ROCK IN POSITION: 41°17'01.47" N 072°04'27.98" W [NAD 83] [ENTERED 4/19/04 JCM]

#### Survey Summary

**Survey Position:** 41° 17' 01.1" N, 072° 04' 26.4" W  
**Least Depth:** 12.28 m (= 40.29 ft = 6.714 fm = 6 fm 4.29 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-132.20:26:56.672 (05/12/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-132 / 123\_2023  
**Profile/Beam:** 4083/16  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock RESON 8101 shows it to be comparable to charted depth and location.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-132/123_2023	4083/16	0.00	000.0	Primary
h11441/1005_100/2005-132/123_2023	0001	14.65	276.7	Secondary
H11224_LIDAR_ReqFldWrk.csv	6	31.11	125.1	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12407	38.83	107.1	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 62	80.60	168.6	Secondary (grouped)

## Hydrographer Recommendations

Chart a rock with a depth of 40 feet in Latitude 41°17'01.101"N, Longitude 072°04'26.390"W.

### Cartographically-Rounded Depth (Affected Charts):

40ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

6 ¾fm (12300\_1, 13006\_1, 13003\_1)

12.3m (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 - 12.279 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete charted 40Rk and danger curve. Chart a 40Rk and danger curve in Latitude 41°17'01.101"N, Longitude 072°04'26.390"W.

### 3.6) AWOIS 12408 - Chart 7 Rk

#### Primary Feature for AWOIS Item #12408

**Search Position:** 41° 18' 20.2" N, 072° 04' 37.8" W  
**Historical Depth:** 2.13 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H08966 (1968) --7 FT SOUNDING NOW CHARTED IN POSITION: 41°18'20.23 N 072°04'37.83" W [NAD 83] [ENTERED 4/19/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 19.6" N, 072° 04' 37.1" W  
**Least Depth:** 2.07 m (= 6.79 ft = 1.132 fm = 1 fm 0.79 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-132.18:17:22.946 (05/12/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-132 / 247\_1816  
**Profile/Beam:** 2629/7  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock outcrop immediatly south-east of New London Ledge light. Good MBES coverage of this shoal.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-132/247_1816	2629/7	0.00	000.0	Primary
h11441/1005_100/2005-132/247_1816	0006	24.48	318.7	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12408	25.15	136.4	Secondary (grouped)
h11441/1005_100/2005-132/244_1835	0010	25.45	251.9	Secondary
h11441/1005_100/2005-132/247_1816	0007	25.61	305.4	Secondary
h11441/1005_100/2005-132/848_1820	0001	33.44	324.3	Secondary (grouped)
h11441/1005_200/2005-135/200_2115	0001	202.78	108.5	Secondary (grouped)

## Hydrographer Recommendations

Chart a depth of 7 feet in Latitude 41°18'19.641"N, Longitude 072°04'37.087"W.

### Cartographically-Rounded Depth (Affected Charts):

7ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

2.1m (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 - 2.070 m

VERDAT - 12:Mean lower low water

WATLEV - 2:always dry

## Office Notes

Concur - Chart a Rk with a depth of 7 ft in Latitude 41°18'19.641"N, Longitude 072°04'37.087"W.

### 3.7) AWOIS 12165 - Chart a 9Rk

#### Primary Feature for AWOIS Item #12165

**Search Position:** 41° 18' 38.6" N, 072° 03' 46.3" W  
**Historical Depth:** 3.05 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 10 FT SOUNDING FROM A ROCK NOW CHARTED IN POSITION: 41°18'38.56" N 072°03'46.21" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 38.6" N, 072° 03' 46.1" W  
**Least Depth:** 2.82 m (= 9.27 ft = 1.544 fm = 1 fm 3.27 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-133.21:15:14.722 (05/13/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-133 / 279\_2104  
**Profile/Beam:** 4073/6  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock cluster as charted but MBES shows it to be slightly shoal of the charted soundings. Found with RESON 8101 and Klein 5000 sss

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-133/279_2104	4073/6	0.00	000.0	Primary
H11224_LIDAR_ReqFldWrk.csv	15	3.50	073.5	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12165	4.21	081.1	Secondary (grouped)
h11441/1005_100/2005-133/279_2104	0003	50.24	010.4	Secondary (grouped)

## Hydrographer Recommendations

Chart a rock with a depth of 9 feet in Latitude 41°18'38.581"N, Longitude 072°03'46.142"W.

### Cartographically-Rounded Depth (Affected Charts):

9ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 12354\_1, 13205\_1)

1 ½fm (12300\_1, 13006\_1, 13003\_1)

2.8m (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 - 2.824 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 10 Rk. Chart a 9Rk in Latitude 41°18'38.581"N, Longitude 072°03'46.142"W.

### 3.8) AWOIS 12170 - Chart 15 ft Rk

#### Primary Feature for AWOIS Item #12170

**Search Position:** 41° 18' 48.4" N, 072° 02' 29.0" W  
**Historical Depth:** 4.57 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- 15 FT SOUNDING NOW CHARTED IN POSITION: 41°18'48.41" N 072°02'28.96" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 48.7" N, 072° 02' 28.1" W  
**Least Depth:** 4.66 m (= 15.28 ft = 2.546 fm = 2 fm 3.28 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-133.22:15:51.213 (05/13/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-133 / 877\_2212  
**Profile/Beam:** 7185/15  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Cluster of rocks, 8101 MBES shows this to be as charted.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-133/877_2212	7185/15	0.00	000.0	Primary
h11441/1005_100/2005-133/877_2212	0001	22.63	295.9	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12170	22.66	065.2	Secondary (grouped)



## Hydrographer Recommendations

Chart rock with a depth of 15 feet in Latitude 41°18'48.708"N, Longitude 072°02'28.119"W.

### Cartographically-Rounded Depth (Affected Charts):

15ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

2 ½fm (12300\_1, 13006\_1, 13003\_1)

4.7m (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 - 4.657 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Chart a 15 ft Rk in Latitude 41°18'48.708"N, Longitude 072°02'28.119"W.

### 3.9) AWOIS 7109 - Chart 51 Wks

#### Primary Feature for AWOIS Item #7109

**Search Position:** 41° 17' 07.5" N, 072° 02' 12.0" W  
**Historical Depth:** 12.60 m  
**Search Radius:** 75  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

FE343SS/90--OPR-B660-HE; SIDE SCAN AND DIVER INVESTIGATION LOCATED WHAT IS BELEIVED TO BE THE ITEM IN POS. LAT.41-17-07.5N, LONG.72-02-11.95W WITH A DIVER LEAST DEPTH OF 12.6M (41 FT) MLLW. THREE OTHER WRECK-LIKE OBJECTS WERE DISCOVERED DURING THE INVESTIGATION; SEE AWOIS ITEMS 8345-8347. (UPDATED 8/92 MCR)

#### Survey Summary

**Survey Position:** 41° 17' 07.4" N, 072° 02' 11.9" W  
**Least Depth:** 15.58 m (= 51.11 ft = 8.519 fm = 8 fm 3.11 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-134.12:17:25.577 (05/14/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-134 / 154\_1215  
**Profile/Beam:** 2306/41  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Wreck, RESON 8125 MBES data show that it is significantly deeper than the charted depth and SSS shows that very little remains of this wreck.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-134/154_1215	2306/41	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 7109	4.52	162.9	Secondary
h11441/1005_100/2005-134/154_1215	0001	19.42	046.3	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 87	59.06	045.4	Secondary (grouped)
h11441/1005_100/2005-134/121_1225	0001	62.57	262.5	Secondary (grouped)

## Hydrographer Recommendations

Chart a wreck with a depth of 51 feet in Latitude 41°17'07.360"N, -072°02'11.893"W.

### Cartographically-Rounded Depth (Affected Charts):

51ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

8 ½fm (12300\_1, 13006\_1, 13003\_1)

15.6m (5161\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)

**Attributes:** CATWRK - 1:non-dangerous wreck

INFORM - Chart 51 Wks

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 15.579 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 41Wk and danger curve. Chart 51Wks in Latitude 41°17'07.360"N, -072°02'11.893"W.

### 3.10) AWOIS 12160 - Chart 13 ft rock

#### Primary Feature for AWOIS Item #12160

**Search Position:** 41° 18' 24.8" N, 072° 05' 39.9" W  
**Historical Depth:** 4.27 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 14 FT SOUNDING NOW CHARTED IN POSITION: 41°18'24.78" N 072°05'39.85" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 23.3" N, 072° 05' 40.7" W  
**Least Depth:** 3.98 m (= 13.04 ft = 2.174 fm = 2 fm 1.04 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-134.22:13:53.391 (05/14/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-134 / 255\_2211  
**Profile/Beam:** 4737/3  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock outcrop, depth comparable to reported sounding. RESON 8101 MBES echosounder shows that this outcrop is most shoal on its south-west corner.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-134/255_2211	4737/3	0.00	000.0	Primary
h11441/1005_100/2005-134/255_2211	0003	23.61	270.4	Secondary (grouped)
h11441/1005_100/2005-134/252_1857	0002	31.90	297.7	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12160	50.48	201.6	Secondary (grouped)
h11441/1005_100/2005-134/256a2206	0001	51.47	016.9	Secondary (grouped)
h11441/1005_mb/2005-140/460_1444	285/7	70.34	207.2	Secondary (grouped)
h11441/1005_mb/2005-141/386_1713	646/81	79.27	021.6	Secondary (grouped)

## Hydrographer Recommendations

Chart a 13 ft depth in Latitude 41°18'24.720"N, Longitude 072°05'40.104"W.

### Cartographically-Rounded Depth (Affected Charts):

13ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

4.0m (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 - 3.976 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 14 ft depth. Chart a 13 ft rock in Latitude 41°18'23.282"N, Longitude 072°05'40.697"W.

### 3.11) AWOIS 12174 - Chart 11 Rk

#### Primary Feature for AWOIS Item #12174

**Search Position:** 41° 18' 28.2" N, 072° 01' 18.7" W  
**Historical Depth:** 4.27 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- 14 FT SOUNDING NOW CHARTED IN POSITION: 41°18'28.21" N 072°01'18.69" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 28.3" N, 072° 01' 18.8" W  
**Least Depth:** 3.42 m (= 11.23 ft = 1.872 fm = 1 fm 5.23 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-134.17:11:49.018 (05/14/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-134 / 314\_1711  
**Profile/Beam:** 1527/100  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Large rock outcrop, MBES data show depth to be comparable to reported LIDAR, but both are significantly shoal of charted depth.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-134/314_1711	1527/100	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12174	5.03	335.2	Secondary
H11224_LIDAR_OK.csv	13	8.17	028.8	Secondary (grouped)
h11441/1005_100/2005-134/314_1711	0002	23.40	296.0	Secondary
H11224_LIDAR_OK.csv	14	131.82	209.7	Secondary (grouped)
h11441/1005_100/2005-134/915_1719	0001	262.55	162.3	Secondary (grouped)

## Hydrographer Recommendations

Chart rock with an 11 ft depth in Latitude 41°18'28.348"N, Longitude 072°01'18.790"W.

### Cartographically-Rounded Depth (Affected Charts):

11ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

1 ¾fm (12300\_1, 13006\_1, 13003\_1)

3.4m (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 - 3.424 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 14 ft depth. Chart 11 ft Rk in Latitude 41°18'28.348"N, Longitude 072°01'18.790"W.

### 3.12) AWOIS 12175 - Chart 12 Rk

#### Primary Feature for AWOIS Item #12175

**Search Position:** 41° 18' 29.0" N, 072° 01' 11.6" W  
**Historical Depth:** 3.96 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- 13 FT SOUNDING NOW CHARTED IN POSITION: 41°18'28.97" N 072°01'11.56" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 28.6" N, 072° 01' 12.0" W  
**Least Depth:** 3.69 m (= 12.09 ft = 2.016 fm = 2 fm 0.09 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-134.17:12:30.894 (05/14/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-134 / 314\_1711  
**Profile/Beam:** 3192/8  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky shoal, as charted

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-134/314_1711	3192/8	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12175	15.84	219.1	Secondary
h11441/1005_100/2005-134/314_1711	0001	24.86	164.1	Secondary (grouped)
H11224_LIDAR_OK.csv	12	90.78	264.1	Secondary (grouped)
h11441/1014_mb/2005-137/602_1810	49/12	90.94	269.2	Secondary (grouped)
H11224_LIDAR_OK.csv	99	127.89	237.7	Secondary (grouped)
H11224_LIDAR_OK.csv	15	547.37	198.8	Secondary (grouped)



## Hydrographer Recommendations

Chart rock with a 12 ft depth in Latitude 41°18'28.603"N, Longitude 072°01'12.028"W.

### Cartographically-Rounded Depth (Affected Charts):

12ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_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 - 3.686 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 13 ft depth. Chart 12 ft Rk in Latitude 41°18'28.603"N, Longitude 072°01'12.028"W.

### 3.13) AWOIS 8346 - Chart 70Wk

#### Primary Feature for AWOIS Item #8346

**Search Position:** 41° 17' 11.7" N, 072° 01' 51.4" W  
**Historical Depth:** 22.80 m  
**Search Radius:** 75  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

FE343SS/90--OPR-B660-HE; UNCHARTED WRECK DISCOVERED IN POS. LAT.41-17-11.72N, LONG.72-01-51.35 (NAD 83) WITH 22.8 M (MLLW) DEPTH OBTAINED ON IT. ITEM APPEARS TO BE A BARGE. (UPDATED 8/92 MCR)

#### Survey Summary

**Survey Position:** 41° 17' 11.8" N, 072° 01' 51.3" W  
**Least Depth:** 21.36 m (= 70.07 ft = 11.678 fm = 11 fm 4.07 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-134.12:28:15.499 (05/14/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-134 / 921\_1227  
**Profile/Beam:** 354/95  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Wreck, 8125 MBES data show this to be slightly Shoal of charted depth.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-134/921_1227	354/95	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 8346	3.57	001.2	Secondary
h11441/1005_100/2005-134/921_1227	0001	17.61	147.9	Secondary

## Hydrographer Recommendations

Chart a wreck with a depth of 70 feet in Latitude 41°17'11.835"N, Longitude 072°01'51.347"W.

### Cartographically-Rounded Depth (Affected Charts):

70ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

11fm (12300\_1, 13006\_1, 13003\_1)

21m (5161\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)

**Attributes:** CATWRK - 1:non-dangerous wreck

STATUS - 1:permanent

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

VALSOU - 21.356 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 74Wk. Chart a 70Wk in Latitude 41°17'11.835"N, Longitude 072°01'51.347"W.

### 3.14) AWOIS 12167 - Chart 16 Rk

#### Primary Feature for AWOIS Item #12167

**Search Position:** 41° 19' 38.7" N, 072° 04' 51.1" W  
**Historical Depth:** 5.49 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8935/67 -- 18 FT SOUNDING NOW CHARTED IN POSITION: 41°19'38.74" N 072°04'51.08" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 19' 38.9" N, 072° 04' 51.9" W  
**Least Depth:** 4.94 m (= 16.21 ft = 2.701 fm = 2 fm 4.21 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-135.15:44:04.952 (05/15/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-135 / 242\_1538  
**Profile/Beam:** 10776/6  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Large rock cluster, slightly shoal and to the east of charted contact.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-135/242_1538	10776/6	0.00	000.0	Primary
h11441/1005_100/2005-135/242_1538	0001	2.28	150.7	Secondary (grouped)
h11441/1005_mb/2005-117/165_1833	5262/98	3.11	089.9	Secondary (grouped)
H11224_LIDAR_OK.csv	51	4.68	007.9	Secondary (grouped)
h11441/1005_100/2005-135/101_1447	0003	6.11	258.9	Secondary (grouped)
h11441/1005_mb/2005-137/402_1138	1097/97	9.63	293.8	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12167	20.41	291.4	Secondary (grouped)

## Hydrographer Recommendations

Chart rock with a 16 ft depth in Latitude 41°19'38.941"N, Longitude 072°04'51.914"W.

### Cartographically-Rounded Depth (Affected Charts):

16ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

2 ¾fm (12300\_1, 13006\_1, 13003\_1)

4.9m (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 - 4.940 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 18 ft depth. Chart a 16 ft rock in Latitude 41°19'38.941"N, Longitude 072°04'51.914"W.

### 3.15) AWOIS 8345 - Chart 54 Wk

#### Primary Feature for AWOIS Item #8345

**Search Position:** 41° 17' 06.6" N, 072° 01' 54.4" W  
**Historical Depth:** 16.90 m  
**Search Radius:** 75  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

FE343SS/90--OPR-B660-HE; UNCHARTED WRECK DISCOVERED IN POS. LAT.41-17-06.58N, LONG.72-01-54.38W (NAD 83) WITH A DIVER LEAST DEPTH OF 16.9M (55 FT). A SHOALER DEPTH OF 16M (52 FT) WAS FOUND ON THE RECORDS DURING OFFICE PROCESSING. (ENTERED 8/92 MCR)

#### Survey Summary

**Survey Position:** 41° 17' 06.6" N, 072° 01' 54.5" W  
**Least Depth:** 16.46 m (= 53.99 ft = 8.998 fm = 8 fm 5.99 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-137.17:48:01.741 (05/17/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-137 / 272\_1743  
**Profile/Beam:** 1878/7  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Wreck, as charted.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-137/272_1743	1878/7	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 8345	3.38	289.8	Secondary
h11441/1005_100/2005-134/121_1204	0002	16.16	289.2	Secondary

## Hydrographer Recommendations

Chart a wreck with a depth of 54 feet in Latitude 41°17'06.617"N, Longitude 072°01'54.516"W.

### Cartographically-Rounded Depth (Affected Charts):

54ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

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

16.5m (5161\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)

**Attributes:** CATWRK - 1:non-dangerous wreck

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 16.456 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 52Wk and danger curve. Chart 54Wk and danger curve in Latitude 41°17'06.617"N, Longitude 072°01'54.516"W.

### 3.16) AWOIS 12162 - Chart 10 ft Rk (Rapid Rock)

#### Primary Feature for AWOIS Item #12162

**Search Position:** 41° 17' 17.1" N, 072° 06' 07.2" W  
**Historical Depth:** 3.35 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 11 FT SOUNDING FROM A ROCK ("RAPID ROCK") NOW CHARTED IN POSITION: 41°17'17.13" N 072°06'07.18" W [NAD 83]  
 [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 17' 16.4" N, 072° 06' 07.5" W  
**Least Depth:** 3.19 m (= 10.47 ft = 1.745 fm = 1 fm 4.47 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-138.20:43:57.988 (05/18/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-138 / 191\_2041  
**Profile/Beam:** 3225/4  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rapid Rock, RESON 8101 shows its depth and location to be comparable to charted soundings.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-138/191_2041	3225/4	0.00	000.0	Primary
h11441/1005_100/2005-132/922_2056	0006	8.03	323.4	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12162	22.53	197.5	Secondary (grouped)
ChartGPs - ENC US4CN21M	AToN 16	36.36	281.0	Secondary (grouped)
h11441/1005_100/2005-134/267_2109	0001	47.33	349.8	Secondary (grouped)



## Hydrographer Recommendations

Chart a rock with a 10 ft depth in Latitude 41°17'16.405"N, Longitude -072°06'07.491"W.

### Cartographically-Rounded Depth (Affected Charts):

10ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

1 ¾fm (12300\_1, 13006\_1, 13003\_1)

3.2m (5161\_1)

## S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** OBJNAM - Rapid Rock  
QUASOU - 6:least depth known  
STATUS - 1:permanent  
TECSOU - 2,3:found by side scan sonar,found by multi-beam  
VALSOU - 3.192 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 11 ft depth. Chart 10 ft rock with notation Rapid Rock in Latitude 41°17'16.405"N, Longitude 072°06'07.491"W.

### 3.17) AWOIS 12163 - Chart 14 ft Rk

#### Primary Feature for AWOIS Item #12163

**Search Position:** 41° 17' 20.2" N, 072° 06' 02.5" W  
**Historical Depth:** 4.88 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 16 FT SOUNDING NOW CHARTED IN POSITION: 41°17'20.21" N 072°06'02.5" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 17' 20.8" N, 072° 06' 01.4" W  
**Least Depth:** 4.36 m (= 14.30 ft = 2.384 fm = 2 fm 2.30 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-138.20:28:04.476 (05/18/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-138 / 195\_2027  
**Profile/Beam:** 539/4  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, RESON 8101 MBES shows it to be slightly shoal of charted description.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-138/195_2027	539/4	0.00	000.0	Primary
H11224_LIDAR_OK.csv	5	14.73	236.7	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12163	32.18	054.5	Secondary (grouped)

## Hydrographer Recommendations

Chart a 14 ft depth in Latitude 41°17'20.804"N, Longitude 072°06'01.377"W.

### Cartographically-Rounded Depth (Affected Charts):

14ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_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:** QUASOU - 6:least depth known  
STATUS - 1:permanent  
TECSOU - 2,3:found by side scan sonar,found by multi-beam  
VALSOU - 4.359 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 16 ft depth. Chart a rock with a 14 ft depth in Latitude 41°17'20.804"N, Longitude 072°06'01.377"W.

### 3.18) AWOIS 12161 - Chart 14 ft Rk

#### Primary Feature for AWOIS Item #12161

**Search Position:** 41° 17' 24.9" N, 072° 05' 56.7" W  
**Historical Depth:** 4.88 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 16 FT SOUNDING NOW CHARTED IN POSITION: 41°17'24.88" N 072°05'56.74" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 17' 24.5" N, 072° 05' 57.3" W  
**Least Depth:** 4.36 m (= 14.30 ft = 2.384 fm = 2 fm 2.30 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-138.19:11:49.299 (05/18/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-138 / 602\_1911  
**Profile/Beam:** 904/78  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, slightly shoal of charted depth.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-138/602_1911	904/78	0.00	000.0	Primary
h11441/1005_100/2005-134/267_2109	0002	10.28	046.2	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12161	18.63	230.2	Secondary (grouped)
h11441/1005_100/2005-134/266_2100	0003	19.50	276.2	Secondary (grouped)
H11224_LIDAR_OK.csv	4	20.84	245.0	Secondary (grouped)
H11225_LIDAR_OK.csv	84	20.84	245.0	Secondary (grouped)
H11225_LIDAR_TestArea.csv	59	22.25	253.4	Secondary (grouped)
h11441/1005_mb/2005-138/601_1908	940/97	80.15	271.8	Secondary (grouped)
h11441/1005_100/2005-134/267_2109	0003	113.91	251.8	Secondary (grouped)

h11441/1005_mb/2005-138/600_1940	326/100	158.00	239.9	Secondary (grouped)
H11224_LIDAR_OK.csv	3	158.34	240.5	Secondary (grouped)

## Hydrographer Recommendations

Chart a depth of 14 feet in Latitude 41°17'24.515"N, Longitude 072°05'57.314"W.

### Cartographically-Rounded Depth (Affected Charts):

14ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_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:** QUASOU - 6:least depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam  
 VALSOU - 4.359 m  
 VERDAT - 12:Mean lower low water  
 WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 16 ft depth. Chart a rock with a 14 ft depth in Latitude 41°17'24.515"N, 072°05'57.314"W.

### 3.19) AWOIS 12158 - Chart 11ft. Rk

#### Primary Feature for AWOIS Item #12158

**Search Position:** 41° 18' 39.9" N, 072° 04' 32.5" W  
**Historical Depth:** 3.66 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 12 FT SOUNDING NOW CHARTED IN POSITION: 41°18'39.95" N 072°04'32.53" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 40.1" N, 072° 04' 32.3" W  
**Least Depth:** 3.45 m (= 11.32 ft = 1.886 fm = 1 fm 5.32 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-139.18:56:54.620 (05/19/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-139 / 327\_1856  
**Profile/Beam:** 886/94  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, 'Frank Ledge', RESON 8101 shows it to be slightly shoal of charted sounding.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-139/327_1856	886/94	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12158	8.29	037.6	Secondary (grouped)
h11441/1005_100/2005-132/245_1847	0014	10.31	348.9	Secondary (grouped)
h11441/1005_100/2005-132/244_1835	0018	36.36	160.2	Secondary (grouped)

## Hydrographer Recommendations

Chart a depth of 11 feet in Latitude 41°18'40.112"N, Longitude 072°04'32.283"W.

### Cartographically-Rounded Depth (Affected Charts):

11ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

1 ¾fm (12300\_1, 13006\_1, 13003\_1)

3.5m (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 - 3.450 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 12 ft depth. Chart a rock with an 11 ft depth in Latitude 41°18'40.112"N, Longitude 072°04'32.283"W.

### 3.20) AWOIS 12159 - Chart 17Rk

#### Primary Feature for AWOIS Item #12159

**Search Position:** 41° 18' 18.5" N, 072° 05' 34.5" W  
**Historical Depth:** 5.49 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 18 FT SOUNDING FROM A ROCK NOW CHARTED IN POSITION: 41°18'18.5" N 072°05'34.53" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 18.7" N, 072° 05' 34.4" W  
**Least Depth:** 5.32 m (= 17.46 ft = 2.910 fm = 2 fm 5.46 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-141.17:29:26.567 (05/21/2005)  
**Survey Line:** h11441 / 1005\_mb / 2005-141 / 393\_1728  
**Profile/Beam:** 1113/16  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, as charted

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1005_mb/2005-141/393_1728	1113/16	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12159	5.65	012.0	Secondary
h11441/1005_100/2005-134/257_2202	0001	14.12	289.1	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 63	42.78	275.6	Secondary (grouped)
h11441/1005_mb/2005-141/392_1721	631/29	66.65	016.6	Secondary (grouped)
h11441/1005_100/2005-134/859_2157	0001	121.50	012.7	Secondary (grouped)



## Hydrographer Recommendations

Chart a rock with a depth of 17 feet in latitude 41°18'18.679"N, Longitude 072°05'34.450"W.

### Cartographically-Rounded Depth (Affected Charts):

17ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_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 - 3:found by multi-beam  
VALSOU - 5.321 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 18Rk. Chart 17Rk in Latitude 41°18'18.679"N, Longitude 072°05'34.450"W.

### 3.21) 292/235 - Revise location of charted 10Rk Vixen Ledge

#### Primary Feature for AWOIS Item #12172

**Search Position:** 41° 18' 24.4" N, 072° 02' 54.5" W  
**Historical Depth:** 3.05 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- 10 FT SOUNDING NOW CHARTED IN POSITION: 41°18'24.43" N 072°02'54.51" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 24.2" N, 072° 02' 54.3" W  
**Least Depth:** 3.11 m (= 10.20 ft = 1.701 fm = 1 fm 4.20 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-131.11:14:50.201 (05/11/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-131 / 623\_1114  
**Profile/Beam:** 292/235  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Vixen Ledge, as charted surrounded by a bolder field.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-131/623_1114	292/235	0.00	000.0	Primary
h11441/1005_100/2005-132/283_1636	0004	5.07	120.7	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12172	8.53	141.5	Secondary (grouped)
h11441/1005_100/2005-133/282_2007	0001	36.63	262.3	Secondary (grouped)
h11441/1005_100/2005-133/283_1951	0002	45.76	262.4	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	67	110.33	065.1	Secondary (grouped)
ChartGPs - ENC US4CN21M	AToN 32	151.07	026.9	Secondary (grouped)

## Hydrographer Recommendations

### Cartographically-Rounded Depth (Affected Charts):

10ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

1 ¾fm (12300\_1, 13006\_1, 13003\_1)

3.1m (5161\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** OBJNAM - Vixen Ledge  
QUASOU - 6:least depth known  
STATUS - 1:permanent  
TECSOU - 3:found by multi-beam  
VALSOU - 3.110 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

### Office Notes

Chart a rock with a depth of 10 ft. (Vixen Ledge) in Latitude 41°18'24.184"N, Longitude 72°02'54.273"W.

### 3.22) AWOIS 12171 - Chart 14Rk

#### Primary Feature for AWOIS Item #12171

**Search Position:** 41° 18' 21.4" N, 072° 03' 15.0" W  
**Historical Depth:** 4.27 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- 14 FT SOUNDING FROM A ROCK NOW CHARTED IN POSITION: 41°18'21.42" N 072°03'14.98" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 22.1" N, 072° 03' 16.3" W  
**Least Depth:** 4.47 m (= 14.65 ft = 2.442 fm = 2 fm 2.65 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-131.10:51:38.305 (05/11/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-131 / 637\_1051  
**Profile/Beam:** 305/215  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock cluster, This contact is the shoalest point and is comparable to the charted sounding.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-131/637_1051	305/215	0.00	000.0	Primary
h11441/1005_100/2005-133/283_1952	0001	13.19	309.5	Secondary (grouped)
h11441/1005_100/2005-132/283_1636	0003	23.97	341.0	Secondary (grouped)
h11441/1005_100/2005-132/283_1636	0002	29.49	096.6	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12171	37.04	304.0	Secondary (grouped)
h11441/1005_100/2005-133/283_1952	0002	41.95	103.4	Secondary (grouped)

## Hydrographer Recommendations

Chart a rock with a depth of 14 feet in Latitude 41°18'22.070"N, Longitude 072°03'16.316"W.

### Cartographically-Rounded Depth (Affected Charts):

14ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 12354\_1, 13205\_1)

2 ½fm (12300\_1, 13006\_1, 13003\_1)

4.5m (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 - 4.466 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Chart 14Rk in Latitude 41°18'22.070"N, Longitude 072°03'16.316"W.

### 3.23) AWOIS 12406 - Revise location of 44Rk

#### Primary Feature for AWOIS Item #12406

**Search Position:** 41° 17' 04.8" N, 072° 04' 55.3" W  
**Historical Depth:** 13.41 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

FE-377 (9/8/93) -- 44 FT ROCK IN POSITION: 41°17'04.83" N 072°04'55.27" W [NAD 83] [ENTERED 4/19/04 JCM]

#### Survey Summary

**Survey Position:** 41° 17' 05.4" N, 072° 04' 56.6" W  
**Least Depth:** 13.59 m (= 44.57 ft = 7.428 fm = 7 fm 2.57 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-133.11:35:34.485 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 328\_1134  
**Profile/Beam:** 951/218  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock or obstruction. RESON 8125 MBES shows it to be at a depth comparable to the charted sounding. The shoalest part of this rock is slightly west of the charted position.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/328_1134	951/218	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12406	35.46	298.9	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	5	49.59	273.7	Secondary (grouped)

## Hydrographer Recommendations

Chart a rock with a depth of 44 feet in Latitude 41°17'05.384"N, Longitude 072°04'56.600"W.

### Cartographically-Rounded Depth (Affected Charts):

44ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

7 ¼fm (12300\_1, 13006\_1, 13003\_1)

13.6m (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 - 13.585 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur with clarification - Revise location of charted 44Rk and danger curve to Latitude 41°17'05.384"N, Longitude 072°04'56.600"W.

### 3.24) AWOIS 8769 - Chart 45 Obstn

#### Primary Feature for AWOIS Item #8769

**Search Position:** 41° 17' 15.5" N, 072° 04' 59.0" W  
**Historical Depth:** [None]  
**Search Radius:** 75  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

FE377SS/92--OPR-B660-RU; AN UNKNOWN OBSTRUCTION WAS FOUND ON SONARGRAMS IN POS. LAT.41-17-15.50N, LONG.72-04-59W (NAD 83) WITH AN ESTIMATED DEPTH OF 13.2M (43FT) IN SURROUNDING DEPTHS OF 48-49FT. EVALUATOR RECOMMENDS ADDITIONAL WORK TO RESOLVE THIS CONTACT. (ENTERED 9/93 MCR)

#### Survey Summary

**Survey Position:** 41° 17' 15.1" N, 072° 04' 58.7" W  
**Least Depth:** 13.95 m (= 45.75 ft = 7.625 fm = 7 fm 3.75 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-133.11:44:44.519 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 329\_1141  
**Profile/Beam:** 1821/180  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, at reported obstruction.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/329_1141	1821/180	0.00	000.0	Primary
h11441/1005_100/2005-132/120_2115	0002	1.57	346.5	Secondary (grouped)
h11441/1005_100/2005-132/922_2055	0001	4.37	100.8	Secondary (grouped)
h11441/1005_100/2005-131/104_1852	0001	7.14	012.9	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 8769	13.67	150.5	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	2	21.43	150.8	Secondary (grouped)



## Hydrographer Recommendations

Chart an obstruction with a depth of 45 feet in Latitude 41°17'15.115"N, Longitude 072°04'58.711"W.

### Cartographically-Rounded Depth (Affected Charts):

46ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

7 ½fm (12300\_1, 13006\_1, 13003\_1)

13.9m (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 - 13.945 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 43 Obstrn rep 1992. Chart 45 Obstrn an danger curve in Latitude 41°17'15.115"N, Longitude 072°04'58.711"W.

### 3.25) AWOIS 8768 - Chart 45 Obstn

#### Primary Feature for AWOIS Item #8768

**Search Position:** 41° 17' 11.1" N, 072° 05' 03.3" W  
**Historical Depth:** 13.50 m  
**Search Radius:** 75  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

FE377SS/92--OPR-B660-RU; DURING THE SEARCH FOR THE NOW DISPROVED, LAZY DAYS (AWOIS 1858), SIDE SCAN SONAR LOCATED AN OBJECT WHICH DIVERS REVEALED TO BE A STEEL BEAM WITH A LEAST DEPTH OF 13.5M (44.3FT) IN POS. LAT.41-17-11.14N, LONG.72-05-03.34W (NAD 83). THE OBJECT WAS TWO 30 INCH CHANNEL IRONS SEPERATED APPROX. 40 IN. BY 1/4 INCH LACING BARS. ENTIRE BEAM WAS 20 FT LONG, LYING IN A NORTH/SOUTH DIRECTION. EVAL. RECOMMENDS TO CHART AS REPORTED. (ENTERED 9/92 MCR)

#### Survey Summary

**Survey Position:** 41° 17' 11.1" N, 072° 05' 03.1" W  
**Least Depth:** 13.65 m (= 44.77 ft = 7.461 fm = 7 fm 2.77 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-133.11:52:55.361 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 331\_1150  
**Profile/Beam:** 1493/21  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock or obstruction, RESON 8125 MBES shows it to be approximatly equal to the charted depth and position.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/331_1150	1493/21	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 8768	4.81	101.2	Secondary
h11441/1005_100/2005-132/922_2055	0002	8.58	033.3	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	3	12.01	138.3	Secondary (grouped)

## Hydrographer Recommendations

Chart an obstruction with a depth of 45 feet in Latitude 41°17'11.110"N, Longitude 072°05'03.138"W.

### Cartographically-Rounded Depth (Affected Charts):

45ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

7 ½fm (12300\_1, 13006\_1, 13003\_1)

13.6m (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 - 13.645 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 44 Obstrn and danger curve. Chart 45 Obstrn and danger curve in Latitude 41°17'11.110"N, Longitude 072°05'03.138"W.

### 3.26) AWOIS 8312 - chart 43 Obstn

#### Primary Feature for AWOIS Item #8312

**Search Position:** 41° 17' 15.8" N, 072° 05' 10.4" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

FE345SS/90--OPR-B660-HE; UNIDENTIFIED OBSTRUCTION SHOWN ON SONARGRAMS OBTAINED DURING THE INVESTIGATION OF AWOIS 1858 (36 FT, WRECK, LAZY DAYS). ESTIMATED DEPTH ON CONTACT IS 11.6M (MLLW) AS DETERMINED FROM SIDE SCAN RECORDS. POSITION COMPUTED USING OFFSET FROM VESSEL TRACK IS LAT.41-17-16.2N, LONG.72-05-11.31W (NAD 83). (ENTERED 6/82 MCR) ■ FE377SS/92--OPR-B660-RU; A 200% SIDE SCAN SONAR INVEST. TO A 100M RADIUS WITH DIVER INVESTIGATION REVEALED A PILE OF FOUR LARGE SPOOLS OF STEEL CABLE. SPOOLS WERE APPROX. 4FT IN DIAM. AND 5FT WIDE WITH ONE OF THE SPOOLS BROKEN WITH ITS WIRE STREWN NORTHWARD APPROX. 30FT. LEAST DEPTH ON THE SPOOLS WAS 12.8M (42FT) IN POS. LAT.41-17-15.82N, LONG.72-05-10.37W (NAD 83). EVAL/HYDROG. RECOMMEND TO CHART AN OBSTR. AT THE GIVEN POS. (UPDATED 9/93 MCR)

#### Survey Summary

**Survey Position:** 41° 17' 15.9" N, 072° 05' 10.4" W  
**Least Depth:** 13.20 m (= 43.31 ft = 7.218 fm = 7 fm 1.31 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-133.12:12:18.483 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 335\_1209  
**Profile/Beam:** 1682/182  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

'Obstn' as charted. Klein 5000 SSS imagery and 8125 MBES show a group of items which concur with the historical description of 4 large spools of wire.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/335_1209	1682/182	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 8312	2.80	337.7	Secondary (grouped)
h11441/1005_100/2005-131/105_1826	0001	3.86	152.2	Secondary (grouped)

h11441/1005_100/2005-132/120_2115	0001	5.39	311.4	Secondary (grouped)
h11441/1005_100/2005-132/922_2055	0003	6.38	059.7	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	1	19.70	212.7	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 5	39.18	175.8	Secondary (grouped)

## Hydrographer Recommendations

Chart an obstruction with a depth of 43 feet in Latitude 41°17'15.904"N, Longitude 072°05'10.415"W.

### Cartographically-Rounded Depth (Affected Charts):

43ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

7 ¼fm (12300\_1, 13006\_1, 13003\_1)

13.2m (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 - 13.200 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 42 Obstrn and danger curve. Chart 43 Obstrn and danger curve in Latitude 41°17'15.904"N, Longitude 072°05'10.415"W.

### 3.27) AWOIS 1855 - Chart 37Rk

#### Primary Feature for AWOIS Item #1855

**Search Position:** 41° 16' 58.0" N, 072° 05' 50.4" W  
**Historical Depth:** 11.58 m  
**Search Radius:** 100  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

CL198/81--MONTHLY ACTIVITIES REPORT S-B610-RU/HE-80; ROCKY LEDGE DIVER INVESTIGATED AND 39 FT LD DETERMINED BY PNEUMODEPTH GAGE (PREDICTED); CLEARED BY 40 FT DRAG. ■ ■ H9951/80WD--S-B610-RU/HE-80; SUBM. REEF MEASURING APPROX. 15FT WIDE BY 40FT LONG WITH A LEAST DEPTH OF 38FT WAS LOCATED IN LAT.41-16-57.6N, LONG.72-05-52.1W. CLEARANCE OF 40FT IN ONE DIRECTION ONLY WAS OBTAINED. RECOMMEND CHARTING ROCK IN ACCORDANCE WITH PRESENT SURVEY. (REVISED, 2/84, RWD)

#### Survey Summary

**Survey Position:** 41° 16' 58.3" N, 072° 05' 50.8" W  
**Least Depth:** 11.37 m (= 37.29 ft = 6.216 fm = 6 fm 1.29 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-133.15:06:38.925 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 354\_1504  
**Profile/Beam:** 707/168  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock cluster as charted. RESON 8125 MBES data show depth and position to be comparable to the charted sounding.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/354_1504	707/168	0.00	000.0	Primary
h11441/1005_100/2005-132/124_2009	0002	8.85	205.4	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 1855	13.57	317.9	Secondary
H11224_LIDAR_ReqFldWrk.csv	48	18.07	018.1	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 46	49.80	012.7	Secondary (grouped)
h11441/1005_100/2005-132/124_2009	0004	65.96	311.8	Secondary (grouped)

## Hydrographer Recommendations

Chart a rock with a depth of 37 feet in Latitude 41°16'58.276"N, Longitude 072°05'50.760"W.

### Cartographically-Rounded Depth (Affected Charts):

37ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

6 ¼fm (12300\_1, 13006\_1, 13003\_1)

11.4m (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 - 11.367 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 38Rk an danger curve. Chart 37Rk and danger curve in Latitude 41°16'58.276"N, Longitude 072°05'50.760"W.

### 3.28) AWOIS 12404 - Revise location of charted 40Rk and danger curve

#### Primary Feature for AWOIS Item #12404

**Search Position:** 41° 17' 13.8" N, 072° 05' 41.2" W  
**Historical Depth:** 12.19 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

LNM 45/93 -- NOS; 40 FT ROCK IN POSITION: 41°17'13.76" N 072°05'41.15" W [NAD 83] [ENTERED 4/19/04 JCM]

#### Survey Summary

**Survey Position:** 41° 17' 14.4" N, 072° 05' 40.4" W  
**Least Depth:** 12.40 m (= 40.70 ft = 6.783 fm = 6 fm 4.70 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-133.15:25:42.037 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 358\_1525  
**Profile/Beam:** 140/217  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, 8125 MBES data shows it to be as charted.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/358_1525	140/217	0.00	000.0	Primary
h11441/1005_100/2005-134/270_2147	0001	2.90	132.0	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 47	25.34	202.8	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12404	28.25	041.3	Secondary (grouped)



## Hydrographer Recommendations

Chart a rock with a depth of 40 feet in Latitude 41°17'14.446"N, Longitude 072°05'40.351"W.

### Cartographically-Rounded Depth (Affected Charts):

40ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

6 ¾fm (12300\_1, 13006\_1, 13003\_1)

12.4m (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 - 12.404 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Chart a rock with a 40 ft. depth in Latitude 41°17'14.446"N, Longitude 72°05'40.351"W.

### 3.29) AWOIS 12422 - Delete 48 Obstn - Chart 48 Rk

#### Primary Feature for AWOIS Item #12422

**Search Position:** 41° 16' 43.3" N, 072° 05' 54.9" W  
**Historical Depth:** 14.63 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, SD  
**Technique Notes:** [None]

#### History Notes:

F-343ss/90 -- 48 FT ROCK CHARTED IN POSITION: 41°16'43.3" N 072°05'54.9" W [NAD 83] [ENTERED 5/4/04 JCM]

#### Survey Summary

**Survey Position:** 41° 16' 42.4" N, 072° 05' 57.0" W  
**Least Depth:** 14.60 m (= 47.89 ft = 7.982 fm = 7 fm 5.89 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-134.14:14:43.573 (05/14/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-134 / 625\_1411  
**Profile/Beam:** 1696/39  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

RESON 8125 MBES shows the charted depth to be correct but the shoalest point is southwest of the charted position. Rock found.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-134/625_1411	1696/39	0.00	000.0	Primary
h11441/1005_100/2005-132/127_1908	0011	23.26	018.7	Secondary
H11224_LIDAR_ReqFldWrk.csv	46	47.36	233.4	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12422	55.23	240.0	Secondary (grouped)
h11441/1005_100/2005-132/127_1908	0010	58.79	210.5	Secondary (grouped)

## Hydrographer Recommendations

Chart a rock with a depth of 48 feet in Latitude 41°16'42.408"N, Longitude 072°05'56.950"W.

### Cartographically-Rounded Depth (Affected Charts):

48ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

8fm (12300\_1, 13006\_1, 13003\_1)

14.6m (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 - 14.597 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 48 Obstrn and danger curve. Chart 48Rk and danger curve in Latitude 41°16'42.408"N, Longitude 072°05'56.950"W.

### 3.30) AWOIS 11914- Delete 59 Obstn - Chart 60 Obstn

#### Primary Feature for AWOIS Item #11914

**Search Position:** 41° 15' 48.1" N, 072° 05' 27.2" W  
**Historical Depth:** 17.68 m  
**Search Radius:** 100  
**Search Technique:** S2,MB,DI  
**Technique Notes:** [None]

#### History Notes:

FE343/90; OPR-B660 -- 58-FOOT SOUNDING LOCATED IN CURRENTLY CHARTED POSITION 41/15/48.08 NORTH LATITUDE, 072/05/27.17 WEST LONGITUDE (NAD83). THIS WAS ONE OF FIVE SIGNIFICANT CONTACTS LOCATED WITH SIDE SCAN SONAR IN THIS VICINITY; SEE AWOIS 11913. (ENTERED 8/03 BY CG)

#### Survey Summary

**Survey Position:** 41° 15' 47.9" N, 072° 05' 26.7" W  
**Least Depth:** 18.23 m (= 59.81 ft = 9.968 fm = 9 fm 5.81 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-134.20:45:01.833 (05/14/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-134 / 682\_2043  
**Profile/Beam:** 437/36  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Tall rock, RESON 8125 MBES data shows this to be at this location and slightly deeper than the charted sounding.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-134/682_2043	437/36	0.00	000.0	Primary
h11441/1005_100/2005-131/940_1705	0001	3.79	149.1	Secondary (grouped)
h11441/1014_mb/2005-134/682_2043	437/58	4.39	218.6	Secondary (grouped)
h11441/1005_100/2005-131/137_1700	0001	4.51	256.6	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 11914	12.25	117.9	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	44	16.41	130.6	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 2	55.88	226.3	Secondary (grouped)

## Hydrographer Recommendations

Chart an obstruction with a depth of 60 feet in Latitude 41°15'47.895"N, Longitude 072°05'26.706"W.

### Cartographically-Rounded Depth (Affected Charts):

60ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

18.2m (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 - 18.229 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 59 Obstrn and danger curve. Chart 60 Obstrn and danger curve in Latitude 41°15'47.895"N, Longitude 072°05'26.706"W.

### 3.31) AWOIS 7073 Not charted

#### Primary Feature for AWOIS Item #7073

**Search Position:** 41° 17' 35.4" N, 072° 02' 32.3" W  
**Historical Depth:** [None]  
**Search Radius:** 0  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

LNM31/78--3RD CGD; ORANGE AND WHITE HORIZONTALLY BANDED SPECIAL PURPOSE BUOY "A" HAS BEEN ESTABLISHED IN LAT 41-17-35N, LONG 72-02-34W; BUOY IS IN 38 FT. OF WATER AND IS ANCHORED TO A SUNKEN AUTOMOBILE. ■ LNM22/83--3RD CGD; BUOY HAS BEEN PERMANENTLY DISCONTINUED; NO MENTION WAS MADE OF AUTOMOBILE; CHARTED AS AN OBSTRUCTION. (ENTERED MSM 1/89) ■ FE343SS/90--OPR-B660-HE; SONARGRAMS SHOWED A ROCKY BOTTOM AREA JUST SOUTH OF ITEM. DIVER INVESTIGATION AMONG ROCKS AND MARINE GROWTH COULD NOT LOCATE CAR. A FATHOMETER DEPTH OF 9.3M (30 FT) WAS OBTAINED ON A ROCK IN POS. LAT.41-17-34.95N, LONG.72-02-33.64W (NAD 83). ANOTHER DEPTH ON A ROCK WAS 10.1M (33FT). EVALUATOR RECOMMENDS TO DELETE CHARTED OBSTRUCTION AND APPLY ROCKS FROM THIS SURVEY. (UPDATED 8/92 MCR) ■ DESCRIPTION ■ \*\*\*\* PER TELECON WITH AIDS TO NAVIGATION, 1ST CGD, 6/5/89, AUTOMOBILE FELL OFF A CAR FERRY; NO PLANS FOR SALVAGE AT THIS TIME. (UPDATED MSM 5/89)

#### Survey Summary

**Survey Position:** 41° 17' 17.3" N, 072° 02' 33.1" W  
**Least Depth:** 6.24 m (= 20.47 ft = 3.411 fm = 3 fm 2.47 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-136.16:28:48.501 (05/16/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-136 / 576\_1627  
**Profile/Beam:** 778/20  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky shoal area as charted.

This reef is close to 1 Km long generally oriented north-south.

RESON 8125 shows that this reef is slightly shoal of currently charted depths. This survey found no sign of the described sunken automobile.

During this survey considerable fishing was observed over this reef.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-136/576_1627	778/20	0.00	000.0	Primary
h11441/1005_100/2005-133/152_1925	0007	47.48	295.2	Secondary (grouped)
h11441/1005_mb/2005-134/296_1540	6613/79	61.60	223.6	Secondary (grouped)
h11441/1005_mb/2005-134/297_1535	2238/33	66.36	067.7	Secondary (grouped)
h11441/1005_100/2005-134/296_1540	0005	69.23	155.7	Secondary (grouped)
h11441/1005_100/2005-134/296_1540	0006	72.62	357.1	Secondary (grouped)
h11441/1005_100/2005-133/151_1911	0001	96.49	282.9	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 70	97.47	359.0	Secondary (grouped)
h11441/1005_100/2005-134/297_1535	0003	104.51	065.1	Secondary (grouped)
h11441/1014_mb/2005-136/581_1804	484/101	112.05	062.3	Secondary (grouped)
h11441/1005_100/2005-134/298_1529	0001	116.13	084.8	Secondary (grouped)
h11441/1014_mb/2005-136/581_1804	778/113	122.76	116.9	Secondary (grouped)
h11441/1005_100/2005-133/922_1707	0001	161.03	003.8	Secondary (grouped)
h11441/1014_mb/2005-136/579_1757	1196/193	165.91	155.5	Secondary (grouped)
h11441/1005_100/2005-133/120_1730	0003	167.13	047.7	Secondary (grouped)
h11441/1005_100/2005-133/120_1730	0004	175.65	088.5	Secondary (grouped)
h11441/1005_100/2005-134/297_1535	0002	178.50	358.7	Secondary (grouped)
h11441/1014_mb/2005-136/577_1649	2566/41	180.50	357.7	Secondary (grouped)
h11441/1005_100/2005-134/296_1540	0004	187.46	175.7	Secondary (grouped)
h11441/1005_100/2005-134/295_1546	0001	191.85	203.9	Secondary (grouped)
h11441/1005_100/2005-134/296_1540	0007	197.59	313.2	Secondary (grouped)
h11441/1005_100/2005-133/153_1934	0001	204.05	324.2	Secondary (grouped)
h11441/1005_100/2005-134/297_1535	0005	212.17	166.5	Secondary (grouped)
h11441/1005_mb/2005-134/296_1540	5115/54	212.57	181.3	Secondary (grouped)
h11441/1005_100/2005-134/153_1140	0002	212.69	325.4	Secondary (grouped)
h11441/1005_100/2005-134/297_1535	0004	213.51	134.6	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 6	214.87	181.5	Secondary (grouped)
h11441/1005_100/2005-133/120_1730	0002	228.08	055.4	Secondary (grouped)
h11441/1005_100/2005-134/297_1535	0001	228.74	009.9	Secondary (grouped)
h11441/1005_100/2005-134/298_1529	0002	231.34	055.1	Secondary (grouped)
h11441/1005_100/2005-134/298_1529	0003	231.69	025.9	Secondary (grouped)
h11441/1005_100/2005-133/150_1860	0002	235.71	199.8	Secondary (grouped)
h11441/1005_100/2005-134/296_1540	0003	239.17	162.6	Secondary (grouped)

h11441/1005_100/2005-133/150_1860	0004	244.94	216.0	Secondary (grouped)
h11441/1014_mb/2005-136/573_1606	1018/13	249.85	193.7	Secondary (grouped)
h11441/1014_mb/2005-136/581_1804	1343/70	256.57	150.4	Secondary (grouped)
h11441/1005_mb/2005-134/297_1535	4446/34	281.43	151.9	Secondary (grouped)
h11441/1014_mb/2005-136/578_1752	635/72	282.00	167.5	Secondary (grouped)
H11224_LIDAR_OK.csv	6	300.61	168.5	Secondary (grouped)
h11441/1014_mb/2005-136/575_1614	473/220	301.25	178.5	Secondary (grouped)
h11441/1005_mb/2005-133/153_1934	2621/84	310.48	334.9	Secondary (grouped)
h11441/1005_100/2005-133/122_1658	0001	313.90	007.5	Secondary (grouped)
h11441/1005_100/2005-133/150_1860	0001	315.74	202.4	Secondary (grouped)
h11441/1005_100/2005-134/122_1147	0001	315.76	001.6	Secondary (grouped)
h11441/1005_100/2005-134/122_1147	0002	320.60	349.4	Secondary (grouped)
h11441/1005_100/2005-133/149_1848	0001	336.78	192.0	Secondary (grouped)
h11441/1005_100/2005-134/295_1546	0002	339.40	188.1	Secondary (grouped)
h11441/1014_mb/2005-136/570_1822	402/27	347.64	155.7	Secondary (grouped)
h11441/1005_100/2005-134/298_1529	0004	349.91	014.6	Secondary (grouped)
h11441/1005_100/2005-134/154_1215	0002	364.10	343.6	Secondary (grouped)
h11441/1005_100/2005-134/153_1140	0003	384.12	356.8	Secondary (grouped)
h11441/1005_100/2005-133/150_1860	0003	400.56	209.3	Secondary (grouped)
h11441/1005_mb/2005-141/438_1358	470/77	429.32	210.3	Secondary (grouped)
h11441/1005_100/2005-133/149_1848	0002	432.11	210.5	Secondary (grouped)
h11441/1005_100/2005-134/296_1540	0002	497.17	175.9	Secondary (grouped)
h11441/1005_100/2005-134/154_1215	0003	500.29	333.8	Secondary (grouped)
h11441/1005_100/2005-133/148_1841	0001	503.16	177.4	Secondary (grouped)
h11441/1005_100/2005-134/295_1546	0003	535.37	177.8	Secondary (grouped)
h11441/1005_mb/2005-133/148_1841	59/38	542.55	177.7	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 7073	558.39	181.9	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 7	578.00	185.0	Secondary (grouped)
h11441/1005_100/2005-134/295_1546	0004	596.56	185.4	Secondary (grouped)
ChartGPs - ENC US4CN21M	Seabed 24	690.74	331.0	Secondary (grouped)



## Hydrographer Recommendations

Not shown on chart 13212 37th., Ed., Nov./05. No change in charting.

### Cartographically-Rounded Depth (Affected Charts):

20ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

3 ¼fm (12300\_1, 13006\_1, 13003\_1)

6.2m (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 - 6.238 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Do not concur, chart the shoalest Rock on the reef. Chart a 20 Rk in Latitude 41°17'17.302"N, Longitude 72°02'33.066"W.

### 3.32) AWOIS 12173 - Chart 10Rk

#### Primary Feature for AWOIS Item #12173

**Search Position:** 41° 18' 32.2" N, 072° 01' 56.3" W  
**Historical Depth:** 3.96 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- 13 FT SOUNDING NOW CHARTED IN POSITION: 41°18'32.17" N 072°01'56.34" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 32.4" N, 072° 01' 57.2" W  
**Least Depth:** 3.26 m (= 10.71 ft = 1.785 fm = 1 fm 4.71 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-137.18:47:07.123 (05/17/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-137 / 611\_1846  
**Profile/Beam:** 400/44  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky shoal; slightly shoal of currently charted depth.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-137/611_1846	400/44	0.00	000.0	Primary
H11224_LIDAR_OK.csv	22	1.60	091.8	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12173	22.54	286.4	Secondary
h11441/1005_100/2005-133/280_2044	0001	28.97	190.9	Secondary (grouped)
h11441/1005_100/2005-134/914_1813	0001	29.33	201.3	Secondary (grouped)
h11441/1005_100/2005-134/913_1809	0001	39.34	073.5	Secondary (grouped)
h11441/1005_100/2005-133/279_2103	0002	80.02	122.0	Secondary (grouped)
h11441/1005_100/2005-133/281_2020	0001	181.23	031.3	Secondary (grouped)
h11441/1005_100/2005-133/282_2008	0001	182.04	022.1	Secondary (grouped)

h11441/1005_100/2005-133/282_2007	0008	233.04	040.6	Secondary (grouped)
h11441/1005_100/2005-133/282_2007	0004	247.73	038.6	Secondary (grouped)

## Hydrographer Recommendations

Chart a rock with a depth of 10 feet in Latitude 41°18'32.406"N, Longitude 072°01'57.227"W.

### Cartographically-Rounded Depth (Affected Charts):

10ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

1 ¾fm (12300\_1, 13006\_1, 13003\_1)

3.3m (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 - 3.264 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Chart 10Rk in Latitude 41°18'32.406"N, Longitude 072°01'57.227"W.

### 3.33) AWOIS 12169 - Chart 17 ft depth

#### Primary Feature for AWOIS Item #12169

**Search Position:** 41° 18' 46.2" N, 072° 02' 21.3" W  
**Historical Depth:** 5.49 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- 18 FT SOUNDING NOW CHARTED IN POSITION: 41°18'46.2" N 072°02'21.27" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 46.3" N, 072° 02' 21.0" W  
**Least Depth:** 5.39 m (= 17.70 ft = 2.950 fm = 2 fm 5.70 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-137.18:56:16.262 (05/17/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-137 / 709\_1855  
**Profile/Beam:** 356/155  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Cluster of rocks as charted.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-137/709_1855	356/155	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12169	8.18	068.5	Secondary
h11441/1005_100/2005-133/878_2205	0001	30.91	081.2	Secondary

## Hydrographer Recommendations

Chart a depth of 17 feet in Latitude 41°18'46.297"N, Longitude 072°02'20.974"W.

### Cartographically-Rounded Depth (Affected Charts):

17ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

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

5.4m (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 - 11:Nearly lowest low water

## Office Notes

Concur - Chart a 17 ft depth in Latitude 41°18'46.297"N, Longitude 072°02'20.974"W.

### 3.34) AWOIS 11883 - Delete 2 Subm pipes PA

#### Primary Feature for AWOIS Item #11883

**Search Position:** 41° 20' 30.5" N, 072° 05' 13.6" W  
**Historical Depth:** [None]  
**Search Radius:** 100  
**Search Technique:** S2, MB, DI, SD  
**Technique Notes:** IF PIPE IS DETECTED, DEVELOP FEATURE TO FULLEST INSHORE EXTENT

#### History Notes:

LNM 9/77--1ST CGD, 3/2/77; CL 1617/77--COPY OF LNM 9/77 AND LISTED IN CHART HISTORY AS SOURCE OF TWO SUBM. PIPES.1670 FT OF 48- INCH DIAMETER CONCRETE AND POLYETHELENE SUBAQUEOUS OUTFALL SEWER PIPE INSTALLED IN NEW LONDON HARBOR, LONG ISLAND SOUND. THE PIPE EXTENDS EASTWARD AWAY FROM FORT TRUMBULL, CT INTO THE CABLE AREA. POSITION IS GIVEN IN CHART HISTORY AS 41-20-30.5N, 72-05-31W NAD 27. HOWEVER, THE ITEMS WERE CHARTED 30M APART WITH A CENTRAL POS. IN 41 20 30.5N, 072 05 13.6W NAD 83, BASED ON PROVIDED CHART SECTION. ENTERED 1/8/04 JCM .

#### Survey Summary

**Survey Position:** 41° 20' 29.7" N, 072° 05' 14.6" W  
**Least Depth:** 6.25 m (= 20.52 ft = 3.420 fm = 3 fm 2.52 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-141.13:51:11.999 (05/21/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-141 / 136\_1350  
**Profile/Beam:** 584/209  
**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Cable or (sewer?) pipeline with shoal at the end. No piles were found in this area.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-141/136_1350	584/209	0.00	000.0	Primary
h11441/1005_200/2005-135/245_2038	0004	5.84	136.3	Secondary
h11441/1005_100/2005-134/229_2250	0001	15.70	006.7	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 11883	35.53	223.0	Secondary (grouped)
h11441/1014_mb/2005-141/145_1400	993/199	49.94	094.6	Secondary
h11441/1005_100/2005-135/230_1218	0001	52.58	101.4	Secondary (grouped)

h11441/1014_mb/2005-135/168_1701	2821/21	64.87	093.3	Secondary (grouped)
h11441/1014_mb/2005-135/168_1701	2811/140	72.06	093.7	Secondary (grouped)
h11441/1014_mb/2005-135/168_1701	2802/227	79.11	093.9	Secondary (grouped)

### Hydrographer Recommendations

It is recommended that the 2 subm pipe symbols and notation Subm pipes PA be deleted. Chart present survey depths.

#### Cartographically-Rounded Depth (Affected Charts):

20ft (13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

3 ¼fm (12300\_1, 13006\_1, 13003\_1)

6.3m (5161\_1)

### S-57 Data

[None]

### Office Notes

Concur - Delete 2 Subm pipe symbols and notation Subm pipes PA.

### 3.35) AWOIS 12423 - Delete 45 Rk - Chart 47Rk

#### Primary Feature for AWOIS Item #12423

**Search Position:** 41° 16' 30.8" N, 072° 06' 04.9" W  
**Historical Depth:** 13.72 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, SD  
**Technique Notes:** [None]

#### History Notes:

F-00343ss/90 -- 45 FT ROCK CHARTED IN POSITION: 41°16'30.8" N 072°06'04.9" W [NAD 83] [ENTERED 5/4/04 JCM]

#### Survey Summary

**Survey Position:** 41° 16' 31.5" N, 072° 06' 07.5" W  
**Least Depth:** 14.29 m (= 46.88 ft = 7.813 fm = 7 fm 4.88 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-142.16:01:36.283 (05/22/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-142 / 224\_1555  
**Profile/Beam:** 2209/52  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, near charted location. RESON 8125 shows the depth to be to the west and slightly deeper than the charted sounding.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-142/224_1555	2209/52	0.00	000.0	Primary
h11441/1005_100/2005-132/129_1355	0009	21.93	276.1	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12423	63.78	288.6	Secondary (grouped)
ChartGPs - ENC US4CN21M	Danger 42	99.63	273.6	Secondary (grouped)



## Hydrographer Recommendations

Chart a rock with a depth of 47 feet in Latitude 41°16'31.459"N, Longitude 072°06'07.490"W.

### Cartographically-Rounded Depth (Affected Charts):

47ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

7 ¾fm (12300\_1, 13006\_1, 13003\_1)

14.3m (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 - 14.288 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Concur - Delete 45Rk and danger curve. Chart 47Rk and danger curve in Latitude 41°16'31.459"N, Longitude 072°06'07.490"W.

### 3.36) AWOIS #1847 - AWOIS 1847 - Not charted

#### No Primary Survey Feature for this AWOIS Item

**Search Position:** 41° 15' 56.4" N, 072° 05' 31.3" W  
**Historical Depth:** [None]  
**Search Radius:** 0  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

CL271/18--CGS; ADVANCE INFO FROM WIRE DRAG PARTY 1; AN OBSTRUCTION, PROBABLY A WRECK, FOUND IN LAT 41-15-58N, LONG 72-05-34W; LEAST DEPTH NOT YET DETERMINED; DRAG CAUGHT WHILE SET TO 58 FT. ■ CL60/19--CGS; FINAL WIRE DRAG SURVEY DATA; 54 FT. OBSTRUCTION CHARTED IN LAT 41-15-56N, LONG 72-05-33W. ■ H9212/71--OBSTRUCTION DELETED. ■■ DESCRIPTION ■ 24 NO.8668; SUNK 1919; POSITION ACCURACY WITHIN 1 MILE; WD CLEARED TO 56 FT. (SOURCE UNK.); REPORTED THROUGH CGS SURVEY, DATED 1919 (REG. NO. NOT ASCERTAINED)

#### Survey Summary

**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

RESON 8101 MBES shows outcrop to be slightly shoal of surrounding terrain. No wreck or obstruction as reported by AWOIS was seen at this location.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 1847	0.00	000.0	Primary
h11441/1005_100/2005-131/937_1652	0002	50.58	093.5	Secondary (grouped)
h11441/1014_mb/2005-134/680_2022	1273/177	89.83	124.4	Secondary (grouped)

#### Hydrographer Recommendations

Item disproved during investigation H9212/71. Not shown on chart 13212 37th. Ed., Nov./05. No change in charting.

#### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** OBJNAM - probably not significant.

TECSOU - 2:found by side scan sonar

WATLEV - 3:always under water/submerged

## Office Notes

Concur

**3.37) AWOIS #1857 - AWOIS 1857 - Not charted -Not seen****No Primary Survey Feature for this AWOIS Item**

**Search Position:** 41° 17' 00.4" N, 072° 05' 38.3" W  
**Historical Depth:** [None]  
**Search Radius:** 0  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

**History Notes:**

NM 35/17--BUOY ESTABLISHED TO MARK SIGNALING APPARATUS.■ CL321/18--CGS; PRELIMINARY BOAT SHEET DATA; OBSTRUCTION AND 34 FT. SOUNDING CHARTED.■ CL60/19--CGS; FINAL WIRE DRAG DATA; REVISED TO 32 FT. OBSTRUCTION.■ CL388/27--USN HYDROGRAPHIC OFFICE; SEARCH FAILED TO LOCATE TRIPOD; BELIEVES IT NO LONGER EXISTS; DELETION RECOMMENDED.■■ DESCRIPTION■ 24 NO.8654; SUNK 1919; POSITION ACCURACY WITHIN 1 MILE; REPORTED SALVAGED (SOURCE UNK)

**Survey Summary**

**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

[None]

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 1857	0.00	000.0	Primary

**Hydrographer Recommendations**

Item not seen during office review of present survey data. No change in charting.

**S-57 Data**

[None]

## Office Notes

Concur

### 3.38) AWOIS #6957 - AWOIS #6957 - Subm Rk rep 1972 disproven

#### No Primary Survey Feature for this AWOIS Item

**Search Position:** 41° 18' 32.9" N, 072° 01' 49.3" W  
**Historical Depth:** [None]  
**Search Radius:** 250  
**Search Technique:** S2,MB,DI  
**Technique Notes:** ONLY SEARCH THE PORTION OF THE SEARCH AREA THAT IS SEAWARD OF THE 18 FT DEPTH CURVE

#### History Notes:

CL1286/72--PRIVATE MARINER; WHILE TRAVELLING BETWEEN MUMFORD COVE AND FISHERS ISLAND, A SAILBOAT, DRAWING 3.5 FT., STRUCK A SUBMERGED PINNACLE IN AN AREA CHARTED AS HAVING 25 FT. OF WATER; EXTREME LOW TIDE AT THE TIME; LATEST PHOTOGRAPHY AND H8926/66 INSPECTED IN THE OFFICE FOR SIGN OF PINNACLE, WITH NEGATIVE RESULTS; 13 FT. PINNACLE ON SURVEY LOCATED APPROXIMATELY 175 YARDS WEST OF REPORTED STRIKING; BELIEVED TO BE AN INDICATION THAT OTHER PINNACLES MAY BE IN THE AREA. (ENTERED MSM 11/88)

#### Survey Summary

**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

There are no rocks or objects found by the Klein 5000 or MBES over this reported 'Subm Rk, rep 1972' location. There is a charted 16 foot rock ~160 meters to the west and a Horseshoe Reef to the east. There are no rocks as this AWOIS reports for over 200 meters north to Mumford Point.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 6957	0.00	000.0	Primary

#### Hydrographer Recommendations

AWOIS item disproven. Delete Sumb Rock rep 1972. Chart per digital data.

#### S-57 Data

[None]

## Office Notes

Concur - Delete danger curve and notation Subm Rk (rep 1972).

AWOIS #6957 - Subm Rk rep 1972 disproven

**3.39) AWOIS #11844 - AWOIS 11844 -Delete notation Rks****No Primary Survey Feature for this AWOIS Item**

**Search Position:** 41° 21' 24.4" N, 072° 05' 23.1" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** ROCK POSITIONS ARE NEAR 30FT CURVE

**History Notes:**

CL771/59--THE EXISTENCE OF SEVEN ROCKS ARE IN APPROXIMATE NAD 83 POSITION; LAT. 41-21-24.36 N, LONG 072-05-23.07 W. THE DEPTHS OF ROCKS INDICATED WERE FURNISHED BY A STATE PIER REPRESENTATIVE BASED ON AN INVESTIGATION MADE BY NAVY DIVERS. DEPTHS RANGE FROM 22FT TO 34 FT. NM 38/59 WAS FOUND INSCRIBED ON CL771/59.■■ NM38/59--A FIELD INSPECTION BY THE C GS SHOWS SUBMERGED ROCKS COVERED BY 22 FEET AT M.L.W. ABOUT 385 YARDS 152 DEGREES FROM THE TANK. LAT. 41 21 35N, LONG. 72 05 31.5W (NAD 27) ENTERED RFE 04/03

**Survey Summary**

**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

[None]

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 11844	0.00	000.0	Primary

**Hydrographer Recommendations**

No rocks were determined during office processing from the base surface data.

**S-57 Data**

[None]



## Office Notes

Delete notation Rks. Chart present survey depths.

### 3.40) AWOIS #11880 - AWOIS 11880 - Delete dangerous sunken wreck PA

#### No Primary Survey Feature for this AWOIS Item

**Search Position:** 41° 19' 53.4" N, 072° 05' 25.4" W  
**Historical Depth:** [None]  
**Search Radius:** 100  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

LN17/88--CGD1, 04/27/88; A 35FT WHITE HULL/BLUE BOTTOM BOAT HAS BEEN REPORTED SUNK IN POSITION LAT. 41-19- 53.1 , LONG. 072-05-27.1 (NAD 27) AND HAS BEEN MARKED WITH A TEMPORARY WRECK BUOY. ENTERED RFE 06/03.

#### Survey Summary

**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

No 35 foot wreck as reported was found within this AWOIS circle. Small, scattered debris were found; none significant to navigation.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 11880	0.00	000.0	Primary
H11224_LIDAR_ReqFldWrk.csv	21	5.59	192.6	Secondary
h11441/1005_mb/2005-140/040_1609	1068/32	30.70	252.9	Secondary (grouped)
h11441/1005_mb/2005-140/043_1555	1719/96	85.61	352.6	Secondary

#### Hydrographer Recommendations

Disproven. Chart area per digital datum.

#### S-57 Data

[None]

## Office Notes

Concur - Delete dangerous sunken wreck, PA.

### 3.41) AWOIS #11881 - AWOIS 11881 - RETAIN ROCK AWASH

#### No Primary Survey Feature for this AWOIS Item

**Search Position:** 41° 20' 09.6" N, 072° 05' 33.7" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** S2,MB,DI  
**Technique Notes:** [None]

#### History Notes:

H08935/67-- "HOG BACK" ROCK AWASH NOW CHARTED IN POSITION: 41°20'09.61" N 072°05'33.73" W (NAD 83) [UPDATED 2/28/2005 JCM]

#### Survey Summary

**Charts Affected:** 13213\_1, 12372\_4, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

[None]

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 11881	0.00	000.0	Primary

#### Hydrographer Recommendations

Rock awash neither verified nor disproved. Retain as charted.

#### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 2:depth unknown  
STATUS - 1:permanent  
TECSOU - 3:found by multi-beam  
VERDAT - 12:Mean lower low water  
WATLEV - 5:awash

## Office Notes

Concur

### 3.42) AWOIS #12166 - AWOIS 12166 -Chart 12 ft depth

#### No Primary Survey Feature for this AWOIS Item

**Search Position:** 41° 18' 33.5" N, 072° 03' 43.0" W  
**Historical Depth:** 3.66 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8996/68 -- 12 FT SOUNDING NOW CHARTED IN POSITION: 41°18'33.48" N 072°03'42.97" W [NAD 83] [ENTERED 1/15/04 JCM]

#### Survey Summary

**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

[None]

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 12166	0.00	000.0	Primary

#### Hydrographer Recommendations

Chart a depth of 12 feet in Latitude 41°18'33.55"N, Longitude 072°03'42.92"W.

#### 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 - Chart 12 ft depth in Latitude 41°18'33.55"N, Longitude 072°03'42.92"W.

### 3.43) AWOIS #12176 - AWOIS 12176 - Retain as charted rock awash

#### No Primary Survey Feature for this AWOIS Item

**Search Position:** 41° 18' 25.2" N, 072° 01' 29.8" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- ROCK AWASH AT MLLW. NOW CHARTED IN POSITION: 41°18'25.2" N 072°01'29.78" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Horshoe Reef, rocky shoal extends to the south beyond what is described by the chart. The rock awash was neither verified nor disproved. Area unsafe for survey vessel.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 12176	0.00	000.0	Primary
H11224_LIDAR_OK.csv	16	3.16	189.9	Secondary
h11441/1005_100/2005-134/312_1805	0001	33.24	099.2	Secondary
h11441/1005_100/2005-134/313_1650	0002	48.92	057.2	Secondary
h11441/1005_mb/2005-134/313_1650	1988/96	69.52	351.0	Secondary (grouped)

#### Hydrographer Recommendations

Retain chart rock awash.

#### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 2:depth unknown  
STATUS - 1:permanent



TECSOU - 2:found by side scan sonar

VERDAT - 12:Mean lower low water

WATLEV - 5:awash

## Office Notes

Concur

### 3.44) AWOIS #12177 - AWOIS 12177 - Retain 6 ft depth

#### No Primary Survey Feature for this AWOIS Item

**Search Position:** 41° 18' 32.7" N, 072° 01' 23.3" W  
**Historical Depth:** 1.83 m  
**Search Radius:** 50  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

H-8926/68 -- 6 FT SOUNDING NOW CHARTED IN POSITION: 41°18'32.7" N 072°01'23.25" W [NAD 83] [ENTERED 1/16/04 JCM]

#### Survey Summary

**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Horshoe Reef, rocky area as charted. MBES coverage could not safely be acquired directly over this rock.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B370-TJ-05_AWOIS	AWOIS # 12177	0.00	000.0	Primary
H11224_LIDAR_OK.csv	18	6.59	084.8	Secondary
h11441/1005_100/2005-134/315_1715	0002	27.82	050.1	Secondary (grouped)

#### Hydrographer Recommendations

Retain charted 6 ft depth.

#### 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

### 3.45) AWOIS 13001 - Disproved

#### Primary Feature for AWOIS Item #13001

**Search Position:** 41° 16' 58.9" N, 072° 05' 57.0" W  
**Historical Depth:** 10.67 m  
**Search Radius:** 100  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

UNDETERMINED CHARTING SOURCE -- 35 FT RK NOW CHARTED IN POSITION: 41-16-58.89 N, 072-05-57.00 W (NAD 83). UPDATED 3/3/2005 JCM.

#### Survey Summary

**Survey Position:** 41° 17' 00.2" N, 072° 05' 55.6" W  
**Least Depth:** 14.79 m (= 48.52 ft = 8.086 fm = 8 fm 0.52 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-133.15:17:45.215 (05/13/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-133 / 356\_1515  
**Profile/Beam:** 1398/234  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky outcrop but no 35 foot rock per AWOIS was seen in this area. MBES data show this contact to be the shoal point within the AWOIS circle.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-133/356_1515	1398/234	0.00	000.0	Primary
h11441/1005_100/2005-132/124_2009	0010	35.82	338.0	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 13001	52.12	038.7	Secondary (grouped)

#### Hydrographer Recommendations

Do not chart. Item not shown on chart 13212 37th. Ed., Nov./05.

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 1:depth known  
STATUS - 1:permanent  
TECSOU - 3:found by multi-beam  
VALSOU - 14.788 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

### Office Notes

Concur - No change in charting.

### 3.46) AWOIS 3180 - Delete 43 Obstn rep 1990 and danger curve

#### Primary Feature for AWOIS Item #3180

**Search Position:** 41° 16' 47.9" N, 072° 04' 28.4" W  
**Historical Depth:** 13.11 m  
**Search Radius:** 75  
**Search Technique:** S2,MB,DI,SD  
**Technique Notes:** [None]

#### History Notes:

H9951/80WD--S-B610-RU/HE-80; SUBM OBSTR, AN UNINVESTIGATED TEMPORARY HANG HUNG AT AN EFFECTIVE DEPTH OF 42FT, POSITION APPROX. IN LAT. 41-16-47.0N, LONG.72-04-29.6W. IT WAS CLEARED BY AN EFFECTIVE DEPTH OF 41FT IN ONE DIRECTION ONLY. RECOMMENDS CHARTING THIS HANG AS A SUBM OBSTRUCTION WITH A WIRE DRAG CLEARANCE TO 41FT. SHOWN ON SMOOTH SHEET AS A GROUNDING. (ENTERED 11/14/83 RWD) ■ ■ F00343SS/90--OPR-B660-HE; DURING OFFICE PROCESSING A SIDE SCAN SONAR CONTACT WITH AN ESTIMATED DEPTH OF 43 FT WAS COMPUTED IN POS. LAT.41-16-47.93N, LONG. 072-04-28.39W (UPDATED 3/05 MCR)

#### Survey Summary

**Survey Position:** 41° 16' 48.8" N, 072° 04' 28.2" W  
**Least Depth:** 13.07 m (= 42.88 ft = 7.147 fm = 7 fm 0.88 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-134.12:17:08.420 (05/14/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-134 / 618\_1212  
**Profile/Beam:** 3058/240  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rocky area as charted. No obstruction seen in data.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-134/618_1212	3058/240	0.00	000.0	Primary
ChartGPs - ENC US4CN21M	Danger 3	0.86	093.1	Secondary (grouped)
h11441/1005_100/2005-132/126_1924	0003	9.17	008.5	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 3180	28.13	006.7	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	43	37.61	011.1	Secondary (grouped)

## Hydrographer Recommendations

Delete charted 43 Obstn rep 1990 and danger curve. Chart present survey depth.

### Cartographically-Rounded Depth (Affected Charts):

43ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

13.1m (5161\_1)

### S-57 Data

[None]

### Office Notes

Concur

### 3.47) AWOIS 12995 - Delete - dangerous sunken wreck, PA

#### Primary Feature for AWOIS Item #12995

**Search Position:** 41° 21' 43.0" N, 072° 05' 13.0" W  
**Historical Depth:** [None]  
**Search Radius:** 100  
**Search Technique:** S2, SWMB, DI, SD  
**Technique Notes:** [None]

#### History Notes:

NM 45/04 (11/6/04) -- DANGEROUS WRECK PA WITH UNKNOWN DEPTH REPORTED IN POSITION 41°21'43" N, 72°05'13" W (NAD83)  
 [UPDATED 2/28/2005 JCM]

#### Survey Summary

**Survey Position:** 41° 21' 43.6" N, 072° 05' 13.6" W  
**Least Depth:** 11.31 m (= 37.09 ft = 6.182 fm = 6 fm 1.09 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-135.13:43:49.570 (05/15/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-135 / 133\_1343  
**Profile/Beam:** 303/10  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Shoal at the eastern edge of the channel. This shoal runs north south and appears to be left over from an old butress from a bridge which crossed the river immediatly south of the Amtrak trestle. MBES and SSS coverage do not show any sign of a wreck within the AWOIS circle.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-135/133_1343	303/10	0.00	000.0	Primary
h11441/1005_200/2005-135/200_2059	0003	17.69	155.1	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12995	23.39	322.1	Secondary (grouped)
h11441/1014_mb/2005-135/129_1331	359/197	40.87	124.5	Secondary
h11441/1014_mb/2005-135/129_1331	391/201	47.72	134.4	Secondary



## Hydrographer Recommendations

Delete charted dangerous sunken wreck, PA. Chart present survey depth.

### Cartographically-Rounded Depth (Affected Charts):

37ft (13213\_1, 12372\_4, 12354\_1, 13205\_1)

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

11.3m (5161\_1)

## S-57 Data

**Geo object 1:** Sounding (SOUNDG)

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

QUASOU - 1:depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

## Office Notes

Concur - Delete dangerous sunken wreck, PA.

### 3.48) AWOIS 13002 - Disproved - Delete 44Rk, Chart 42 Rk.

#### Primary Feature for AWOIS Item #13002

**Search Position:** 41° 17' 14.4" N, 072° 04' 48.5" W  
**Historical Depth:** 13.41 m  
**Search Radius:** 100  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

F00345ss/90 -- THIS ORIGINAL SOURCE WAS NOT AVAILABLE FOR OFFICE REVIEW. ■ LNM45/93 -- 44 FT ROCK REPORTED IN POSITION: 41-17-14.4 N, 072-04-48.5 (NAD 83). CHARTING RECOMMENDATION: ADD 44 FT SOUNDING AND LABEL RK. UPDATED 3/3/2005 JCM.

#### Survey Summary

**Survey Position:** 41° 17' 10.7" N, 072° 04' 48.4" W  
**Least Depth:** 13.03 m (= 42.76 ft = 7.126 fm = 7 fm 0.76 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-137.13:43:04.608 (05/17/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-137 / 622\_1342  
**Profile/Beam:** 542/217  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Significant rock or obstruction just outside of AWOIS circle. RESON 8125 MBES data show this to be the shoal point near this AWOIS circle.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-137/622_1342	542/217	0.00	000.0	Primary
ChartGPs - ENC US4CN21M	Danger 61	112.16	179.4	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 13002	115.78	178.9	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 8311	116.69	179.2	Secondary (grouped)

## Hydrographer Recommendations

Chart present survey depth

### Cartographically-Rounded Depth (Affected Charts):

43ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

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

13.0m (5161\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** QUASOU - 1:depth known  
STATUS - 1:permanent  
TECSOU - 3:found by multi-beam  
VALSOU - 13.032 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

### Office Notes

Concur - Delete 44Rk. Chart a 42 Rk in Latitude 41°17'10.656"N, Longitude 72°04'48.408"W.

### 3.49) AWOIS 12420 - Chart 32 Rk

#### Primary Feature for AWOIS Item #12420

**Search Position:** 41° 18' 01.4" N, 072° 04' 18.3" W  
**Historical Depth:** 8.53 m  
**Search Radius:** 100  
**Search Technique:** S2, MB, DI  
**Technique Notes:** [None]

#### History Notes:

COE BP 143044 (JUNE 1990) -- 28 FT ROCK IN POSITION APPROXIMATE: 41°18'01.44" N 072°04'18.40" W [NAD 83] [ENTERED 4/19/04 JCM]

#### Survey Summary

**Survey Position:** 41° 18' 02.3" N, 072° 04' 18.6" W  
**Least Depth:** 9.90 m (= 32.47 ft = 5.411 fm = 5 fm 2.47 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2005-137.16:15:17.008 (05/17/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-137 / 914\_1614  
**Profile/Beam:** 597/50  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock where charted. RESON 8125 MBES shows this rock to be deeper than charted depth. Rock outcrop swings a crescent shaped arc to the north.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-137/914_1614	597/50	0.00	000.0	Primary
h11441/1005_100/2005-131/110_2015	0001	27.47	060.7	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12420	27.77	347.8	Secondary (grouped)
H11224_LIDAR_ReqFldWrk.csv	16	35.67	124.7	Secondary (grouped)
h11441/1005_100/2005-131/847_2304	0001	64.21	169.5	Secondary (grouped)
h11441/1005_100/2005-131/111_2021	0001	74.84	278.6	Secondary (grouped)
H11224_LIDAR_OK.csv	33	87.63	140.4	Secondary (grouped)
h11441/1005_100/2005-131/288_2204	0004	100.86	271.9	Secondary (grouped)

H11224_LIDAR_ReqFldWrk.csv	17	128.83	166.5	Secondary (grouped)
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## Hydrographer Recommendations

### Cartographically-Rounded Depth (Affected Charts):

32ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

5 ¼fm (12300\_1, 13006\_1, 13003\_1)

9.9m (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 - 9.896 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

## Office Notes

Chart a rock with a 32ft. depth in Latitude 41°18'02.278"N, Longitude 72°04'18.551"W.

## **4 - Dangers to Navigation**

## 4.1) DTON 532/34 - Charted 21 Rk

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 41° 17' 52.1" N, 072° 02' 27.1" W  
**Least Depth:** 6.45 m (= 21.16 ft = 3.526 fm = 3 fm 3.16 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-136.17:34:26.883 (05/16/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-136 / 557\_1733  
**Profile/Beam:** 532/34  
**Charts Affected:** 13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock cluster, RESON 8125 shows this to be significantly shoal of nearest reported sounding. This is an area where there is the potential for large ship traffic.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-136/557_1733	532/34	0.00	000.0	Primary
H11224_LIDAR_OK.csv	7	3.01	348.8	Secondary (grouped)
h11441/1005_100/2005-131/291_2116	0002	13.10	200.2	Secondary (grouped)
h11441/1005_100/2005-131/290_2135	0001	13.84	326.5	Secondary (grouped)
h11441/1005_100/2005-131/290_2135	0002	53.38	132.8	Secondary (grouped)

#### Hydrographer Recommendations

Chart rock with a depth of 21 feet in Latitude 41°17'52.10"N, Longitude 072°02'27.132"W.

#### Cartographically-Rounded Depth (Affected Charts):

21ft (13213\_1, 13212\_1, 13214\_1, 12372\_1, 13205\_1)

3 ½fm (12300\_1, 13006\_1, 13003\_1)

6.4m (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 - 6.449 m  
VERDAT - 12:Mean lower low water  
WATLEV - 3:always under water/submerged

### Office Notes

Concur - Item originates with present survey. Item shown on chart 13213, 41st. Edition, Mar/04. No change in charting.



## 4.2) DTON 658/106 - Charted 19 Rk

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 41° 17' 55.7" N, 072° 05' 38.2" W  
**Least Depth:** 6.01 m (= 19.71 ft = 3.285 fm = 3 fm 1.71 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-142.18:55:25.779 (05/22/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-142 / 214\_1854  
**Profile/Beam:** 658/106  
**Charts Affected:** 13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rock, 8125 MBES shows it to be significantly shoal of charted soundings.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-142/214_1854	658/106	0.00	000.0	Primary
H11224_LIDAR_OK.csv	1	5.36	162.0	Secondary
h11441/1005_100/2005-134/262_2020	0001	14.40	229.0	Secondary

#### Hydrographer Recommendations

Chart a rock with a depth of 19 feet in Latitude 41°17'55.702"N, Longitude 072°05'38.235"W.

#### Cartographically-Rounded Depth (Affected Charts):

19ft (13213\_1, 13212\_1, 12372\_1, 12354\_1, 13205\_1)

3 ¼fm (12300\_1, 13006\_1, 13003\_1)

6.0m (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 - 6.008 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

### **Office Notes**

Concur - Item originates with present survey. Item shown on chart 13213, 41st. Edition, Mar/04. No change in charting.

### 4.3) DTON 463/200 - DTON - Charted 11 Obstrn

## DANGER TO NAVIGATION

### Survey Summary

**Survey Position:** 41° 21' 00.1" N, 072° 05' 45.3" W  
**Least Depth:** 3.48 m (= 11.43 ft = 1.906 fm = 1 fm 5.43 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-141.15:41:55.391 (05/21/2005)  
**Survey Line:** h11441 / 1014\_mb / 2005-141 / 169\_1541  
**Profile/Beam:** 463/200  
**Charts Affected:** 13213\_1, 12372\_4, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Debris with mast or pile tipped at angle toward shore. Foul area around.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11441/1014_mb/2005-141/169_1541	463/200	0.00	000.0	Primary
h11441/1005_100/2005-135/222_1338	0002	3.01	172.3	Secondary
h11441/1005_100/2005-135/216_1037	0015	8.06	009.8	Secondary

### Hydrographer Recommendations

Chart an obstruction with a depth of 11 feet in Latitude 41°21'00.145" , Longitude 072°05'45.33"W.

#### Cartographically-Rounded Depth (Affected Charts):

11ft (13213\_1, 12372\_4, 12354\_1, 13205\_1)

1 ¾fm (12300\_1, 13006\_1, 13003\_1)

3.5m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** QUASOU - 6:least depth known  
 STATUS - 1:permanent

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

VALSOU - 3.485 m

VERDAT - 12:Mean lower low water

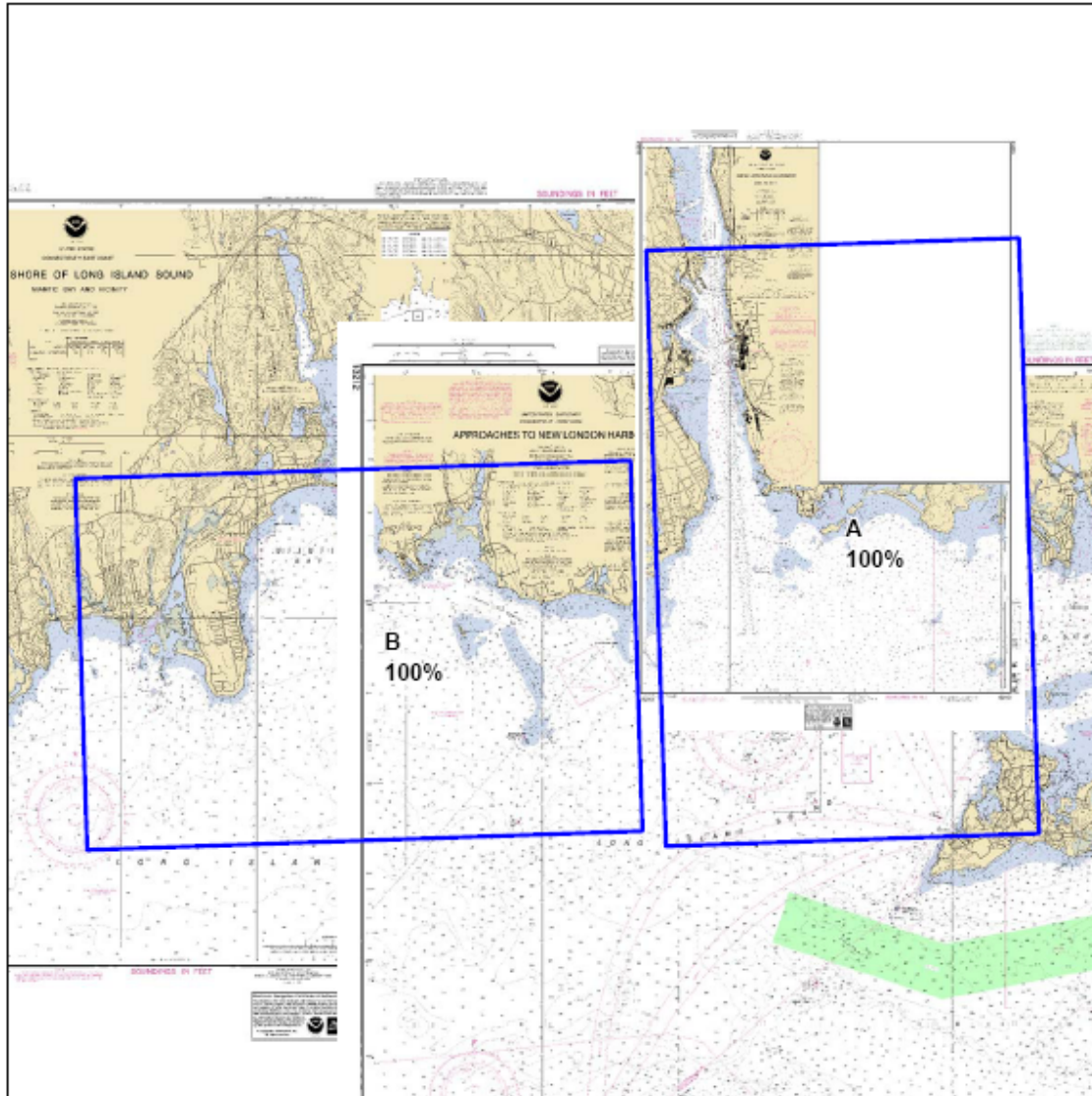
WATLEV - 3:always under water/submerged

### **Office Notes**

Concur - Item originates with present survey. Item shown on chart 13213, 41st. Edition, Mar/04. No change in charting.

## APPENDIX III

### PROGRESS SKETCH



Project	Sheet_Letter	H_num	HQ_Est_SNM	CumIPeroCompPrev	CumIPeroCompCur	SNM_CompCurh
B370-TJ-05	A	H11441	14	0	100	14
B370-TJ-05	B	H11442	18	50	100	8

Project	Month	LNH_Hydr	LNH_MB	SV_Casts	Bottom_Sam	AWOIS_Items	Tide_Gauge_Inst	DAS	DTime equip_H	DTime_Weather	D_Time_other_J
B370	April	271.00	612.00	81.00	0.00	23.00	0.00	13.00	35.00	16.00	0.00
B370	May	450.00	1,325.00	275.00	0.00	47.00	0.00	23.00	80.00	0.00	0.00

**Progress Sketch OPR-B370-TJ-05**  
**May, 2005**

## **APPENDIX IV**

### **TIDES AND WATER LEVELS**

#### **IV.1. Description**

Tide data were collected through the National Water Level Observation Network (NWLON) from stations located at New London (846-1490), Montauk (851-0560) and New Haven (846-5705). The personnel of the THOMAS JEFFERSON were not required to level these tide stations. The dates and times that tide data were required for this survey are listed the Request for Approved Tides letter, figure d. Refer to standing instructions for information on water level procedures. All tide levels are relative to Mean Lower Low Level (MLLW) and times are UTC.

Attached is the request for smooth tides; submitted on May 23<sup>rd</sup>, 2005:

#### **IV.2. Smooth Tide Request**

May 23, 2005

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

FROM: CDR Emily B. Christman, THOMAS JEFFERSON

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

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

Transmit data to:

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

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

Project No.: OPR-B370-TJ-05  
Registry No.: H11441  
State: CT  
Locality: Eastern Long Island Sound  
Sublocality: New London Harbor and Approaches

Attachments containing:

- 1) an Abstract of Times of Hydrography,
- 2) digital MID MIF files of the track lines from pydro on CD/diskette

cc: N/CS33

## Request for Approved Tides

## Times of Hydrography

---

Year_DOY	Min Time	Max Time
2005_117	16:09:44	20:26:31
2005_119	22:58:56	23:32:38
2005_126	15:59:36	19:07:55
2005_130	10:52:38	23:21:38
2005_131	10:44:32	23:10:52
2005_132	12:52:03	21:39:37
2005_133	10:54:00	22:35:12
2005_134	10:53:51	23:19:20
2005_135	10:19:35	23:02:59
2005_136	11:08:36	23:01:27
2005_137	10:51:10	22:54:25
2005_138	16:33:46	23:01:15
2005_139	11:00:48	22:41:51
2005_140	10:35:19	22:48:17
2005_141	12:30:47	19:31:49
2005_142	12:16:37	21:32:30





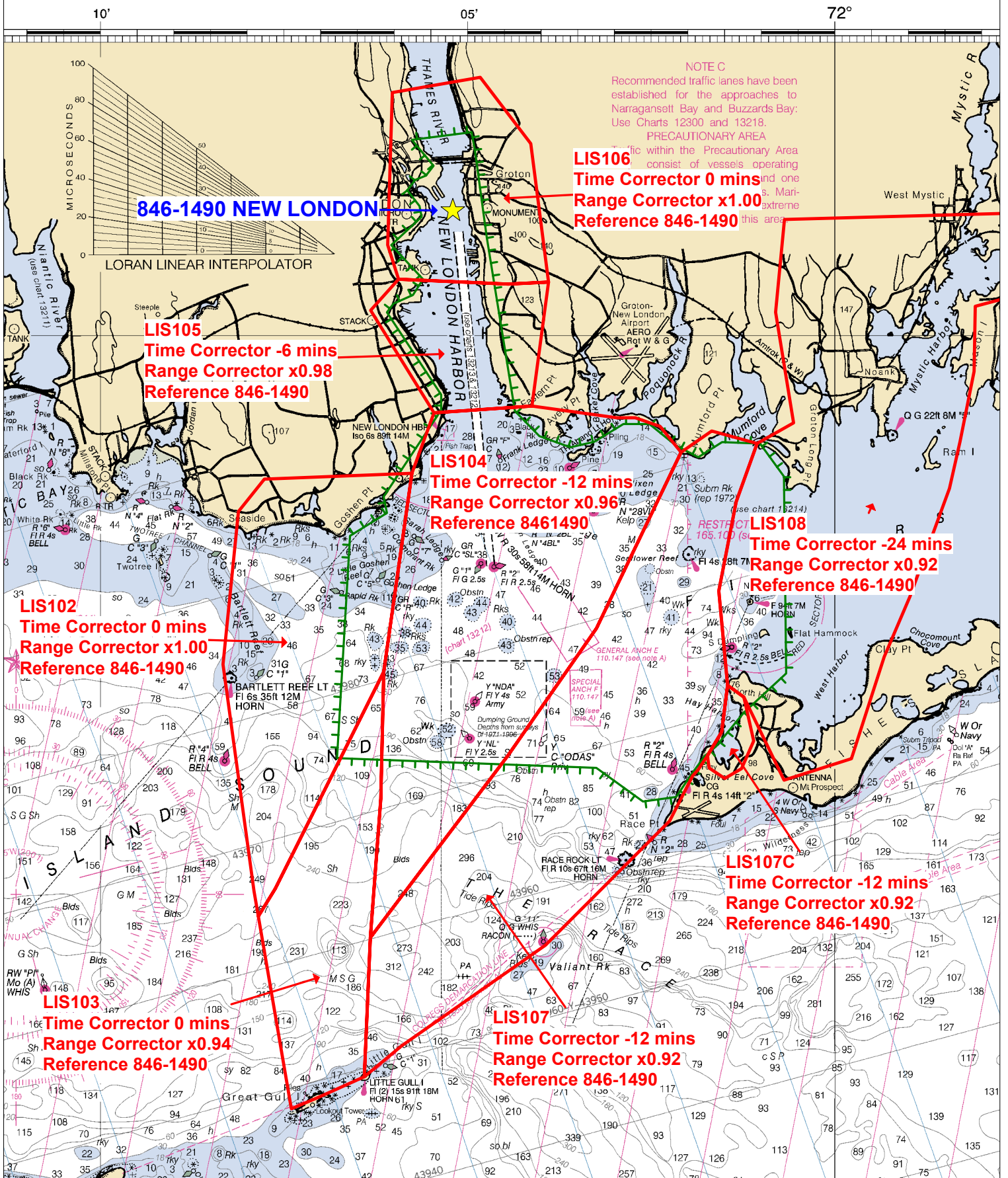
**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
National Ocean Service  
Silver Spring, Maryland 20910



# Final Tidal Zoning for OPR-B370-TJ-2004 Eastern Long Island Sound - Sheet H11441

Riverhead, NY WXM-80 162.475 MHz

3926, December 27, 1966, and is also the outer limit of the U.S. for the application of domestic law. The 3 nautical mile line, pr as the outer limit of the territorial sea, is retained because the pr does not alter existing State or Federal law. The 9 n miles boundary off Texas, the Gulf coast of Florida, and nautical mile elsewhere remain the inner bounda es jurisdiction and limit of states' jurisdiction under the Sub 7 Stat. 29, March 22, 1953). These maritime lin as represented on future charts. The lines sh dition take precedence. The Puerto Rico natural re to the limits of the commonwealth's jurisdiction under Public Law 1980; 94 Stat. 91.



**Final tide zone node point locations for OPR-B370-TJ-2005, H11441**

Format: Tide Station (in recommended order of use)  
 Average Time Correction (in minutes)  
 Range Correction  
 Longitude in decimal degrees (negative value denotes Longitude West)  
 Latitude in decimal degrees

	Tide Station Order	AVG Time Correction	Range Correction
Zone LIS102	846-1490	0	1.00
-72.130834 41.233905			
-72.126992 41.23864			
-72.102348 41.275812			
-72.095961 41.309811			
-72.129456 41.30881			
-72.135341 41.303266			
-72.138858 41.277061			
-72.131818 41.23823			
-72.130834 41.233905			
Zone LIS103	846-1490	0	0.94
-72.130834 41.233905			
-72.126992 41.23864			
-72.102348 41.275812			
-72.103022 41.254049			
-72.105382 41.230242			
-72.106756 41.20639			
-72.117129 41.202875			
-72.123325 41.200896			
-72.130834 41.233905			
Zone LIS104	846-1490	-12	0.96
-72.105382 41.230242			
-72.103022 41.254049			
-72.102348 41.275812			
-72.095961 41.309811			
-72.090927 41.320153			
-72.068687 41.321329			
-72.04941 41.31931			
-72.04941 41.31931			
-72.045202 41.31931			

-72.039592 41.31783  
-72.034818 41.31341  
-72.054038 41.28325  
-72.074164 41.261424  
-72.105382 41.230242

Zone LIS105 846-1490 -6 0.98

-72.090927 41.320153  
-72.105312 41.337699  
-72.098967 41.343029  
-72.074064 41.342189  
-72.064919 41.342541  
-72.068687 41.321329  
-72.090927 41.320153

Zone LIS106 846-1490 0 1.00

-72.098967 41.343029  
-72.101462 41.348889  
-72.100406 41.374975  
-72.08043 41.377569  
-72.068944 41.366229  
-72.064919 41.342541  
-72.074064 41.342189  
-72.098967 41.343029

Zone LIS107 846-1490 -12 0.92

-72.017559 41.314902  
-72.027851 41.317045  
-72.034818 41.31341  
-72.054038 41.28325  
-72.074164 41.261424  
-72.105382 41.230242  
-72.106756 41.20639  
-72.098254 41.211712  
-72.065642 41.228934  
-72.03741 41.250244  
-72.032211 41.257964  
-72.030926 41.259042  
-72.028799 41.261481  
-72.025599 41.2655  
-72.024252 41.273492  
-72.026262 41.289665  
-72.022305 41.304922

-72.017559 41.314902

Zone LIS107C

846-1490

-12

0.92

-72.024252 41.273492

-72.020568 41.271475

-72.018323 41.263965

-72.021092 41.259222

-72.024908 41.257528

-72.028425 41.259335

-72.028724 41.260803

-72.028799 41.261481

-72.025599 41.2655

-72.024252 41.273492

Zone LIS108

846-1490

-24

0.92

-72.024252 41.273492

-72.026262 41.289665

-72.022305 41.304922

-72.017559 41.314902

-72.009264 41.318434

-72.01335 41.337385

-72.011346 41.353262

-71.949417 41.354534

-71.956303 41.340751

-71.968008 41.338398

-71.968279 41.327257

-71.971469 41.315237

-71.973864 41.307218

-71.982839 41.288678

-71.988693 41.278376

-71.996122 41.260925

-72.011439 41.257246

-72.020568 41.271475

-72.024252 41.273492

**ATLANTIC HYDROGRAPHIC BRANCH  
EVALUATION REPORT to Accompany  
Surveys H11224 (2004) & H11441 (2005)  
& F00521 (2006)**

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  
CARIS BASE Manager 2.1  
CARIS HOM 3.3 SP3  
PYDRO, version 7.3  
Dkart Inspector V. 5.1

**B.2 QUALITY CONTROL**

**H-Cells**

The AHB source depth grid was generated as a 4m resolution combined BASE surface sourced from the AHB generated 4m combined BASE surface for the Tenix Lidar survey H11224, from the 4m multibeam CUBE surfaces generated by the Thomas Jefferson field personnel for survey H11441, and from the AHB generated 4m combined BASE surface for the NRT survey F00541. All AHB generated surfaces (H11441 and F00521) were sourced from the field submitted surfaces (75cm resolution surfaces from F00521 and 40 and 80 cm surfaces from H11441). Survey scale soundings were extracted from AHB generated 4m combined BASE surface at a 1:10000 scale using a radius of 1.75m. Soundings were selected for charting by hand using the latest raster charts (13212 and 13213) and smooth contours 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 BASE surface was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

## H11224-H11441-F00521

No processed data was available for verification of features during survey compilation, only the field submitted BASE surfaces and side scan mosaics were available. Features were verified where possible in the combined BASE surface but fliers did exist, and in locations where the Pydro feature data was shoaler than the existing BASE surface the Pydro data superseded the BASE surface depths. The side scan mosaic was referenced in order to verify and identify some features.

Depth curves were created from a BASE Editor shifted surface sourced from the 4m product surface using a single shift value of 0.229m. However, preliminary contours were far too detailed, so smoothed contours were created by hand. The contours are included in the final H-Cell product. The curves were utilized during chart scale sounding selection and quality assurances efforts at AHB.

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 fathoms following NOAA sounding rounding rules.

The H11441, H11224 and F00521 CARIS H-Cell final deliverables include the following products:

US511441_CU.000	1:10,000 Scale	H11441, H11224 and F00521 H-Cell with Chart Scale Selected Soundings
US511441_SS.000	1:10,000 Scale	H11441, H11224 and F00521 Selected Soundings (Survey Scale)
US511441_BlueNotes.000	1:10,000 Scale	H11441, H11224 and F00521 Cartographic Notes

### **Junctions**

Survey H11441 (2005) junctions with surveys H11442 (2005) to the east. Survey H11224 (2004) junctions with surveys H11225 (2004) to the east. Present survey depths are in harmony with the charted Hydrography to the west and south. In the junctional area south of Latitude 41°17'56.00", junctional surveys H-11225 and H11442 are superseded by the present surveys.

**C. VERTICAL AND HORIZONTAL CONTROL**

Final vertical correction processing was completed by the field unit with no additional correction required by Atlantic Hydrographic Branch. The field unit applied verified water levels in conjunction with the preliminary tidal zoning which was accepted and approved by N/OPSI CO-OPS as the final zoning for H11224-H11441. 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. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements. The horizontal geodetic datum was translated to Latitude and Longitude (LLDG) World Geodetic System-84 (WGS-84) during CARIS HOM processing.

**D. RESULTS AND RECOMMENDATIONS**

**Chart Comparison**

**13213 (41<sup>st</sup>. Edition, Mar. /04)**

Corrected through NM Mar. 13/04  
Corrected through LNM Feb. 24/04  
1:10,000 Scale

**13212 (37th Edition, Nov. /05)**

Corrected through NM Nov. 12/07  
Corrected through LNM Nov. 1/07  
1:20,000 Scale

**13211 (15th Edition, Sep. /07)**

Corrected through NM Sep. 1/07  
Corrected through LNM Aug. 21/07  
1:20,000 Scale

**ENC Comparison**

**US4CN21M**

Block Island Sound and Approaches  
Edition 8  
Update Application Date 2007-09-17  
Issue Date 2008-02-11  
References: Charts 13211 & 13212

**Hydrography**

The charted Hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in Section D. of the Descriptive Report.



**Dangers to Navigation (Dtons)**

Three Dangers to Navigation were submitted by the field. All items were verified during office processing.

**Charted and Uncharted Features**

1) Several charted items were neither verified nor disproved by the field units. These items are recommended to be retained as charted. All items can be found in the blue notes file of the H-Cell.

2) A charted pier in the vicinity of Latitude 41°21'55.88" N, Longitude 72°05'02.68" W was neither veified nor disproved by the present surveys. The RSD shoreline file CG 10641 shows no reference of the pier. It is recommended that this item be defered to Marine Chart Division, Nautical Data Branch for charting recommendations.

3) During office processing the following depths were determined to be fliers.

<u>Depth</u>	<u>Latitude N</u>	<u>Longitude W</u>
32	41°16'19.19"	072°02'41.55"
45	41°16'27.40"	072°04'44.50"
28	41°17'11.35"	072°06'05.20"
24	41°16'15.73"	072°04'17.07"
40	41°16'33.65"	072°04'42.48"

It is recommended that the items not be charted.

4) The following items were verified or disproved by the present survey:

<u>Charted Depth</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depth (ft)</u>
6 Rk	41°20'49.52"N	72°05'37.44"W	6 Rk
2 Rk	41°19'20.37"N	72°04'33.13"W	rock cover/uncover
2 Rk	41°19'18.94"N	72°04'30.25"W	rock cover/uncover

It is recommended that the above discussed items be charted in present survey location with depths.

5) All foul area were neither adequately verified nor disproved. It is

recommended that the foul areas be retained as charted.

6) Several seabed areas were digitized from the BASE Surface. All seabed areas are designated as rocky areas

7) Charted dolphins in the vicinity of Latitude 41°21'34.93" N, Longitude 72°05'22.47" W was neither veified nor disproved by the present surveys. The RSD shoreline file CG 10641 shows no reference of the dolphins. During office processing the program google Earth was used to veiw the area. Mooring platforms appeared in the area. It is recommended that this area be defered to Marine Chart Division, Nautical Data Branch for charting recommendations.

8) The following items were neither verified nor disproved by the present survey:

<u>Item</u>	<u>Latitude</u>	<u>Longitude</u>
pier	41°21'14.96"N	72°05'31.52"W
pier	41°21'14.33"N	72°05'31.11"W
pier	41°21'14.14"N	72°05'29.44"W
dolphin	41°21'01.18"N	72°05'46.75"W
dolphin	41°21'18.51"N	72°05'03.01"W
pier	41°21'10.31"N	72°05'00.50"W
pier	41°20'46.66"N	72°04'55.96"W
pier	41°20'02.58"N	72°04'48.42"W

RSD shoreline file CG 10641 shows a shoreline change in these areas. It is recommended that these items be defered to Marine Chart Division, Nautical Data Branch for charting recommendations.

9) The following items were disproved by the present survey:

<u>Charted Depth (ft)</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depth (ft)</u>
28 Rk	41°18'01.90"N	72°04'19.70"W	Delete 28 Rk
	41°18'02.28"N	72°04'18.55"W	Add 32 depth
33 Rk	41°17'54.30"N	72°04'14.60"W	Delete 33 Rk
	41°17'53.82"N	72°04'14.22"W	Add 35 depth
44 Rk	41°17'14.40"N	72°04'48.40"W	Delete 44 Rk
	41°17'13.91"N	72°04'48.74"W	Add 46 depth

**H11224-H11441-F00521**

<u>Charted Depth (ft)</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depth (ft)</u>
54 Rk	41°17'25.30"N	72°04'48.60"W	Delete 54 Rk
	41°17'25.90"N	72°04'47.80"W	Add 50 Rk
35 Rk	41°16'47.50"N	72°05'57.10"W	Delete 35 Rk
	41°16'48.12"N	72°05'56.26"W	Add 48 depth
43 Obstn Rep 1990	41°16'47.30"N	72°04'28.40"W	Delete 43 Obstn rep 1990
	41°16'48.83"N	72°04'28.25"W	Add 43 depth

It is recommended that the above discussed items be deleted and present survey depth be charted in above location. The charting recommendations for the charted items can be found in the bluenoses file of the H-Cell.

10) Charted Dols, PA in the vicinity of Latitude 41°20'33.21" N, Longitude 72°04'59.12" W were neither verified nor disproved by the present surveys. It is recommended that the items be retained as charted unless further information is available.

11) The following charted controlling depths show discrepancies with the present survey:

<u>Controlling Depth</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Present Depth (ft)</u>
21 FT 1994	41°20'39.50" N	72°05'29.03" W	17 FT 2004
17.5 FT JUN 2003	41°21'28.06" N	72°05'32.78" W	15 FT 2004
38 FT 2003	41°20'11.39" N	72°04'56.32" W	34 FT 2004
20 ft rep 1994	41°20'01.89" N	72°04'49.07" W	17 ft 2004
18 ft rep 979	41°20'00.92" N	72°04'47.18" W	9 ft 2004
Shl 2 ft rep	41°19'05.60" N	72°01'07.35" W	Shp 1 ft rep
12 ft rep 1974	41°20'05.85" N	72°04'47.50" W	9 ft 2004
12 ft rep	41°21'01.92" N	72°04'59.39" W	11 ft rep

It is recommended that these items be deferred to Marine Chart Division, Nautical Data Branch for charting recommendations.

**Prior Surveys**

A comparison with prior surveys was not done during office processing in accordance with section 4. of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

**Shoreline**

Shoreline project CT0401C, 18 Dec 2006 was submitted to AHB from the Remote Sensing Division (RSD). This project is subsequent to the present survey. A comparison was performed during office processing of the common areas. Common areas seaward of the high waterline were updated within the present survey. Numerous rocks awash or rocks cover/uncover were brought forward from the RSD project to supplement the present survey. Items from the RSD survey verifying charted features can be found in the blue notes file of the present survey. The remaining areas will be superseded by the RSD shoreline project during compilation at MCD.

**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 File or the Blue Notes should be retained as charted. Refer to the Descriptive Report for further survey requirements recommended by the hydrographer.

**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.

*Bryan Chauveau*

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Bryan Chauveau  
Physical Scientist  
Verification of Data  
Evaluation and Analysis Report

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Norris A. Wike  
Cartographer  
Verification of Data  
Evaluation and Analysis Report

## AHB COMPILATION PROCESS

Registry No.	F00521	H11224	H11441
Project No.	OPR-B470-NRT5-06	OPR-B370-KRL-04	OPR-B370-TJ-05
Field Unit	NRT5	Tenix LADS Aircraft, VH – LC	NOAA Ship Thomas Jefferson
Compilers	Bryan Chauveau, Norris Wike		

**13213 (41<sup>st</sup>. Edition, Mar. /04)**

Corrected through NM Mar. 13/04  
 Corrected through LNM Feb. 24/04  
 1:10,000 Scale

Largest Scale Chart  
**13212 (37th Edition, Nov. /05)**  
 Corrected through NM Nov. 12/07  
 Corrected through LNM Nov. 1/07  
 1:20,000 Scale

**13211 (15th Edition, Sep. /07)**

Corrected through NM Sep. 1/07  
 Corrected through LNM Aug. 21/07  
 1:20,000 Scale

Survey Scale		1:10000	
Date Of Survey	5-31 to 6-30-2006	1-20 to 3-5-2004	4-18 to 5-6-2005

Milestones	File Name
<i>Product Surface Creation</i>	H11224_Shoal_H11441_Mb_F00521_Combined_4m.hns
<i>Shifted Surface</i>	H11224_Shoal_H11441_Mb_F00521_Shifted_4m.hns
<i>Contour Layer</i>	H11441_H11224_F00521_Contours.hob
<i>Survey Scale Soundings</i>	H11441_H11224_F00521_SS_Soundings.hob
<i>Chart Scale Soundings</i>	H11441_H11224_F00521_CS_Soundings.hob
<i>Feature Layer</i>	H11441_H11224_F00521_Features.hob H11441_H11224_F00521_Depth_Area.hob H11441_H11224_F00521_Seabed_Areas.hob H11441_H11224_F00521_Shoreline_Features.hob H11441_H11224_F00521_Retained_Features.hob
<i>Meta-objects Layer</i>	H11441_H11224_F00521_MCovr.hob H11441_H11224_F00521_MQuals.hob
<i>Blue Notes</i>	H11441_H11224_F00521_BlueNotes.hob

META-OBJECTS:

M\_COVR attributes

Acronym	Value
CATCOV	1 - coverage available
SORDAT	20060630
SORIND	US,US,survey,H11441_H11224_F00521

M\_QUAL attributes

Acronym	Value		
CATZOC	zone of confidence A2	zone of confidence B	zone of confidence A2
INFORM	F00521, OPR-B470-NRT5-06, NOAA Survey Boat S-3002	H11224, OPR-B370-KRL-04, Tenix LADS Aircraft, VH LCL	H11441, OPR-B370-TJ-05, NOAA Ship Thomas Jefferson, S-222
TECSOU	Multibeam	Laser	Multibeam
SURSTA	20060531	20040120	20050427
SUREND	20060630	20040305	20050522
POSACC	10	10	10
SORDAT	20060630	20040305	20050522
SORIND	US,US,survey,F00521	US,US,survey,H11224	US,US,survey,H11441

Final Grids Listing on following page –

AHB\_75cm\_Final.hns  
AHB\_75cm\_Final.xml  
eastern\_p75\_Final.hns  
eastern\_p75\_Final.xml  
F00521\_p75\_Final.hns  
F00521\_p75\_Final.xml  
fishers\_p75\_Final.hns  
fishers\_p75\_Final.xml  
H11224\_AHB\_Uncertainty\_4m.hns  
H11224\_AHB\_Uncertainty\_4m.xml  
H11441\_1\_40cm\_Final.hns  
H11441\_1\_40cm\_Final.xml  
H11441\_02\_40cm\_Final.hns  
H11441\_02\_40cm\_Final.xml  
H11441\_3\_40cm\_Final.hns  
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silvercove\_p75\_Final.xml



**APPROVAL SHEET**  
**H11441, H11224 and F00521**

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproof 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.

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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.

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Norris Wike  
Cartographer,  
Atlantic Hydrographic Branch

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: \_\_\_\_\_

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