

H11250

NOAA FORM 76-35A

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

**DESCRIPTIVE REPORT**

*Type of Survey:* **Navigable Area**

*Registry Number:* **H11250**

**LOCALITY**

*State:* New York & Connecticut

*General Locality:* Long Island Sound

*Sub-locality:* The Race

**2003**

CHIEF OF PARTY  
**LCDR Donald W. Haines, NOAA**

LIBRARY & ARCHIVES

DATE

**HYDROGRAPHIC TITLE SHEET**

**H11250**

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

State: **New York & Connecticut**

General Locality: **Long Island Sound**

Sub-Locality: **The Race**

Scale: **1:10,000** Date of Survey: **10/06/03 to 11/1/03**

Instructions Dated: **08/05/03** Project Number: **OPR-B370-TJ-03**

Vessel: **NOAA Ship THOMAS JEFFERSON, S-222**

Chief of Party: **LCDR Donald W. Haines, NOAA**

Surveyed by: **THOMAS JEFFERSON Personnel**

Soundings by: **Reson SeaBat 8101 multibeam echosounder**  
**Reson SeaBat 8125 multibeam echosounder**  
**Kongsberg Simrad EM1002 multibeam echosounder**

Graphic record scaled by: **N/A**

Graphic record checked by: **N/A**

Protracted by: **N/A** Automated Plot: **N/A**

Verification by: **Atlantic Hydrographic Branch *Personnel***

Soundings in: **Meters at MLLW**

Remarks: ***Bold, Red, Italic, notes in the Descriptive Report were made during office processing.***

- 1) All Times are UTC.***
- 2) This is a Navigable Area Hydrographic Survey.***
- 3) Projection is UTM Zone 18.***

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**DESCRIPTIVE REPORT**

to accompany  
HYDROGRAPHIC SURVEY H11250

Scale of Survey: 1:10,000

Year of Survey: 2003

NOAA Ship THOMAS JEFFERSON  
LCDR Donald W. Haines, Commanding

**A. AREA SURVEYED**

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project OPR-B370-TJ-03, Eastern Long Island Sound, New York and Connecticut. The original instructions are dated 05 August 2003.

This Descriptive Report pertains to sheet "G" of project OPR-B370-TJ-03, which includes "The Race". The assigned registry number for this sheet is H11250, as prescribed in the Letter Instructions.

The purpose of this project is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts and reduce the critical survey backlog in the Long Island Sound region. The current vintage of hydrography dates back to as early as 1838 in areas of heavy traffic. This project also responds to a request from the Northeast Marine Pilots Association. Increased oil tanker traffic bound up and down Long Island Sound and its associated lightering requires modern hydrographic survey techniques to accurately portray the bottom and locate or disprove shipwrecks and obstructions. Additionally, the U.S. Geological Survey Woods Hole Field Center has expressed an interest in sub-bottom profiles, multibeam bathymetry, and multibeam backscatter/side scan imagery of the area to aid in their analysis of the region's geology.

For complete survey limits, see the chartlet on the following page.

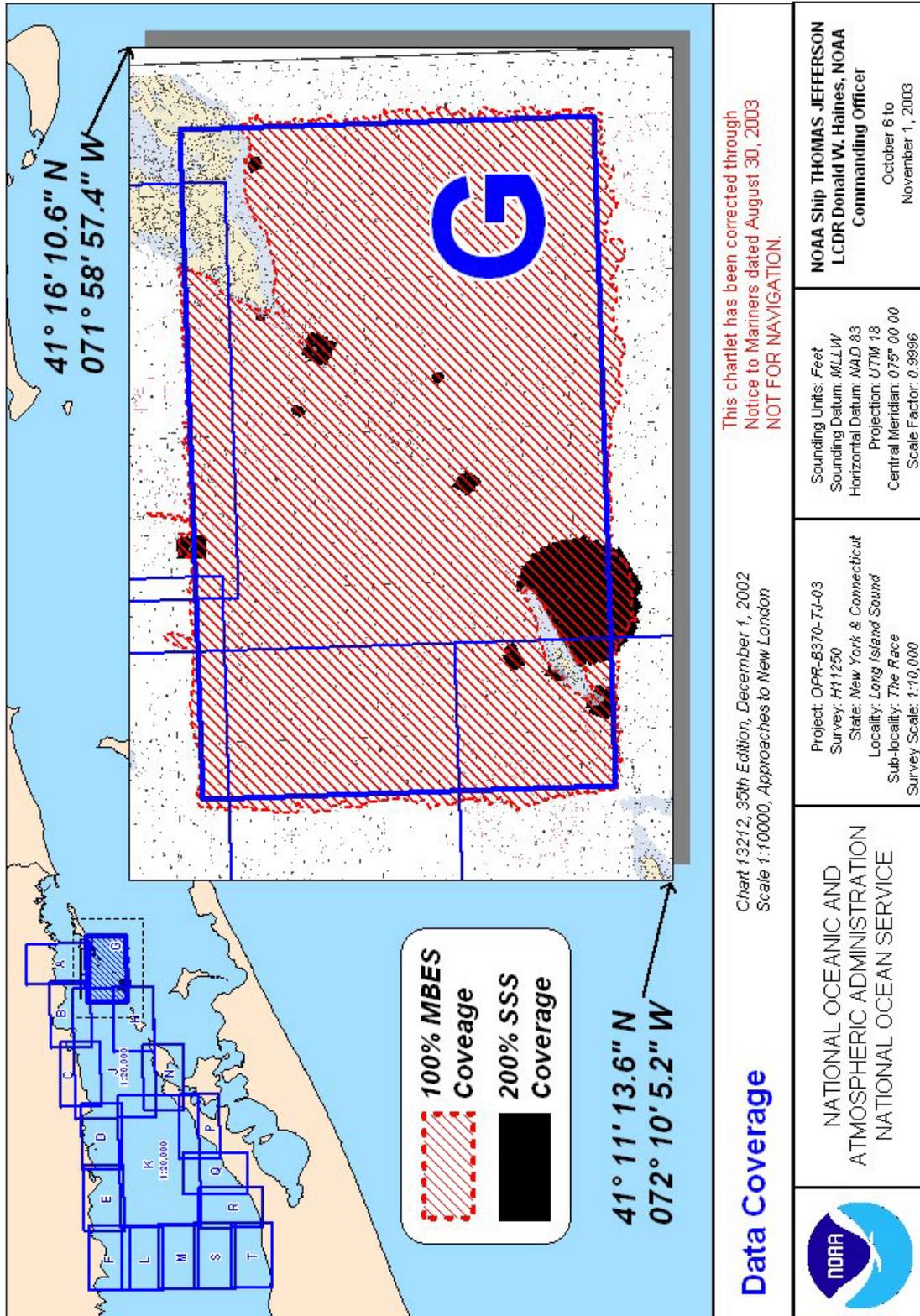


Figure 1: Complete Survey Limits & Data Coverage

## **B. DATA ACQUISITION AND PROCESSING** *See also the evaluation report.*

### **EQUIPMENT**

Data were acquired by NOAA Ship THOMAS JEFFERSON, NOAA Launch 1005, and NOAA Launch 1014. NOAA Ship THOMAS JEFFERSON is a 63.4-meter hydrographic survey vessel with an average transducer draft of 4.6 meters. NOAA Launch 1005 and NOAA Launch 1014 are NOAA's standard 8.5-meter aluminum Jensen vessels with a typical 0.5-meter transducer draft.

NOAA Ship THOMAS JEFFERSON acquired multibeam echosounder (MBES) data with a SIMRAD 1002 and side scan sonar (SSS) data with a towed KLEIN 5500. Although the ship was able to acquire SSS data over a wreck located with MBES, the ship was not available, due to mechanical problems, to acquire SSS data over a number of items that were too deep for the launches. Launch 1005 acquired MBES data with a RESON 8101 and SSS data with a hull-mounted KLEIN 5500. Launch 1014 acquired MBES with RESON 8125. All platforms also acquired single beam echo sounder data with an Odom Echotrac DF3200 MK II echosounder, although these data were not processed.

NOAA Ship THOMAS JEFFERSON and Launch 1014 positioning and attitude data were determined with a TSS POS/MV 320 Version 3 GPS-aided inertial navigation system. Launch 1005 positioning and attitude data were determined with a TSS POS/MV 320 Version 2 GPS-aided inertial navigation system.

A NOAA's diver least depth gauge, s/n 68338, was used to obtain a least depth measurement during the survey's one dive operation.

No unusual vessel configurations or problems were encountered. Refer to the Data Acquisition and Processing Report (DAPR)\* for detailed equipment and vessel configuration information.

### **QUALITY CONTROL**

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

At the Commanding Officer's discretion, as per the letter instructions, side scan sonar (SSS) data were acquired in limited areas due to high concentrations of lobster pots and high currents. SSS data were used primarily as a quality control tool to ensure no significant contacts escaped detection with MBES data. SSS data were also acquired to investigate items, to disprove items, and to resolve MBES data ambiguities.

*\*Data filed with original field records.*

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. A good check consisted of distinguishing contacts or sand waves across the entire range of the side scan trace. No unusual problems were encountered.

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

There were no faults with the MBES system which affected data integrity. Daily confidence checks examining the internal consistency of the MBES were made by comparing overlapping lines. Accuracy was also checked by performing a set of lead line comparisons. Refer to this project's DAPR\* for detailed discussion of MBES system calibrations, data acquisition, and data processing.

### **Crosslines**

Sixty-seven nautical miles of crosslines (about 7% of the 972 nm of mainscheme MBES data) were acquired. No traditional crossline comparison was performed on the multibeam data because quality control procedures have been incorporated into the depth and uncertainty models produced by CARIS 5.4.

### **Junctions**

No contemporary surveys were available for junction comparisons.

### **CORRECTIONS TO ECHO SOUNDING**

All methods or instruments used were as described in the project DAPR.\* A table detailing all sound velocity casts is located in Separate III.\*

***\*Data filed with original field records.***

### C. VERTICAL AND HORIZONTAL CONTROL *See also the evaluation report.*

#### VERTICAL CONTROL

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating National Water Level Observation Network (NWLON) stations at New London, CT (846-1490) and Montauk, NY (851-0560), and the Physical Oceanographic Real Time System (PORTS) station at New Haven, CT (846-5705) served as datum control for the survey area as well as control for datum determination at the subordinate station at Silver Eel Pond, Fishers Is, NY (851-0719).

The final zones used for this survey are as follows:

**Table 1: Final Tide Zones & Correctors**

<b>ZONE NAME</b>	<b>CORRECTOR (min)</b>	<b>RATIO</b>	<b>REFERENCE</b>
LIS100	+12	1.11	851-0719
LIS101	+6	1.03	851-0719
LIS102	0	1.09	851-0719
LIS103	0	1.03	851-0719
LIS104	-6	1.05	851-0719
LIS107	-12	1.00	851-0719
BIS21	-24	0.98	851-0719
BIS24	-12	0.98	851-0719
BIS25	+6	0.98	851-0719

A Request for Approved Tides letter was sent to N/OPS1 on November 06, 2003 (Appendix IV).<sup>\*</sup> Verified tides from the N/OPS1 CO-OPS website were downloaded on February 2, 2004, and applied to all sounding data. Refer to the August-September 2004 DAPR<sup>\*</sup> for a summary of the methods used to determine, evaluate, and apply tide corrections to sounding data.

For the final tide zoning (received from N/OPS1 on January 22, 2004), see the figure on the following page. *Approved tides and zones where applied during field operations.*

*<sup>\*</sup>Data filed with original field records.*



Figure 2: Final Tide Zoning

## 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. The primary and only DGPS beacon used for this survey was Moriches, New York (site ID = 803, transmission frequency = 293). No horizontal control stations were established for this survey.

Horizontal dilution of precision (HDOP) was monitored daily on the ship and both launches. That value did not exceed 4.00, and adequate satellite coverage was maintained throughout the survey period.

## D. RESULTS AND RECOMMENDATIONS *See also the evaluation report.*

### CHART COMPARISON

There are 11 charts affected by this survey:

**Table 2: Affected Charts**

Number	Version	Edition Date	Scale
13211	13 <sup>th</sup> Ed.	08/24/91	1:20,000
13212	36 <sup>th</sup> Ed.	03/01/04	1:20,000
13214	27 <sup>th</sup> Ed.	06/01/02	1:20,000
12372	32 <sup>nd</sup> Ed.	10/01/03	1:40,000
13209	23 <sup>rd</sup> Ed.	10/30/99	1:40,000
12354	40 <sup>th</sup> Ed.	08/01/03	1:80,000
13205	36 <sup>th</sup> Ed.	04/14/01	1:80,000
12300	43 <sup>rd</sup> Ed.	03/01/03	1:400,000
13006	31 <sup>st</sup> Ed.	06/01/03	1:675,000
5161	13 <sup>th</sup> Ed.	10/01/03	1:1,058,400

<b>13003</b>	47 <sup>th</sup> Ed.	06/01/03	1:1,200,000
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### General Agreement with Charted Soundings, Features, and Notes

- (1) The general area including the southern end and west side of Great Gull Island generally did not agree with the charted depths. Depths in this area are shallower than charted. This area is generally transited only by small, recreational vessels. A number of features in this area are discussed in the item investigation report section; however, the majority of the area needs to be recharted/recontoured.\*
- (2) There is a supplemental 90-foot curve on chart 13211 (1:20,000), but no supplemental 90-foot curve on chart 13212 (1:20,000). Consistency should be maintained among same-scale charts. The hydrographer recommends that the charts be reviewed and updated accordingly.\*
- (3) The blue shallow water tint on chart 13212 extends to the 18-foot curve, and on chart 13214, the blue shallow water tint extends to the 12-foot curve. Consistency should be maintained among same-scale charts. The hydrographer recommends all charts in the area be reviewed and updated accordingly.\*
- (4) The charted "blds," on the western half of the sheet, north of Great Gull and Little Gull Islands, adequately represent the survey area.\*

*\*Concur.*

### Item Investigation Reports

The item investigation reports describing the 21 submitted DtoN's (2 in the DtoN letter dated 11/07/03 and 19 in the letter dated 01/06/04), 7 investigated AWOIS items, 8 significant uncharted features, and 13 non-AWOIS charted features & notes are contained in Appendix I. **\*\* Appended to this report.**

## ADDITIONAL RESULTS

### Prior Surveys

The survey overlaps seven prior surveys:

Survey	Scale	Year
H04008	20,000	1917
H05513	10,000	1934
H06860	40,000	1943
H08709	20,000	1962
H08926	10,000	1968

H09212	20,000	1971
H10339	10,000	1990

Much of the survey area has been surveyed with only lead lines and single beam echosounder data without the aid of differential GPS. This present survey is adequate to supersede all charted depths in common area. *Concur.*

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

All identified floating aids to navigation within the survey area are consistent with the chart and serve their intended purpose. However, the charted "W Or Navy" buoy (41° 15' 04.177" N, 072° 00' 24.846" W) was not observed and is discussed as item 1.2 in the Non-AWOIS Charted Features and Notes section of Appendix I.\*\* The positions of the lighted floating aids to navigation are consistent with the positions published in the *Light List*. *Concur.*

*\*\*Appended to this report.*

### **Bridges and Overhead Cables**

There were no bridges or overhead cables in the survey area to be considered. *Concur.*

### **Ferry Routes**

There are three ferries that frequent the survey area, although there are no ferry terminals located within the survey limits: (1) New London to/from Fishers Island, (2) New London to/from Block Island, and (3) New London to/from Orient Point. In order to make mariners aware of these high-traffic areas, the hydrographer recommends that Atlantic Hydrographic Branch or Marine Charting Division work with the Northeast Navigation Manager to ensure that they are properly charted. *Defer to MCD for charting recommendations.*

### **Submarine Cables and Pipelines**

There are charted cable areas within the survey area; however, no cables were positioned or observed in either the MB or SSS data. Hydrographer recommends retaining cable areas as charted. *Concur.*

### **Tidal Conditions**

In general, the charted "Tide rips" and the 2004 Coast Pilot adequately represent the unusually strong tidal conditions in the survey area. However, there is a significant back eddy on the northwest side of Valiant Rock that is not currently represented on

the chart or discussed in the 2004 Coast Pilot (See Appendix V, Coast Pilot Report, NOAA Form 77-6).\*

### **Recommended New Surveys**

Since the present survey includes significantly shoaler-than-charted depths on the very southern edge of the survey limits (over a large, and possibly migrating, sand wave), south of Little Gull Island, the hydrographer recommends an additional survey to the south of sheet G and to the east of sheet H. *Concur.*

### **Shoreline/Nearshore LIDAR**

The inshore limit of hydrography was the 12- and 18-foot curve, based on the discretion of the commanding officer. To address the numerous charted foul areas lying between the inshore limits of hydrography and the shores of Great Gull, Little Gull, and Fishers Islands, the current survey can be junctioned with future LIDAR surveys. *Concur.*

*\*Forwarded to MCD by field unit.*

**E. APPROVAL SHEET****OPR-B370-TJ-03  
Eastern Long Island Sound  
New York & Connecticut****The Race  
Survey Registry No. H11250**

Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All bathymetry models, 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.

Also submitted in association with this descriptive report has been a series of reports and data:

- SEPARATES TO ACCOMPANY PROJECT OPR-B370-TJ-03, SHEET G, H11250
- COAST PILOT REPORT, NOAA FORM 77-6 (*dated & submitted 04/07/04*)
- DATA ACQUISITION AND PROCESSING REPORT (*dated August - September, 2003; submitted 03/29/04*)
- HORIZONTAL AND VERTICAL CONTROL REPORT (*dated 01/20/04; submitted 03/04/04*)
- TIDES AND WATER LEVELS PACKAGE FOR MATTITUCK (851-2668), LONG ISLAND, NY (*submitted 11/12/03*)
- TIDES AND WATER LEVELS PACKAGE FOR SILVER EEL POND (851-0719), FISHER ISLAND, NY (*submitted 11/07/03*)

Respectfully Submitted:



Nicholas A. Forfinski  
Hydrographer

Approved and Forwarded:



LT Shepard Smith, NOAA  
Field Operations Officer



LCDR Donald W. Haines, NOAA  
Commanding Officer

**APPENDIX I****ITEM INVESTIGATION REPORTS**

Following are item investigation reports detailing four groups of features:

- 1) Dangers to Navigation (Dton's)
- 2) AWOIS Items
- 3) Significant Uncharted Features
- 4) Non-AWOIS Charted Features & Notes

# OPR-B370-TJ-03 - DtoN's

**Registry Number:** H11250  
**State:** New York & Connecticut  
**Locality:** Long Island Sound  
**Sub-locality:** The Race  
**Project Number:** OPR-B370-TJ-03  
**Survey Dates:** October 6, 2003 - November 1, 2003

## Charts Affected

Number	Version	Date	Scale
13212	36th Ed.	03/01/04	1:20000
13214	27th Ed.	06/01/02	1:20000
12372	32nd Ed.	10/01/03	1:40000
13209	23rd Ed.	10/30/99	1:40000
12354	40th Ed.	08/01/03	1:80000
13205	36th Ed.	04/14/01	1:80000
12300	43rd Ed.	03/01/03	1:400000
13006	31st Ed.	06/01/03	1:675000
5161	13th Ed.	10/01/03	1:1058400
13003	47th Ed.	06/01/03	1:1200000

## Features

Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
Rock	1.33 m	041° 11' 52.678" N	72° 07' 34.073" W	---
Rock	2.08 m	041° 12' 20.532" N	72° 06' 58.112" W	---
Rock	4.17 m	041° 11' 46.082" N	72° 08' 01.496" W	---
Rock	4.30 m	041° 11' 47.819" N	72° 07' 48.499" W	---
Rock	5.05 m	041° 11' 40.988" N	72° 08' 05.059" W	---
Obstn	5.20 m	041° 15' 03.498" N	72° 00' 27.244" W	---
Rock	5.55 m	041° 12' 25.869" N	72° 05' 58.896" W	---
Rock	5.65 m	041° 14' 40.867" N	72° 02' 31.275" W	---

Sounding	5.73 m	041° 11' 30.405" N	72° 06' 43.505" W	---
Sounding	5.92 m	041° 11' 38.170" N	72° 06' 51.075" W	---
Rock	6.06 m	041° 14' 44.826" N	72° 02' 37.648" W	---
Rock	6.87 m	041° 15' 10.369" N	72° 02' 32.662" W	---
Rock	7.65 m	041° 12' 37.098" N	72° 06' 48.154" W	---
Rock	7.91 m	041° 14' 43.227" N	72° 02' 49.597" W	---
Rock	9.14 m	041° 13' 17.498" N	72° 04' 22.058" W	---
Rock	9.86 m	041° 12' 16.870" N	72° 07' 27.355" W	---
Rock	9.93 m	041° 12' 38.913" N	72° 06' 58.001" W	---
Rock	10.77 m	041° 11' 53.615" N	72° 08' 16.879" W	---
Rock	10.83 m	041° 15' 10.936" N	72° 02' 51.123" W	---
Rock	11.55 m	041° 14' 53.647" N	72° 02' 53.146" W	---
Wreck	21.23 m	041° 13' 17.262" N	72° 03' 19.704" W	---

## **1 - Features from Bathymetry**

## 1.1) 4-foot rock

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 11' 52.678" N, 72° 07' 34.073" W  
**Least Depth:** 1.33 m  
**Timestamp:** 2003-280.16:40:03.528 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-280 / 650\_1634  
**Profile/Beam:** 1343/234  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES and developed with 200% sss. This DtoN was submitted in the DtoN Letter submitted 11/07/03.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-280/650_1634	1343/234	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-304/034_1724	0003	2.28	305.7	Secondary

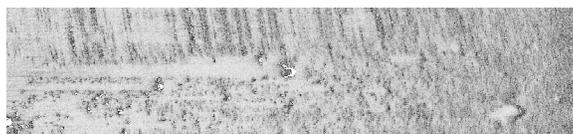
#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 4 Rk with danger curve.**

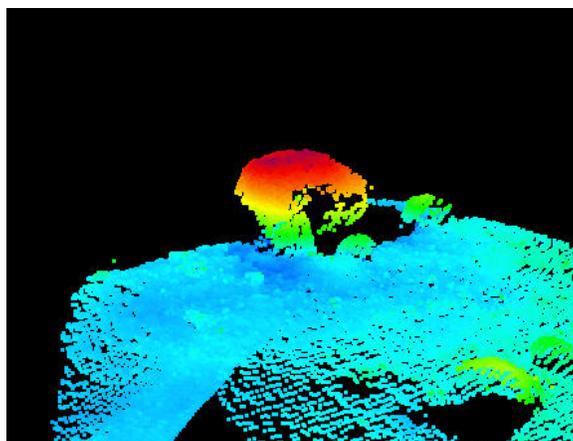
**Cartographically-Rounded Depth (Affected Charts):**

- 4ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)
- 0 ¾fm (12300\_1, 13006\_1, 13003\_1)
- 1.3m (5161\_1)

#### Feature Images



*Figure 1.1.1*



*Figure 1.1.2*

**1.2) 7 near charted 12**

**DANGER TO NAVIGATION**

**Survey Summary**

**Survey Position:** 041° 12' 20.532" N, 72° 06' 58.112" W  
**Least Depth:** 2.08 m  
**Timestamp:** 2003-280.20:48:40.270 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-280 / 646\_2045  
**Profile/Beam:** 746/218  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

**Feature Correlation**

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-280/646_2045	746/218	0.00	000.0	Primary

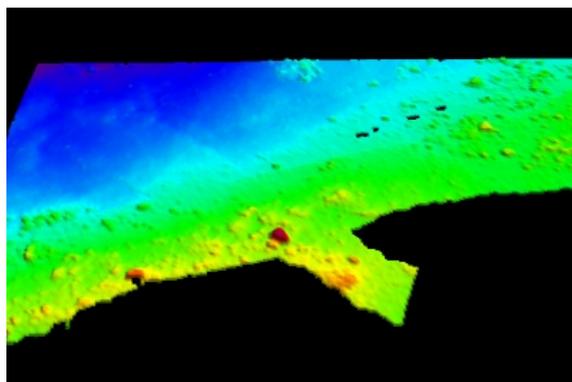
**Hydrographer Recommendations**

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart 7 Rk with danger curve.**

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

- 7ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)
- 1fm (12300\_1, 13006\_1, 13003\_1)
- 2.1m (5161\_1)

**Feature Images**



*Figure 1.2.1*

### 1.3) 13 near 30-foot contour

## DANGER TO NAVIGATION

### Survey Summary

**Survey Position:** 041° 11' 46.082" N, 72° 08' 01.496" W  
**Least Depth:** 4.17 m  
**Timestamp:** 2003-280.19:16:32.447 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-280 / 398\_1912  
**Profile/Beam:** 992/111  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-280/398_1912	992/111	0.00	000.0	Primary

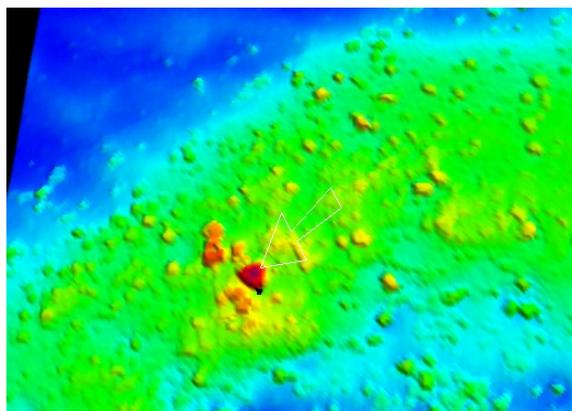
### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 13 Rk with danger curve.**

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

- 13ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)
- 2 ¼fm (12300\_1, 13006\_1, 13003\_1)
- 4.1m (5161\_1)

### Feature Images



*Figure 1.3.1*

**1.4) 14 near charted 22**

**DANGER TO NAVIGATION**

**Survey Summary**

**Survey Position:** 041° 11' 47.819" N, 72° 07' 48.499" W  
**Least Depth:** 4.30 m  
**Timestamp:** 2003-280.17:18:36.021 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-280 / 406\_1715  
**Profile/Beam:** 584/240  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES and developed with 100% SSS. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

**Feature Correlation**

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-280/406_1715	584/240	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-304/037_1716	0001	7.27	304.7	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-304/036_1718	0001	8.86	154.3	Secondary

**Hydrographer Recommendations**

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart 14 Rk with danger curve.**

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

- 14ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)
- 2 ¼fm (12300\_1, 13006\_1, 13003\_1)
- 4.3m (5161\_1)

**Feature Images**

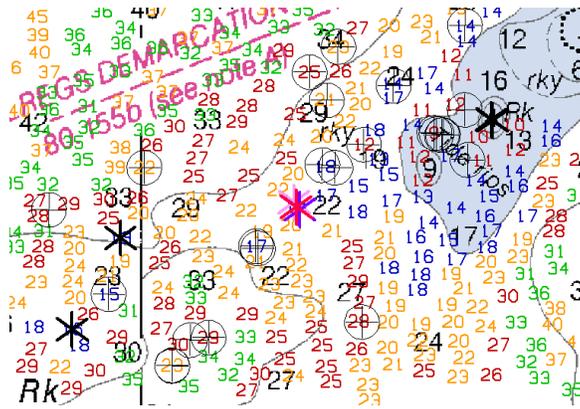


Figure 1.4.1

## 1.5) 16 near charted 30

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 11' 40.988" N, 72° 08' 05.059" W  
**Least Depth:** 5.05 m  
**Timestamp:** 2003-280.17:36:22.895 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-280 / 671\_1731  
**Profile/Beam:** 1375/239  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-280/671_1731	1375/239	0.00	000.0	Primary

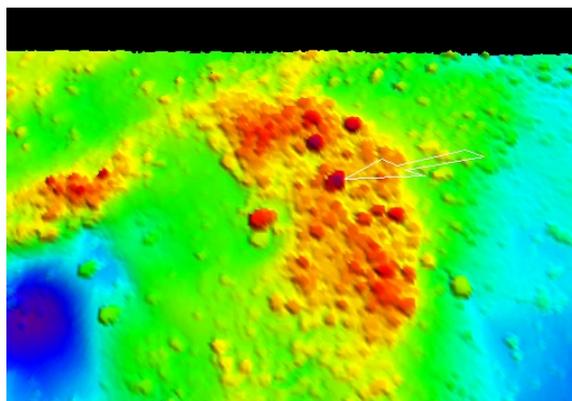
#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 16 Rk with danger curve.**

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

- 16ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)
- 2 ¾fm (12300\_1, 13006\_1, 13003\_1)
- 5.0m (5161\_1)

#### Feature Images



*Figure 1.5.1*

## 1.6) A-frame

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 15' 03.498" N, 72° 00' 27.244" W  
**Least Depth:** 5.20 m  
**Timestamp:** 2003-293.14:06:46.254 (10/20/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-293 / 168\_1404  
**Profile/Beam:** 421/47  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature was located with 100% MBES (RESON 8125) and developed with 200% SSS. Divers identified the feature on 10/20/03 as a steel a-frame with a couple anchor chains hanging off of it. The divers acquired a least depth pressure of 23.24 and a pre-dive deck pressure of 15.14. Velocwin's least depth report (DiveReport\_2003-293.003) reports a corrected least depth of 5.94 meters, which is deeper than the depth of the correlating bathymetry feature; therefore, use the bathymetry feature's depth. This DtoN was submitted in the DtoN Letter submitted 11/07/03.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-293/168_1404	421/47	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/043_1400	0001	1.98	012.7	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/014_1430	0002	2.32	006.2	Secondary
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-279/591_2118	0001	3.99	230.2	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/013_1433	0002	4.76	352.6	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/044_1359	0001	5.27	307.4	Secondary

## Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 17 Obstrn with danger curve.**

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

17ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

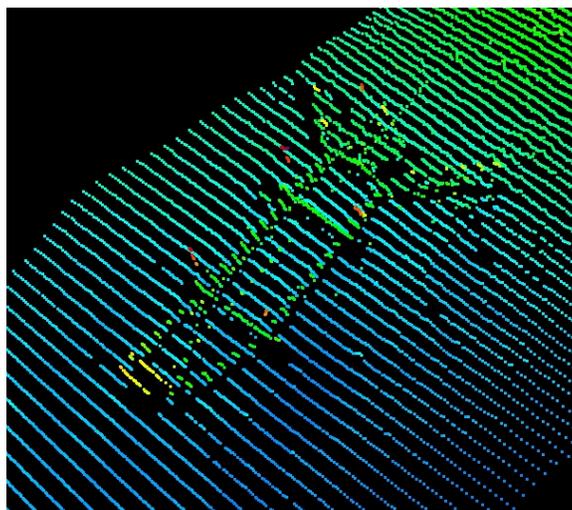
2 ¾fm (12300\_1, 13006\_1, 13003\_1)

5.2m (5161\_1)

## Feature Images



*Figure 1.6.1*



*Figure 1.6.2*

**1.7) 18 near charted 53, 55, rky**

**DANGER TO NAVIGATION**

**Survey Summary**

**Survey Position:** 041° 12' 25.869" N, 72° 05' 58.896" W  
**Least Depth:** 5.55 m  
**Timestamp:** 2003-301.17:25:30.193 (10/28/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-301 / 832\_1724  
**Profile/Beam:** 468/90  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

**Feature Correlation**

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-301/832_1724	468/90	0.00	000.0	Primary

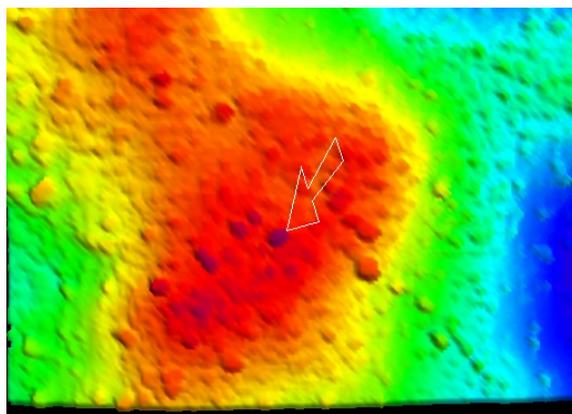
**Hydrographer Recommendations**

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 18 Rk with danger curve.**

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

- 18ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)
- 3fm (12300\_1, 13006\_1, 13003\_1)
- 5.5m (5161\_1)

**Feature Images**



*Figure 1.7.1*

## 1.8) 18 near charted 24

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 14' 40.867" N, 72° 02' 31.275" W  
**Least Depth:** 5.65 m  
**Timestamp:** 2003-279.14:30:51.690 (10/06/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-279 / 523\_1411  
**Profile/Beam:** 5496/192  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-279/523_1411	5496/192	0.00	000.0	Primary

#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Revise charted 18½ Rk to an 18 Rk with danger curve.**

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

18ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

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

5.6m (5161\_1)

#### Feature Images

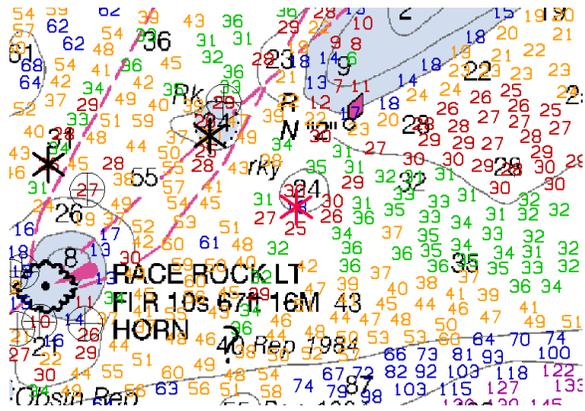


Figure 1.8.1

## 1.9) 18 near charted 37 rky

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 11' 30.405" N, 72° 06' 43.505" W  
**Least Depth:** 5.73 m  
**Timestamp:** 2003-292.16:26:00.823 (10/19/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-292 / 834\_1624  
**Profile/Beam:** 20/233  
**Charts Affected:** 13212\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is a 4-5 meter-high sandwave orientated NW to SE. The sandwave was only partially covered with MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-292/834_1624	20/233	0.00	000.0	Primary

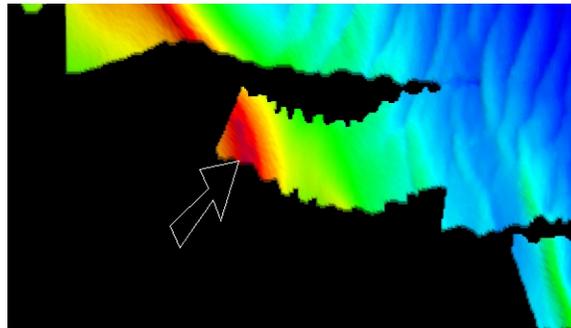
#### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with clarification - Delete charted 18 Obstn. Chart soundings from present survey and add "Sandwave" notation.**

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

- 19ft (13212\_1, 13209\_1, 12354\_1, 13205\_1)
- 3fm (12300\_1, 13006\_1, 13003\_1)
- 5.7m (5161\_1)

#### Feature Images



*Figure 1.9.1*

**1.10) 19 near charted 37**

**DANGER TO NAVIGATION**

**Survey Summary**

**Survey Position:** 041° 11' 38.170" N, 72° 06' 51.075" W  
**Least Depth:** 5.92 m  
**Timestamp:** 2003-281.16:46:51.081 (10/08/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-281 / 660\_1645  
**Profile/Beam:** 993/30  
**Charts Affected:** 13212\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is a 4-5 meter-high sandwave orientated NW to SE. The sandwave was only partially covered with MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

**Feature Correlation**

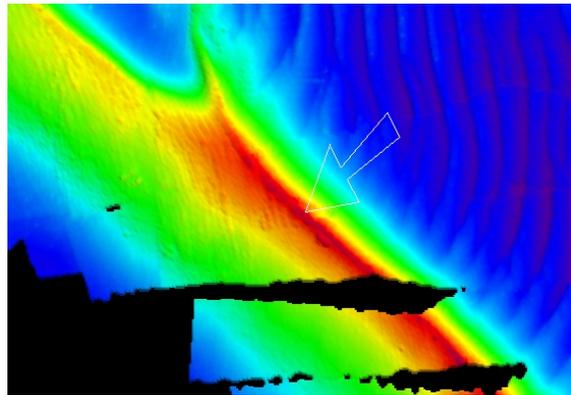
Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-281/660_1645	993/30	0.00	000.0	Primary

**Hydrographer Recommendations**

Hydrographer recommends charting present survey soundings. **Concur with clarification- Delete charted 19 Obstn. Chart soundings from present survey and add "Sandwave" notation.**  
**Cartographically-Rounded Depth (Affected Charts):**

- 19ft (13212\_1, 13209\_1, 12354\_1, 13205\_1)
- 3 ¼fm (12300\_1, 13006\_1, 13003\_1)
- 5.9m (5161\_1)

**Feature Images**



*Figure 1.10.1*

## 1.11) 20 near charted 24-foot Rk

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 14' 44.826" N, 72° 02' 37.648" W  
**Least Depth:** 6.06 m  
**Timestamp:** 2003-281.21:33:14.201 (10/08/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-281 / 560\_2131  
**Profile/Beam:** 385/8  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES within the danger curve of a charted 24-foot dangerous obstruction. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-281/560_2131	385/8	0.00	000.0	Primary

#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 20 Rk with danger curve.**

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

20ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

3 ¼fm (12300\_1, 13006\_1, 13003\_1)

6.0m (5161\_1)

#### Feature Images

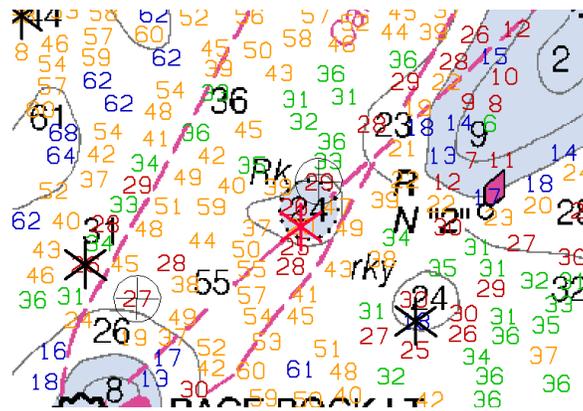


Figure 1.11.1

## 1.12) 22 near charted 33

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 15' 10.369" N, 72° 02' 32.662" W  
**Least Depth:** 6.87 m  
**Timestamp:** 2003-282.15:57:11.552 (10/09/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-282 / 526\_1551  
**Profile/Beam:** 1419/211  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-282/526_1551	1419/211	0.00	000.0	Primary

#### Hydrographer Recommendations

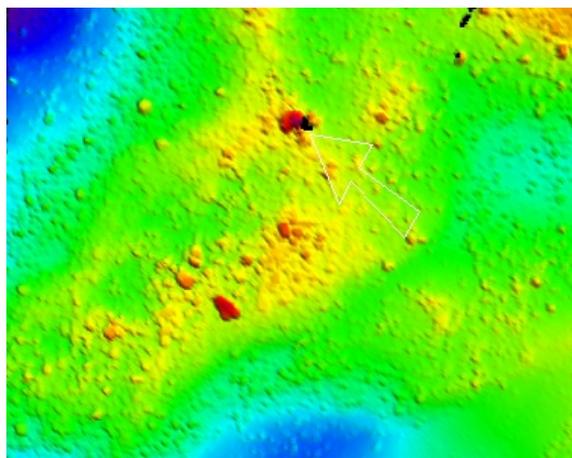
Hydrographer recommends charting the feature as per digital data. **Concur - Chart 22 Rk with danger curve.**  
**Cartographically-Rounded Depth (Affected Charts):**

22ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

3 ¾fm (12300\_1, 13006\_1, 13003\_1)

6.8m (5161\_1)

#### Feature Images



*Figure 1.12.1*

**1.13) 25 near charted sy**

**DANGER TO NAVIGATION**

**Survey Summary**

**Survey Position:** 041° 12' 37.098" N, 72° 06' 48.154" W  
**Least Depth:** 7.65 m  
**Timestamp:** 2003-301.15:44:56.065 (10/28/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-301 / 727\_1542  
**Profile/Beam:** 228/224  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

**Feature Correlation**

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-301/727_1542	228/224	0.00	000.0	Primary

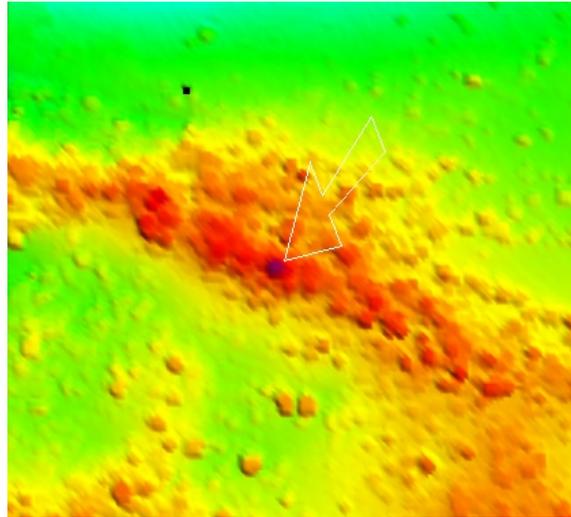
**Hydrographer Recommendations**

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 25 Rk with danger curve.**

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

25ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)  
 4fm (12300\_1, 13006\_1, 13003\_1)  
 7.6m (5161\_1)

**Feature Images**



*Figure 1.13.1*

## 1.14) 26 near charted 31

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 14' 43.227" N, 72° 02' 49.597" W  
**Least Depth:** 7.91 m  
**Timestamp:** 2003-282.16:12:24.884 (10/09/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-282 / 275\_1609  
**Profile/Beam:** 624/188  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-282/275_1609	624/188	0.00	000.0	Primary

#### Hydrographer Recommendations

Hydrographer recommends charting feature as per digital data. **Concur - Chart 26 Rk with danger curve.**

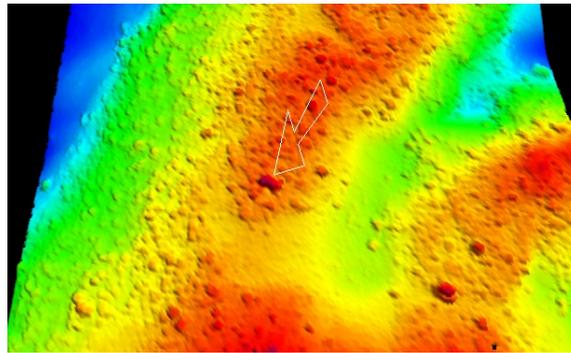
**Cartographically-Rounded Depth (Affected Charts):**

26ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

4 ¼fm (12300\_1, 13006\_1, 13003\_1)

7.9m (5161\_1)

#### Feature Images



*Figure 1.14.1*

## 1.15) 30 near charted 37

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 13' 17.498" N, 72° 04' 22.058" W  
**Least Depth:** 9.14 m  
**Timestamp:** 2003-280.16:37:59.975 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-280 / 200\_1627  
**Profile/Beam:** 4723/92  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-280/200_1627	4723/92	0.00	000.0	Primary

#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 30 Rk with danger curve.**

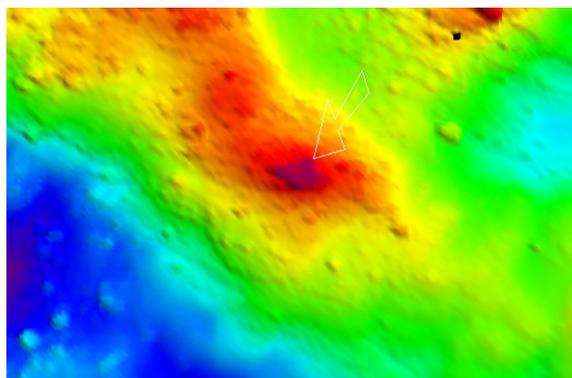
**Cartographically-Rounded Depth (Affected Charts):**

30ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

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

9.1m (5161\_1)

#### Feature Images



*Figure 1.15.1*

## 1.16) 32 between 43 48

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 12' 16.870" N, 72° 07' 27.355" W  
**Least Depth:** 9.86 m  
**Timestamp:** 2003-290.17:13:03.250 (10/17/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-290 / 374\_1706  
**Profile/Beam:** 1658/197  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-290/374_1706	1658/197	0.00	000.0	Primary

#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 32 Rk with danger curve.**

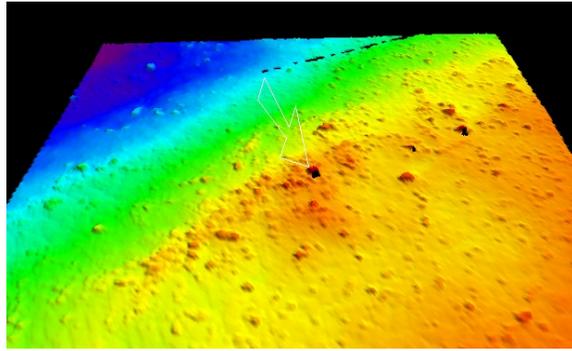
**Cartographically-Rounded Depth (Affected Charts):**

32ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

5 ¼fm (12300\_1, 13006\_1, 13003\_1)

9.8m (5161\_1)

#### Feature Images



*Figure 1.16.1*

**1.17) 32 between charted 61 48**

**DANGER TO NAVIGATION**

**Survey Summary**

**Survey Position:** 041° 12' 38.913" N, 72° 06' 58.001" W  
**Least Depth:** 9.93 m  
**Timestamp:** 2003-290.14:23:47.123 (10/17/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-290 / 351\_1420  
**Profile/Beam:** 553/43  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

**Feature Correlation**

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-290/351_1420	553/43	0.00	000.0	Primary

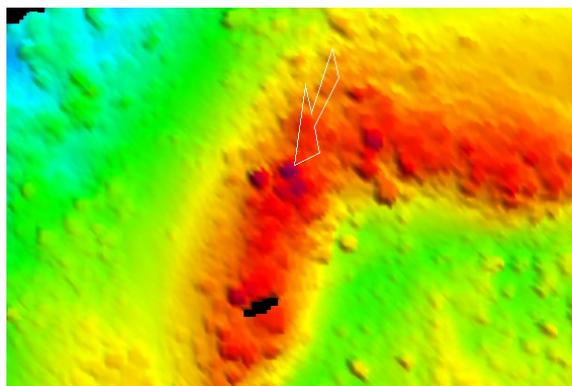
**Hydrographer Recommendations**

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 32 Rk with danger curve.**

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

32ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)  
 5 ¼fm (12300\_1, 13006\_1, 13003\_1)  
 9.9m (5161\_1)

**Feature Images**



*Figure 1.17.1*

## 1.18) 35 near charted 49

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 11' 53.615" N, 72° 08' 16.879" W  
**Least Depth:** 10.77 m  
**Timestamp:** 2003-281.13:38:52.199 (10/08/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-281 / 378\_1329  
**Profile/Beam:** 2449/101  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-281/378_1329	2449/101	0.00	000.0	Primary

#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 35 Rk with danger curve.**

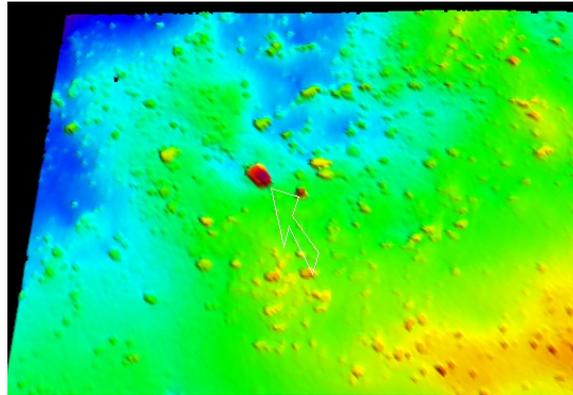
**Cartographically-Rounded Depth (Affected Charts):**

35ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

5 ¾fm (12300\_1, 13006\_1, 13003\_1)

10.7m (5161\_1)

#### Feature Images



*Figure 1.18.1*

## 1.19) 35 near charted 41

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 15' 10.936" N, 72° 02' 51.123" W  
**Least Depth:** 10.83 m  
**Timestamp:** 2003-282.17:32:24.596 (10/09/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-282 / 335\_1730  
**Profile/Beam:** 269/226  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-282/335_1730	269/226	0.00	000.0	Primary

#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 35 Rk with danger curve.**

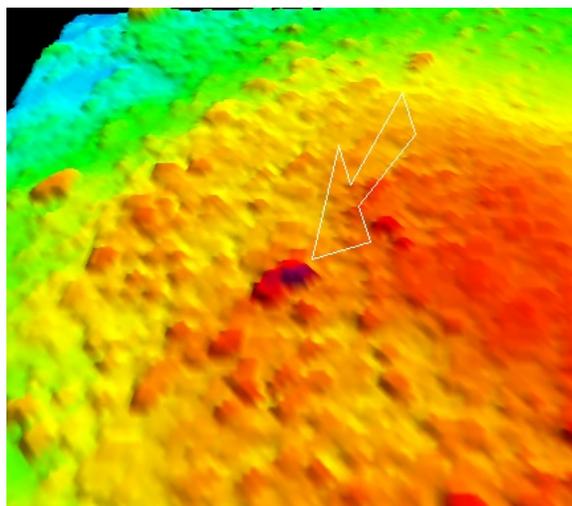
**Cartographically-Rounded Depth (Affected Charts):**

35ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

5 ¾fm (12300\_1, 13006\_1, 13003\_1)

10.8m (5161\_1)

#### Feature Images



*Figure 1.19.1*

## 1.20) 38 near charted 44

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 14' 53.647" N, 72° 02' 53.146" W  
**Least Depth:** 11.55 m  
**Timestamp:** 2003-282.18:00:20.036 (10/09/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-282 / 269\_1753  
**Profile/Beam:** 1861/29  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-282/269_1753	1861/29	0.00	000.0	Primary

#### Hydrographer Recommendations

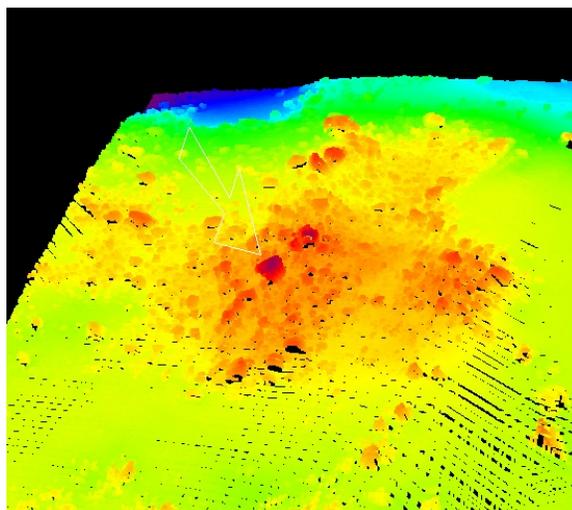
Hydrographer recommends charting the feature as per digital data. **Concur - Chart 38 Rk with danger curve. Cartographically-Rounded Depth (Affected Charts):**

38ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

6 ¼fm (12300\_1, 13006\_1, 13003\_1)

11.5m (5161\_1)

#### Feature Images



*Figure 1.20.1*

## 1.21) Volund

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 041° 13' 17.262" N, 72° 03' 19.704" W  
**Least Depth:** 21.23 m  
**Timestamp:** 2003-281.20:52:36.522 (10/08/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-281 / 710\_2051  
**Profile/Beam:** 32/238  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature was located with 100% MBES and developed with 200% SSS. Local historians suggest this is the wreck of the Norweigien steamship Volund, which sank in 1908 after colliding with a passenger liner in dense fog. This DtoN was submitted in the DtoN Letter submitted 01/06/04.

#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-281/710_2051	32/238	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/s222_100/2003-296/wreck_100	0001	20.63	194.5	Secondary
h:/hdcs_data/b370_03_h11250g/s222_100/2003-296/wreck_75	0001	26.95	207.0	Secondary
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-280/655_1400	0001	37.18	251.5	Secondary
h:/hdcs_data/b370_03_h11250g/s222_100/2003-296/wreck_75_2	0001	42.01	261.7	Secondary

#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur - Chart 69 Wk with danger curve.**

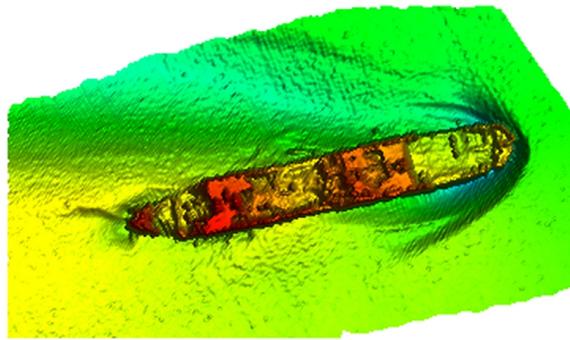
**Cartographically-Rounded Depth (Affected Charts):**

69ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

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

21m (5161\_1)

## Feature Images



*Figure 1.21.1*

# OPR-B370-TJ-03 - AWOIS Items

**Registry Number:** H11250  
**State:** New York & Connecticut  
**Locality:** Long Island Sound  
**Sub-locality:** The Race  
**Project Number:** OPR-B370-TJ-03  
**Survey Dates:** October 6, 2003 - November 1, 2003

## Charts Affected

Number	Version	Date	Scale
13212	36th Ed.	03/01/04	1:20000
13214	27th Ed.	06/01/02	1:20000
12372	32nd Ed.	10/01/03	1:40000
13209	23rd Ed.	10/30/99	1:40000
12354	40th Ed.	08/01/03	1:80000
13205	36th Ed.	04/14/01	1:80000
12300	43rd Ed.	03/01/03	1:400000
13006	31st Ed.	06/01/03	1:675000
5161	13th Ed.	10/01/03	1:1058400
13003	47th Ed.	06/01/03	1:1200000

## Features

Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
Sounding	6.03 m	041° 13' 31.594" N	72° 04' 12.441" W	11910
Rock	8.61 m	041° 14' 31.050" N	72° 02' 52.852" W	7088
Obstn	13.07 m	041° 11' 40.700" N	72° 06' 11.492" W	11912
Rock	15.19 m	041° 13' 04.361" N	72° 04' 42.652" W	11911
Obstn	17.92 m	041° 15' 47.902" N	72° 05' 26.725" W	11914
Sounding	22.92 m	041° 14' 49.801" N	72° 00' 19.117" W	11909
Wreck	72.63 m	041° 13' 24.290" N	72° 05' 04.374" W	7540

## **1 - Features from Bathymetry**

## 1.1) AWOIS 11910

### Primary Feature for AWOIS Item #11910

**Search Position:** 41.22588889, -72.06669444  
**Historical Depth:** 5.79 m  
**Search Radius:** 100  
**Search Technique:** ES,S2,MB,BD,DI,SD  
**Technique Notes:** Search the area as defined by the AWOIS graphic

**History Notes:**

H08709/62 -- Least depth on Valiant Rock was found to be 19-feet, skin divers obtained least depth and reported heavy kelp. Position currently charted at 41/13/33.2 north latitude, 072/04/0.1 west longitude (NAD83). (Entered 8/03 by CG)

### Survey Summary

**Survey Position:** 041° 13' 31.594" N, 72° 04' 12.441" W  
**Least Depth:** 6.03 m  
**Timestamp:** 2003-280.14:36:00.156 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-280 / 193\_1429  
**Profile/Beam:** 3641/68  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over Valiant Rock and was obtained with 100% MBES. The feature is 292 meters SSW of AWOIS 11910, which is the current least depth over Valiant Rock.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-280/193_1429	3641/68	0.00	000.0	Primary
B370_AWOIS	AWOIS # 11910	292.25	260.2	Secondary (grouped)

## Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur - Chart soundings from present survey.**

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

20ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

3 ¼fm (12300\_1, 13006\_1, 13003\_1)

6.0m (5161\_1)

## Feature Images

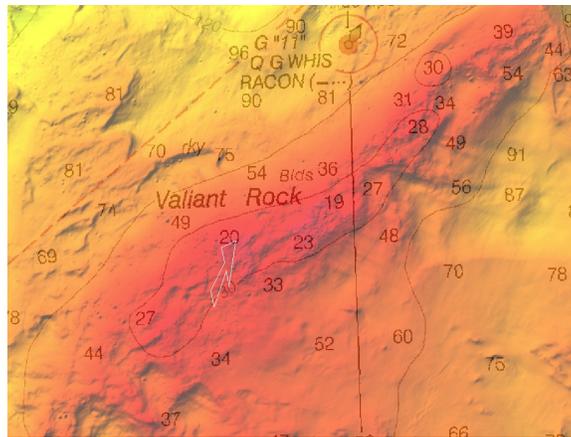


Figure 1.1.1

## 1.2) AWOIS 7088

### Primary Feature for AWOIS Item #7088

**Search Position:** 41.24176389, -72.04815556  
**Historical Depth:** [None]  
**Search Radius:** 200  
**Search Technique:** ES,S2,MB,BD,DI,SD  
**Technique Notes:** Search the area as defined by the AWOIS graphic

**History Notes:**

HISTORY FE262WD/84--OPR-B660-RU/HE-84; A RIDGE WAS FOUND IN THE VICINITY OF RACE ROCK EXTENDING SOUTH INTO THE RACE; RECONNAISSANCE SOUNDINGS WERE RUN ALONG THE PEAK OF THE RIDGE WITH AN ESTIMATED LEAST DEPTH OF 25FT.; THIS RIDGE MAY BE MIGRATING DUE TO CURRENTS, STORMS, AND SEASONAL CHANGES; EXTENT AND SHOALEST DEPTHS COULD NOT BE DETERMINED FROM THIS SURVEY; PRESENTS A HAZARD TO NAVIGATION SINCE DEEP DRAFT VESSELS NAVIGATE IN CLOSE PROXIMITY TO THIS RIDGE; BASIC HYDROGRAPHIC SURVEY IS RECOMMENDED BY THE EVALUATOR. (ENTERED MSM 2/89) H01339/90--OPR-B660-HE-90; ECHOSOUNDER INVESTIGATION OF AREA BUT LINE SPACING NOT SUFFICIENT TO DISPROVE THE 25 FT SOUNDING; CARRIED FORWARD TO THIS SURVEY. (UPDATED MSD 7/91)

### Survey Summary

**Survey Position:** 041° 14' 31.050" N, 72° 02' 52.852" W  
**Least Depth:** 8.61 m  
**Timestamp:** 2003-279.17:52:31.722 (10/06/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-279 / 655\_1750  
**Profile/Beam:** 493/1  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. The feature is within the danger curve of a charted 25-foot Obstn. The feature is one of many rocks in the rocky area around Race Rock Light. There's an 'rky' charted 300 meters to the SE. The feature is outside the 30-foot contour.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-279/655_1750	493/1	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/005_1415	0001	4.25	333.1	Secondary
B370_AWOIS	AWOIS # 7088	24.67	028.7	Secondary
B370_03_H11250G_ChartItems.txt	16	28.38	059.3	Secondary

### Hydrographer Recommendations

Hydrographer recommends deleting the currently charted 25-foot dangerous Obstr Rep and charting the current feature as per digital data. **Concur with clarification - Delete charted 25 Obstr Rep and chart soundings from present survey.**

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

28ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

4 ¾fm (12300\_1, 13006\_1, 13003\_1)

8.6m (5161\_1)

### Feature Images

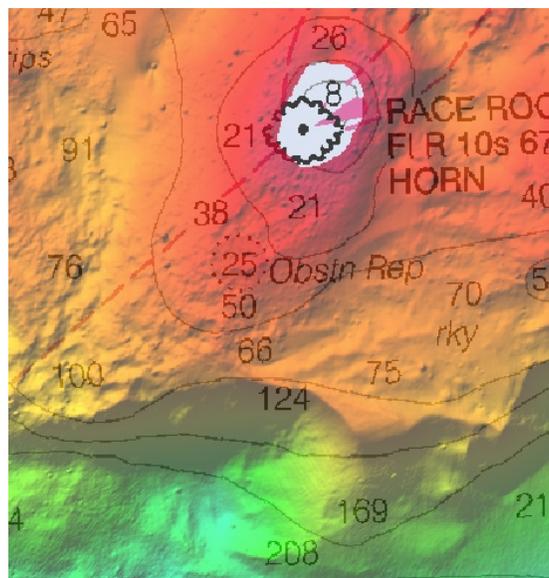


Figure 1.2.1

## 1.3) AWOIS 11912

### Primary Feature for AWOIS Item #11912

**Search Position:** 41.20000000, -72.10500000  
**Historical Depth:** [None]  
**Search Radius:** 1000  
**Search Technique:** ES,S2,MB,BD,DI,SD  
**Technique Notes:** Search the area as defined by the AWOIS graphic, search inside of 20-foot curve not required.

#### History Notes:

LNM34/97, CGD1 20AUG97 -- Add "Submerged Wreck PA" at 41/12/00.0 north latitude, 072/06/18.0 west longitude (NAD83), not dangerous to surface navigation. (Entered 8/03 by CG)

### Survey Summary

**Survey Position:** 041° 11' 40.700" N, 72° 06' 11.492" W  
**Least Depth:** 13.07 m  
**Timestamp:** 2003-281.19:58:36.362 (10/08/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-281 / 497\_1958  
**Profile/Beam:** 152/10  
**Charts Affected:** 13212\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over the only man-made-looking feature within the radius of AWOIS 11912. 100% of the navigable portion of the AWOIS search radius was covered with 100% MBES. The feature is a circular feature located ~610m to the SSE of the charted wreck PA corresponding to AWOIS 11912.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-281/497_1958	152/10	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-304/018_1937	0001	0.95	195.7	Secondary
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-281/497_1958	0001	1.82	089.6	Secondary
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-281/455_1240	0001	2.49	148.4	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-304/020_1923	0001	11.28	181.4	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-304/019_1930	0001	12.10	083.8	Secondary
B370_AWOIS	AWOIS # 11912	615.79	165.7	Secondary
B370_03_H11250G_ChartItems.txt	23	618.67	165.8	Secondary (grouped)

### Hydrographer Recommendations

Hydrographer recommends deleting the dangerous sunken wreck PA corresponding to AWOIS 11912 and charting the current feature as per digital data. **Concur - Delete charted dangerous Wk, depth unknown, PA. Chart 43 Obstrn as shown on present survey.**

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

43ft (13212\_1, 13209\_1, 12354\_1, 13205\_1)

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

13.0m (5161\_1)

## 1.4) AWOIS 11911

### Primary Feature for AWOIS Item #11911

**Search Position:** 41.21761111, -72.07869444  
**Historical Depth:** 14.63 m  
**Search Radius:** 100  
**Search Technique:** ES,S2,MB,BD,DI,SD  
**Technique Notes:** Search the area as defined by the AWOIS graphic

**History Notes:**

H08709/62 -- A least depth of 48.5-feet was found on a rock in latitude 41/13.05, longitude 72/04.75 (NAD27).  
 Least depth obtained by SCUBA divers.

### Survey Summary

**Survey Position:** 041° 13' 04.361" N, 72° 04' 42.652" W  
**Least Depth:** 15.19 m  
**Timestamp:** 2003-280.19:36:36.431 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-280 / 656\_1934  
**Profile/Beam:** 778/23  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES. The feature is located over a charted 48-foot rock and is within the radius of AWOIS 11911.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-280/656_1934	778/23	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	22	5.17	130.5	Secondary
B370_AWOIS	AWOIS # 11911	33.35	027.0	Secondary

## Hydrographer Recommendations

Hydrographer recommends deleting the charted 48-foot rock and charting the current feature as per digital data.

**Concur with clarification - Delete charted 48 Rk. Chart a 50 Rk with danger cure in Lat. 41°13'04.36"N, Lon. 072°04'42.65"W.**

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

50ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

8 ¼fm (12300\_1, 13006\_1, 13003\_1)

15.2m (5161\_1)

## Feature Images

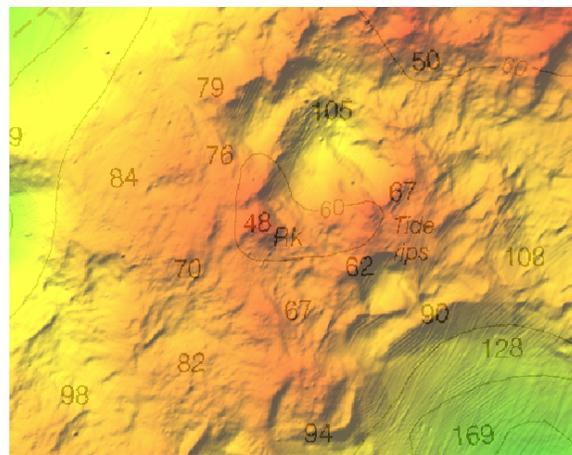


Figure 1.4.1

## 1.5) AWOIS 11914

### Primary Feature for AWOIS Item #11914

**Search Position:** 41.26311111, -72.09058333  
**Historical Depth:** 17.68 m  
**Search Radius:** 100  
**Search Technique:** ES,S2,MB,BD,DI,SD  
**Technique Notes:** Search the area as defined by the AWOIS graphic

**History Notes:**

FE343/90; OPR-B660 -- 58-foot sounding located in currently charted position 41/15/47.2 north latitude, 072/05/26.1 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:** 041° 15' 47.902" N, 72° 05' 26.725" W  
**Least Depth:** 17.92 m  
**Timestamp:** 2003-301.19:40:12.634 (10/28/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-301 / 793\_1937  
**Profile/Beam:** 306/10  
**Charts Affected:** 13212\_1, 12372\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a charted 58-foot dangerous Obstn located with 100% MBES and developed with 200% SSS.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-301/793_1937	306/10	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/008_1448	0001	4.26	263.3	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/006_1450	0001	4.28	217.3	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-304/006_1636	0001	6.83	135.9	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-304/008_1638	0001	7.72	271.4	Secondary
B370_AWOIS	AWOIS # 11914	26.17	326.1	Secondary

## Hydrographer Recommendations

Hydrographer recommends deleting the charted 58-foot dangerous Obstrn and charting the present feature as per digital data. *Concur with clarification - Delete charted 58 Obstrn. Chart 59 Obstrn with danger curve.*

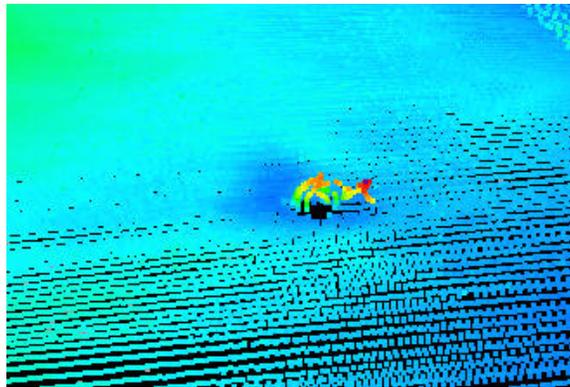
### Cartographically-Rounded Depth (Affected Charts):

59ft (13212\_1, 12372\_1, 12354\_1, 13205\_1)

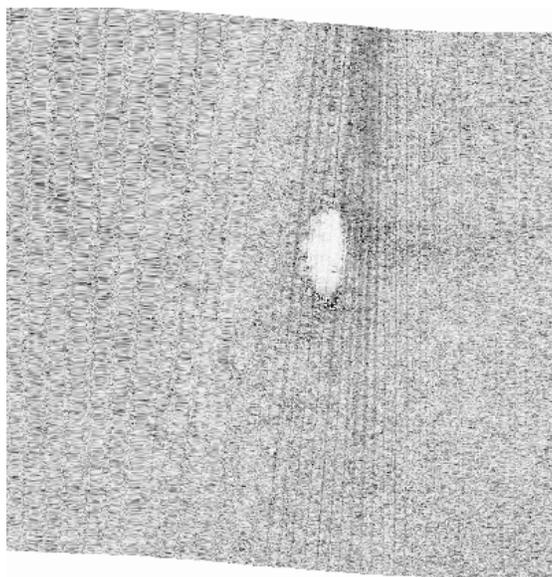
9 ¾fm (12300\_1, 13006\_1, 13003\_1)

17.9m (5161\_1)

## Feature Images



*Figure 1.5.1*



*Figure 1.5.2*

## 1.6 AWOIS 11909

### Primary Feature for AWOIS Item #11909

**Search Position:** 41.24594444, -72.00786111  
**Historical Depth:** 12.80 m  
**Search Radius:** 300  
**Search Technique:** ES,S2,MB,BD,DI,SD  
**Technique Notes:** Search the area as defined by the AWOIS graphic

**History Notes:**

H08926/68 -- Searched utilizing single beam echosounder with negative results. 42-foot wire drag grounding retained. H04043/18 -- 42-foot wire drag grounding at 41/14/45 north latitude, 72/00/30 west longitude (NAD27) was not cleared on this sheet, but was covered by a 28-foot wire drag on H04008. H04008/18 -- No mention of this shoaling, but area cleared to 28-feet via wire drag. (Entered 8/03 by CG)

### Survey Summary

**Survey Position:** 041° 14' 49.801" N, 72° 00' 19.117" W  
**Least Depth:** 22.92 m  
**Timestamp:** 2003-279.18:31:42.097 (10/06/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-279 / 164\_1829  
**Profile/Beam:** 980/66  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over AWOIS 11909. 100% of the search radius was covered with 100% MBES. No 42-foot sounding was found in the vicinity of the AWOIS item's position. There are soundings shoaler than 42 feet in the AWOIS item's radius; however, these soundings represent the area's general slope and not a seperate, distinct shoaling or feature. (\*\*\*\*NOTE: the position of the AWOIS feature in PYDRO does not correspond to the 42-foot charted depth that is described in the item's history...it's off by about 260 meters\*\*\*\*)

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-279/164_1829	980/66	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	20	0.25	261.6	Secondary
B370_AWOIS	AWOIS # 11909	253.86	057.6	Secondary (grouped)

## Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with clarification - Delete AWOIS**

**11909. Chart soundings from present survey.**

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

75ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

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

23m (5161\_1)

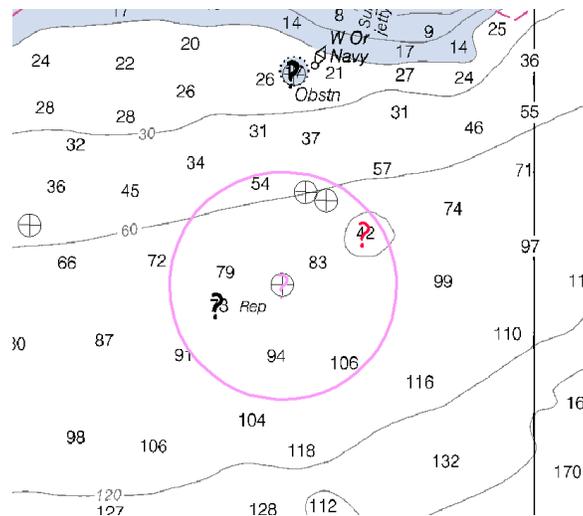
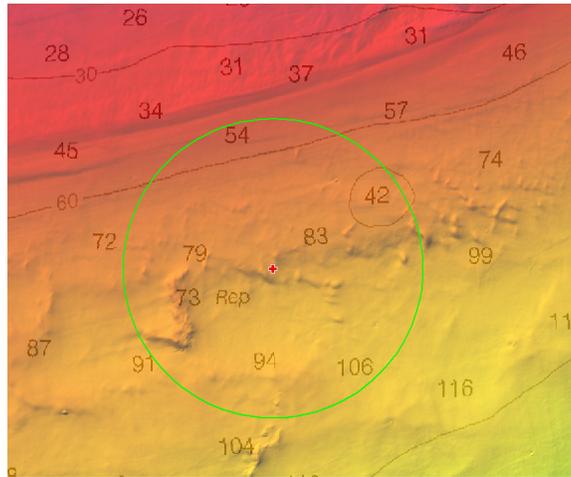


Figure 1.6.1



*Figure 1.6.2*

## 1.7) AWOIS 7540

### Primary Feature for AWOIS Item #7540

**Search Position:** 41.22343056, -72.08451944  
**Historical Depth:** [None]  
**Search Radius:** 300  
**Search Technique:** ES,S2,MB,BD,DI,SD  
**Technique Notes:** Search the area as defined by the AWOIS graphic

**History Notes:**

HISTORY LNM30/89--1ST CGD; A WRECK HAS BEEN REPORTED IN (PA) LAT 41-13-24N, LONG 72-05-06W; CHARTED AS A NONDANGEROUS WRECK. (ENTERED MSM 1/90)

### Survey Summary

**Survey Position:** 041° 13' 24.290" N, 72° 05' 04.374" W  
**Least Depth:** 72.63 m  
**Timestamp:** 2003-281.14:59:51.189 (10/08/2003)  
**Survey Line:** b370\_03\_h11250g / s222\_mb / 2003-281 / 0069\_20031008\_145702\_raw  
**Profile/Beam:** 215/69  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over AWOIS 7540. 100% of the search radius was covered with 100% MBES. Nothing resembling a sunken wreck was found. NOTE: The ship had planned to acquire SSS data over this item, but was unable to do so because the ship had mechanical problems. The area is too deep for the launches to be able to acquire usable SSS data.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/s222_mb/2003-281/0069_20031008_145702_raw	215/69	0.00	000.0	Primary
B370_AWOIS	AWOIS # 7540	3.06	232.6	Secondary
B370_03_H11250G_ChartItems.txt	24	10.62	090.1	Secondary

## Hydrographer Recommendations

Hydrographer recommends deleting the sunken wreck PA. **Concur - Delete charted sunken Wk, not dangerous to surface navigation, PA.**

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

238ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

39fm (12300\_1, 13006\_1, 13003\_1)

72m (5161\_1)

## Feature Images

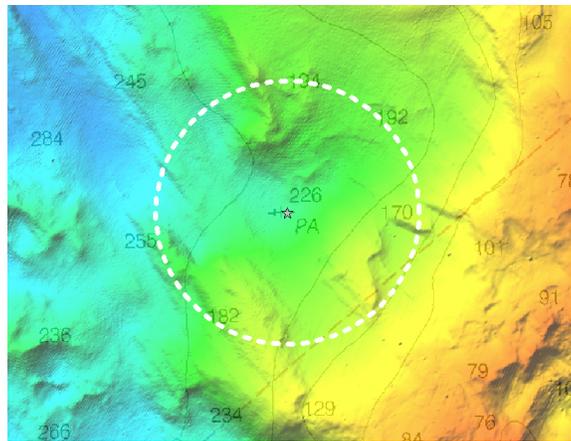


Figure 1.7.1

# OPR-B370-TJ-03 - Significant Uncharted Items

**Registry Number:** H11250  
**State:** New York & Connecticut  
**Locality:** Long Island Sound  
**Sub-locality:** The Race  
**Project Number:** OPR-B370-TJ-03  
**Survey Dates:** October 6, 2003 - November 1, 2003

## Charts Affected

Number	Version	Date	Scale
13212	36th Ed.	03/01/04	1:20000
13214	27th Ed.	06/01/02	1:20000
12372	32nd Ed.	10/01/03	1:40000
13209	23rd Ed.	10/30/99	1:40000
12354	40th Ed.	08/01/03	1:80000
13205	36th Ed.	04/14/01	1:80000
12300	43rd Ed.	03/01/03	1:400000
13006	31st Ed.	06/01/03	1:675000
5161	13th Ed.	10/01/03	1:1058400
13003	47th Ed.	06/01/03	1:1200000

## Features

Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
Rock	3.14 m	041° 12' 23.389" N	72° 06' 51.336" W	---
Rock	5.34 m	041° 11' 54.270" N	72° 07' 20.084" W	---
Obstn	8.46 m	041° 14' 44.294" N	72° 02' 01.568" W	---
Rock	8.61 m	041° 12' 27.608" N	72° 05' 39.696" W	---
Rock	15.31 m	041° 11' 58.110" N	72° 08' 18.404" W	---
Rock	16.36 m	041° 12' 16.293" N	72° 05' 34.805" W	---
Rock	19.09 m	041° 12' 11.981" N	72° 08' 13.479" W	---
Obstn	39.67 m	041° 14' 43.414" N	72° 03' 42.306" W	---

## **1 - Features from Bathymetry**

## 1.1) rocky area W of Gull Islands

### Survey Summary

**Survey Position:** 041° 12' 23.389" N, 72° 06' 51.336" W  
**Least Depth:** 3.14 m  
**Timestamp:** 2003-281.15:18:17.884 (10/08/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-281 / 364\_1515  
**Profile/Beam:** 704/240  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a rock located with 100% MBES. The feature is one of many rocks on the north side of Great Gull and Little Gull Islands.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-281/364_1515	704/240	0.00	000.0	Primary

### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart 10 Rk with danger curve.**

### Feature Images

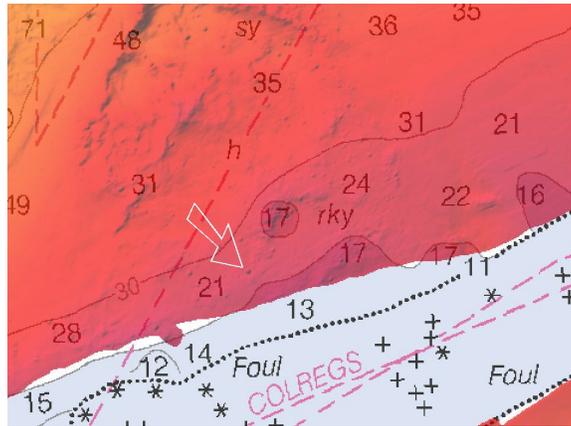


Figure 1.1.1

## 1.2) rock south of Great Gull Island

### Survey Summary

**Survey Position:** 041° 11' 54.270" N, 72° 07' 20.084" W  
**Least Depth:** 5.34 m  
**Timestamp:** 2003-280.16:47:22.157 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-280 / 621\_1646  
**Profile/Beam:** 24/206  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a solitary rock located with 100% MBES.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-280/621_1646	24/206	0.00	000.0	Primary

### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart 17 Rk with danger curve.**

### Feature Images

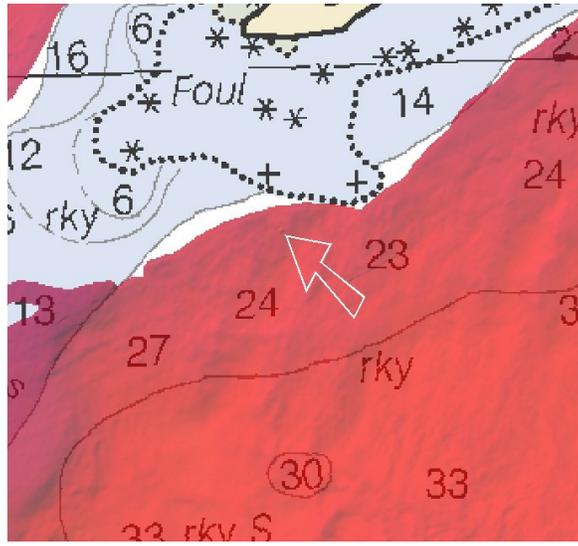


Figure 1.2.1

### 1.3) loopy thing

#### Survey Summary

**Survey Position:** 041° 14' 44.294" N, 72° 02' 01.568" W  
**Least Depth:** 8.46 m  
**Timestamp:** 2003-279.14:36:56.694 (10/06/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-279 / 519\_1431  
**Profile/Beam:** 1304/126  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth of a man-made looking object located with 100% MBES. The raw image is shown because the object is at nadir and does not appear in the slant range-corrected image.

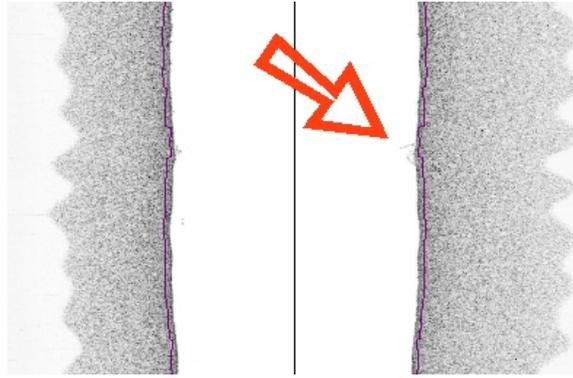
#### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-279/519_1431	1304/126	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-279/519_1431	0001	8.86	111.4	Secondary

#### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart 28 Obstn with danger curve.**

#### Feature Images



*Figure 1.3.1*

## 1.4) 28 in rocky area near charted 57

### Survey Summary

**Survey Position:** 041° 12' 27.608" N, 72° 05' 39.696" W  
**Least Depth:** 8.61 m  
**Timestamp:** 2003-291.13:26:04.367 (10/18/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-291 / 415\_1317  
**Profile/Beam:** 2385/142  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth of a rock located with 100% MBES. The feature is one of many rocks in a shoal rocky area located just to the east of the charted "Little Gull Reef." There's an 'rky' charted in the general area.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-291/415_1317	2385/142	0.00	000.0	Primary

### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart a 28 Rk with danger curve.**

### Feature Images

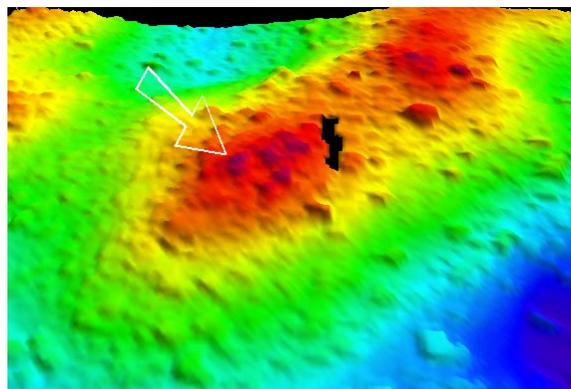


Figure 1.4.1

## 1.5) rock W of Great Gull Island

### Survey Summary

**Survey Position:** 041° 11' 58.110" N, 72° 08' 18.404" W  
**Least Depth:** 15.31 m  
**Timestamp:** 2003-290.16:41:14.263 (10/17/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-290 / 372\_1636  
**Profile/Beam:** 1170/227  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a rock located with 100% MBES in a generally rocky area west of the southern end of Great Gull Island.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-290/372_1636	1170/227	0.00	000.0	Primary

### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart a 50 Rk with danger curve.**

### Feature Images

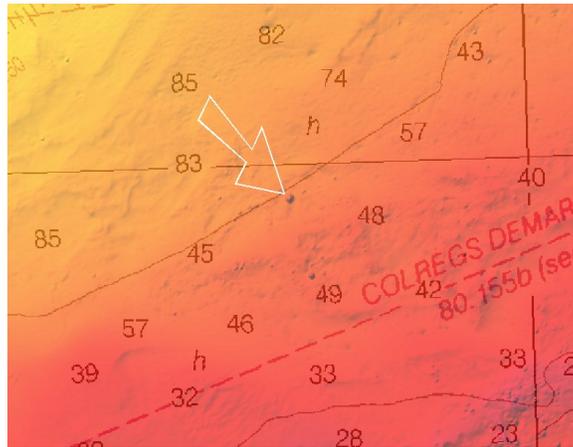


Figure 1.5.1

## 1.6) mound E of Great Gull Island

### Survey Summary

**Survey Position:** 041° 12' 16.293" N, 72° 05' 34.805" W  
**Least Depth:** 16.36 m  
**Timestamp:** 2003-291.13:45:16.044 (10/18/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-291 / 431\_1338  
**Profile/Beam:** 1757/152  
**Charts Affected:** 13212\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a natural mound/ridge located with 100% MBES south of the generally rocky area just to the east of the charted "Little Gull Reef." The feature is between two charted rky's.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1014_mb/2003-291/431_1338	1757/152	0.00	000.0	Primary

### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart 53 Rk with danger curve.**

### Feature Images

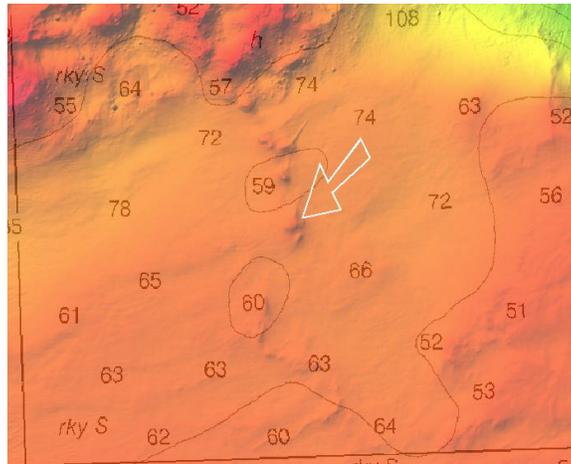


Figure 1.6.1

## 1.7) rock in cable area W of Great Gull Island

### Survey Summary

**Survey Position:** 041° 12' 11.981" N, 72° 08' 13.479" W  
**Least Depth:** 19.09 m  
**Timestamp:** 2003-290.15:15:10.384 (10/17/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-290 / 367\_1509  
**Profile/Beam:** 1079/235  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a rock located with 100% MBES.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdc_data/b370_03_h11250g/1014_mb/2003-290/367_1509	1079/235	0.00	000.0	Primary

### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart 62 Rk with danger curve.**

### Feature Images

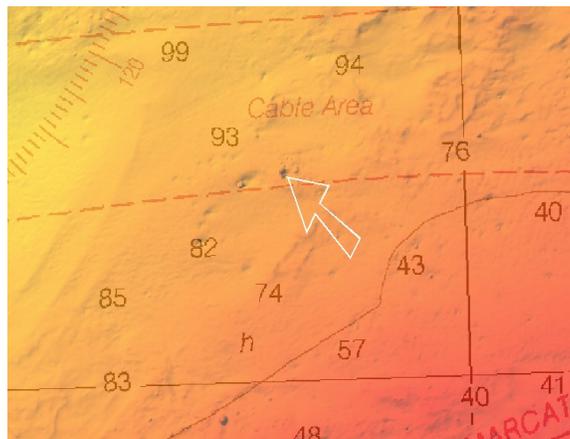


Figure 1.7.1

## 1.8) shipping container

### Survey Summary

**Survey Position:** 041° 14' 43.414" N, 72° 03' 42.306" W  
**Least Depth:** 39.67 m  
**Timestamp:** 2003-287.17:49:36.666 (10/14/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-287 / 307\_1749  
**Profile/Beam:** 22/88  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a shipping-container-like feature located with 100% MBES.

### Feature Correlation

Line	Feature	Range	Azimuth	Status
h:/hdcs_data/b370_03_h11250g/1005_mb/2003-287/307_1749	22/88	0.00	000.0	Primary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/012_1434	0001	6.73	355.8	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/014_1430	0001	9.05	162.7	Secondary
h:/hdcs_data/b370_03_h11250g/1005_100/2003-305/013_1433	0001	12.28	151.9	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting the feature as per digital data. **Concur with clarification - Chart 130 Obstrn with danger curve.**

### Feature Images

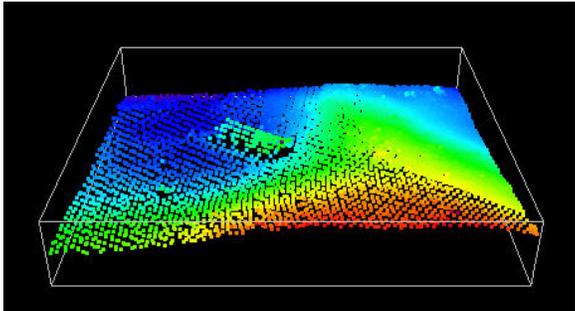


Figure 1.8.1

# OPR-B370-TJ-03 - Non-AWOIS Charted Features & Notes

**Registry Number:** H11250  
**State:** New York & Connecticut  
**Locality:** Long Island Sound  
**Sub-locality:** The Race  
**Project Number:** OPR-B370-TJ-03  
**Survey Dates:** October 6, 2003 - November 1, 2003

## Charts Affected

Number	Version	Date	Scale
13211	13th Ed.	08/24/91	1:20000
13212	36th Ed.	03/01/04	1:20000
13214	27th Ed.	06/01/02	1:20000
12372	32nd Ed.	10/01/03	1:40000
13209	23rd Ed.	10/30/99	1:40000
12354	40th Ed.	08/01/03	1:80000
13205	36th Ed.	04/14/01	1:80000
12300	43rd Ed.	03/01/03	1:400000
13006	31st Ed.	06/01/03	1:675000
5161	13th Ed.	10/01/03	1:1058400
13003	47th Ed.	06/01/03	1:1200000

## Features

Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
Rock	4.42 m	041° 12' 26.362" N	72° 06' 48.429" W	---
Sounding	7.21 m	041° 15' 04.193" N	72° 00' 24.800" W	---
Obstruction	12.75 m	041° 14' 45.870" N	72° 01' 22.894" W	---
Sounding	13.60 m	041° 14' 33.257" N	72° 02' 36.104" W	---
Sounding	21.24 m	041° 14' 29.450" N	72° 02' 35.808" W	---
Bottom Sample	23.06 m	041° 13' 37.446" N	72° 04' 12.916" W	---
Sounding	24.56 m	041° 15' 26.364" N	72° 04' 16.014" W	---

Sounding	25.23 m	041° 14' 43.684" N	72° 00' 35.729" W	---
Sounding	25.84 m	041° 15' 12.697" N	72° 04' 08.473" W	---
Sounding	26.17 m	041° 15' 11.854" N	72° 04' 03.221" W	---
Bottom Sample	79.33 m	041° 15' 08.594" N	72° 08' 09.504" W	---
Sounding	81.62 m	041° 15' 06.609" N	72° 08' 09.888" W	---
SSS	[None]	041° 12' 13.251" N	72° 07' 14.724" W	---

## **1 - Features from Bathymetry**

## 1.1) charted 17 rky

### Survey Summary

**Survey Position:** 041° 12' 26.362" N, 72° 06' 48.429" W  
**Least Depth:** 4.42 m  
**Timestamp:** 2003-281.17:06:01.441 (10/08/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-281 / 365\_1704  
**Profile/Beam:** 306/7  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth of a rock located with 100% MBES over a charted 17 with a nearby "rky". The feature is one of many rocks on the north side of Great Gull and Little Gull Islands.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1014_mb/2003-281/365_1704	306/7	0.00	000.0	Primary

### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with clarification - Chart 14 Rk with danger curve.**

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

14ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

2 ¼fm (12300\_1, 13006\_1, 13003\_1)

4.4m (5161\_1)

### Feature Images



## 1.2) Charted "W Or Navy" buoy

### Survey Summary

**Survey Position:** 041° 15' 04.193" N, 72° 00' 24.800" W  
**Least Depth:** 7.21 m  
**Timestamp:** 2003-279.21:07:11.246 (10/06/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-279 / 590\_2106  
**Profile/Beam:** 643/90  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature was created to mark the position of the charted "W Or Navy" buoy. "W Or Navy" was not seen during the survey. The feature is ~58 meters to the east of an obstruction that was submitted as a DtoN in the DtoN letter dated 11/07/03.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1005_mb/2003-279/590_2106	643/90	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	27	2.37	272.7	Secondary

### Hydrographer Recommendations

N/A ***Defer to MCD Update Service Branch for charting recommendations for Aids to Navigation.***

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

23ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

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

7.2m (5161\_1)

### Feature Images

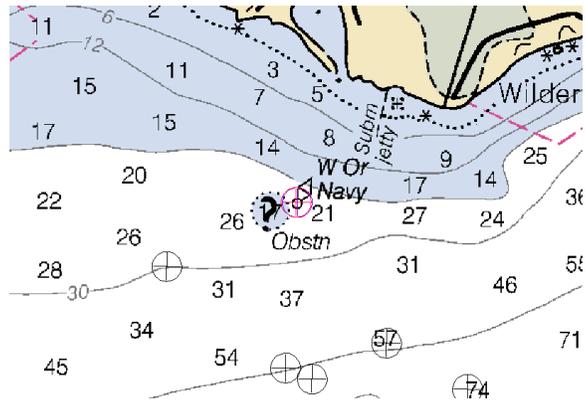


Figure 1.2.1

### 1.3) 42 near charted "55 Rep"

#### Survey Summary

**Survey Position:** 041° 14' 45.870" N, 72° 01' 22.894" W  
**Least Depth:** 12.75 m  
**Timestamp:** 2003-279.16:06:03.371 (10/06/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-279 / 165\_1555  
**Profile/Beam:** 3006/79  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a linear man-made looking feature located with 100% MBES. The feature is 50 meters north of a charted "55 Rep", over which nothing was found.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1014_mb/2003-279/165_1555	3006/79	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	25	53.38	355.1	Secondary (grouped)

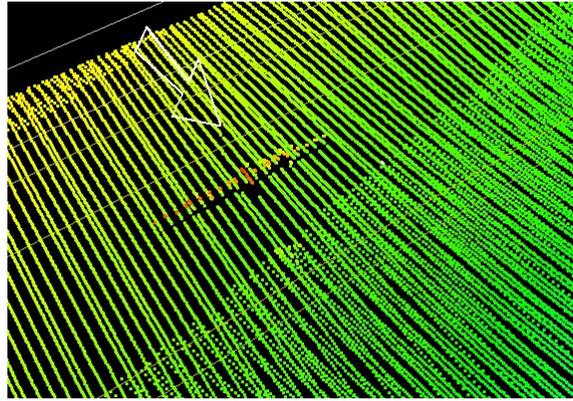
#### Hydrographer Recommendations

Hydrographer recommends deleting the '55 Rep' at the position of the current feature's secondary feature and charting the current feature as per digital data. **Concur with clarification - The charted notation "55 Rep" is AWOIS#12425. Delete charted notation "55 Rep". Chart 42 Obsdn with danger curve.**

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

- 42ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)
- 7fm (12300\_1, 13006\_1, 13003\_1)
- 12.7m (5161\_1)

#### Feature Images



*Figure 1.3.1*

## 1.4) charted "40 Rep 1984"

### Survey Summary

**Survey Position:** 041° 14' 33.257" N, 72° 02' 36.104" W  
**Least Depth:** 13.60 m  
**Timestamp:** 2003-279.17:14:16.511 (10/06/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-279 / 163\_1707  
**Profile/Beam:** 1769/61  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a charted "40 Rep 1984". The feature was covered with 100% MBES and is located in the generally rocky area surrounding Race Rock Light. The feature is between two charted "rky's."

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1014_mb/2003-279/163_1707	1769/61	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	14	0.24	261.8	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with Clarification - The charted notation "40 Rep 1984" is AWOIS#12427. Delete charted notation "40 Rep 1984". Chart soundings from present survey.**

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

44ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

7 ¼fm (12300\_1, 13006\_1, 13003\_1)

13.6m (5161\_1)

### Feature Images

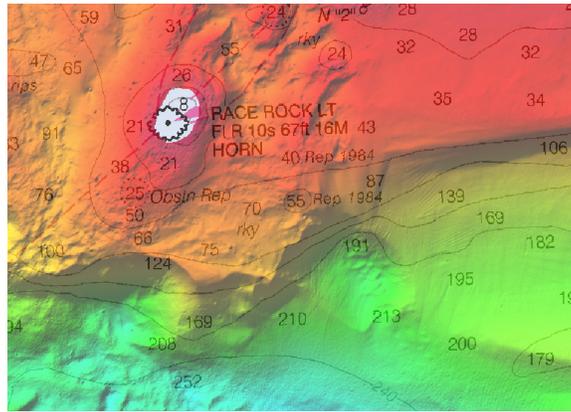


Figure 1.4.1

## 1.5) charted "55 Rep 1984"

### Survey Summary

**Survey Position:** 041° 14' 29.450" N, 72° 02' 35.808" W  
**Least Depth:** 21.24 m  
**Timestamp:** 2003-279.18:54:48.910 (10/06/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-279 / 164\_1842  
**Profile/Beam:** 4487/76  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a charted "55 Rep 1984." The feature was covered with 100% MBES and is located in the generally rocky area surrounding Race Rock Light, 150 meters NE of a charted "rky."

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1005_mb/2003-279/164_1842	4487/76	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	15	0.29	079.1	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with clarification - The charted notation "55 Rep 1984" is AWOIS#12426. Delete charted notation "55 Rep 1984". Chart soundings from present survey.**  
**Cartographically-Rounded Depth (Affected Charts):**

69ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

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

21m (5161\_1)

### Feature Images

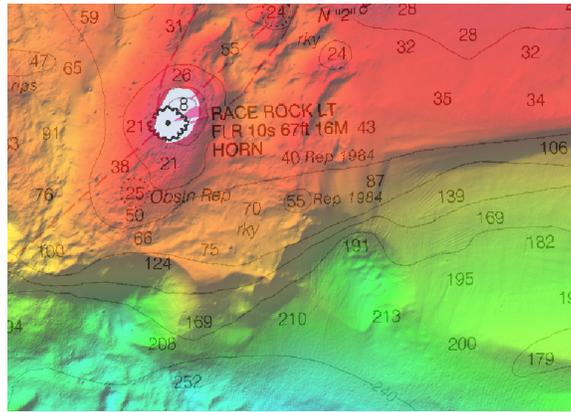


Figure 1.5.1

## 1.6) charted 'kelp'

### Survey Summary

**Survey Position:** 041° 13' 37.446" N, 72° 04' 12.916" W  
**Least Depth:** 23.06 m  
**Timestamp:** 2003-280.13:49:43.754 (10/07/2003)  
**Survey Line:** b370\_03\_h11250g / 1014\_mb / 2003-280 / 249\_1348  
**Profile/Beam:** 81/6  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

A 'kelp' is charted on chart 13205 (1:80,000), and there's also a charted 'kelp' on chart 13209 (1:40,000); however, there's no 'kelp' on the area's largest scale chart (13212 @ 1:20,000). MBES data was inconclusive as to whether or not kelp was present. Kelp was not reported by any of the boat crew.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1014_mb/2003-280/249_1348	81/6	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	7	2.59	151.2	Secondary

### Hydrographer Recommendations

Hydrographer recommends deleting 'kelp' on chart 13205 and 13209, based on the information in the remarks section. **Concur.**

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

75ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

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

23m (5161\_1)

### Feature Images

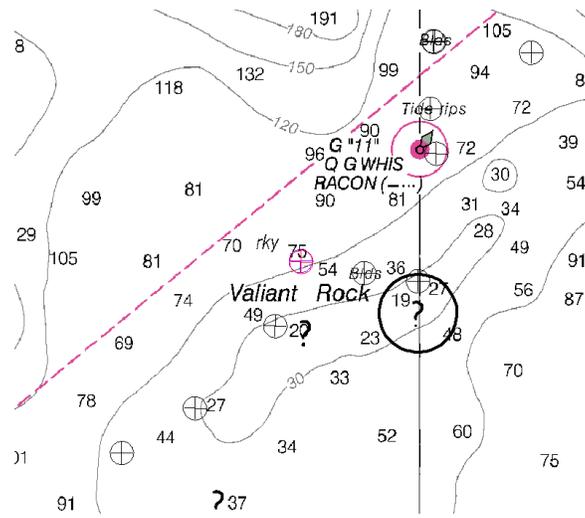


Figure 1.6.1

## 1.7) charted "78 Obstn"

### Survey Summary

**Survey Position:** 041° 15' 26.364" N, 72° 04' 16.014" W  
**Least Depth:** 24.56 m  
**Timestamp:** 2003-287.15:01:58.365 (10/14/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-287 / 002\_1454  
**Profile/Beam:** 2095/32  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a charted "78 Obstn" covered with 100% MBES. No man-made feature was observed.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1005_mb/2003-287/002_1454	2095/32	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	17	0.93	223.2	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with clarification - The chart "78 Obstn" is AWOIS#12183. Delete charted "78 Obstn". Chart soundings from present survey.**

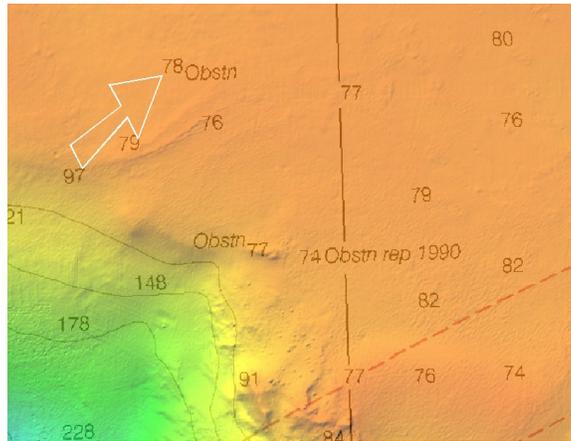
#### Cartographically-Rounded Depth (Affected Charts):

80ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

13fm (12300\_1, 13006\_1, 13003\_1)

24m (5161\_1)

### Feature Images



*Figure 1.7.1*

## 1.8) charted "73 Rep"

### Survey Summary

**Survey Position:** 041° 14' 43.684" N, 72° 00' 35.729" W  
**Least Depth:** 25.23 m  
**Timestamp:** 2003-301.19:56:00.666 (10/28/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-301 / 858\_1953  
**Profile/Beam:** 1896/71  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a charted "73 Rep" covered with 100% MBES. The feature is over a naturally occurring ridge.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1005_mb/2003-301/858_1953	1896/71	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	21	2.72	186.9	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with clarification - Delete charted "73 Rep". Chart soundings from present survey.**

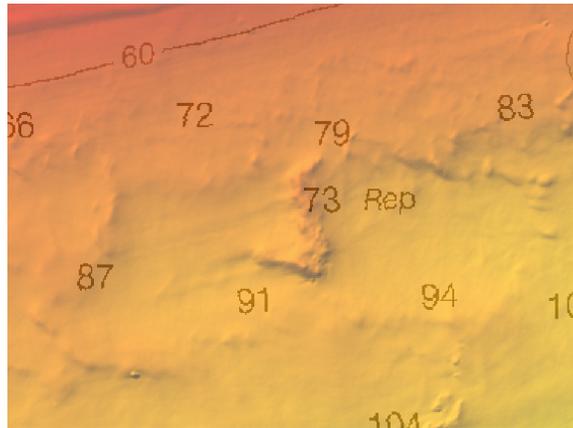
**Cartographically-Rounded Depth (Affected Charts):**

83ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

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

25m (5161\_1)

### Feature Images



*Figure 1.8.1*

## 1.9) charted "77 Obstn"

### Survey Summary

**Survey Position:** 041° 15' 12.697" N, 72° 04' 08.473" W  
**Least Depth:** 25.84 m  
**Timestamp:** 2003-287.16:19:37.078 (10/14/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-287 / 318\_1613  
**Profile/Beam:** 1905/77  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is the least depth over a charted "Obstn 77" covered with 100% MBES. No man-made feature was observed, only a natural looking ridge/mound.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1005_mb/2003-287/318_1613	1905/77	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	18	0.23	069.0	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with clarification - The charted 77 Obstn is AWOIS#12184. Delete charted 77 Obstn. Chart soundings from present survey.**

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

85ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

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

26m (5161\_1)

### Feature Images

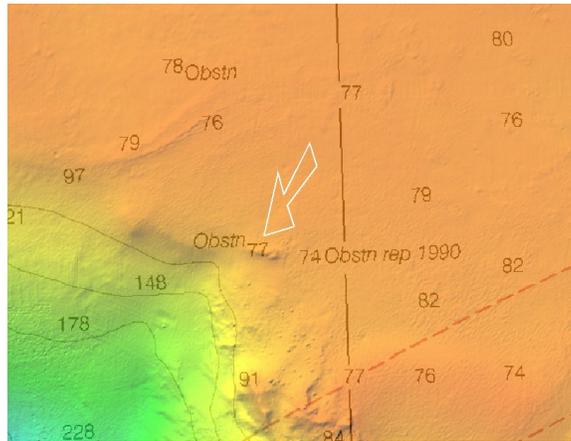


Figure 1.9.1

## 1.10) charted "74 Obstn rep 1990"

### Survey Summary

**Survey Position:** 041° 15' 11.854" N, 72° 04' 03.221" W  
**Least Depth:** 26.17 m  
**Timestamp:** 2003-287.16:19:03.783 (10/14/2003)  
**Survey Line:** b370\_03\_h11250g / 1005\_mb / 2003-287 / 318\_1613  
**Profile/Beam:** 1744/42  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the least depth over a charted "74 Obstn rep 1990" covered with 100% MBES. A small rock or two was found in the immediate area, but no man made feature.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1005_mb/2003-287/318_1613	1744/42	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	19	0.70	227.0	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings. **Concur with clarification - The charted 74 Obstn Rep 1990 is AWOIS#12185. Delete charted 74 Obstn Rep 1990. Chart soundings from present survey.**

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

86ft (13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

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

26m (5161\_1)

### Feature Images

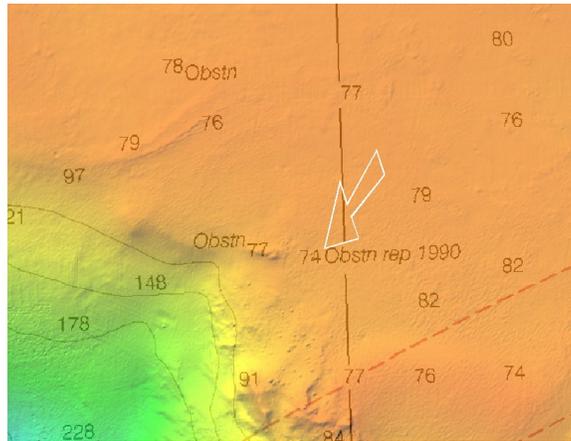


Figure 1.10.1

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## 1.11) 'bk' (chart 13211)

OPR-B370-TJ-03 - Non-AWOIS Charted Features & Notes

1 - Features from Bathymetry

### Survey Summary

**Survey Position:** 041° 15' 08.594" N, 72° 08' 09.504" W  
**Least Depth:** 79.33 m  
**Timestamp:** 2003-296.10:51:41.307 (10/23/2003)  
**Survey Line:** b370\_03\_h11250g / s222\_mb / 2003-296 / 0104\_20031023\_104525\_raw  
**Profile/Beam:** 487/42  
**Charts Affected:** 13211\_1, 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

At the current feature's location, there's a 'bk' charted on chart 13211 (1:20,000), but not on chart 13212 (also 1:20,000).

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/s222_mb/2003-296/0104_20031023_104525_raw	487/42	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	6	2.49	236.0	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting a 'bk' on chart 13212 to be consistent with other same-scale charts. **Do not concur.**

**Notation "bk" is not shown on the latest edition of chart 13211. It is recommend that the notation "bk" not be charted in this area.**

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

260ft (13211\_1, 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

43fm (12300\_1, 13006\_1, 13003\_1)

79m (5161\_1)

### Feature Images

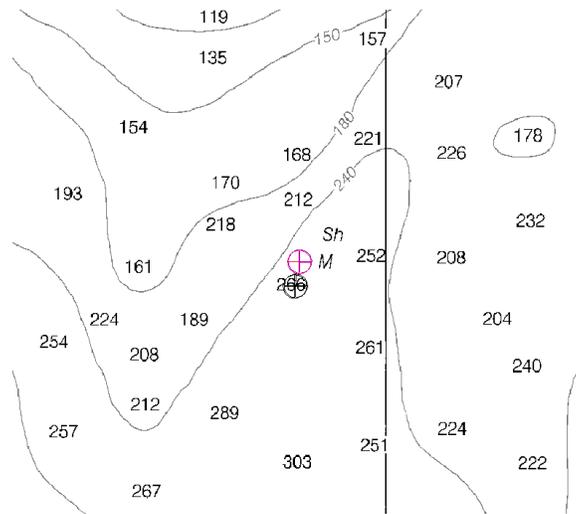


Figure 1.11.1

## 1.12) 268 versus 266

### Survey Summary

**Survey Position:** 041° 15' 06.609" N, 72° 08' 09.888" W  
**Least Depth:** 81.62 m  
**Timestamp:** 2003-296.20:16:58.123 (10/23/2003)  
**Survey Line:** b370\_03\_h11250g / s222\_mb / 2003-296 / 0671\_20031023\_201524\_raw  
**Profile/Beam:** 133/80  
**Charts Affected:** 13211\_1, 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is a charted 268-foot depth on chart 13212 (1:20,000) that disagrees with a charted 266-foot depth on chart 13211 (1:20,000) in the same position.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/s222_mb/2003-296/0671_20031023_201524_raw	133/80	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	8	2.45	054.1	Secondary

### Hydrographer Recommendations

Hydrographer recommends charting present survey soundings on all affected charts. **Concur.**

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

268ft (13211\_1, 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1)

44fm (12300\_1, 13006\_1, 13003\_1)

81m (5161\_1)

### Feature Images

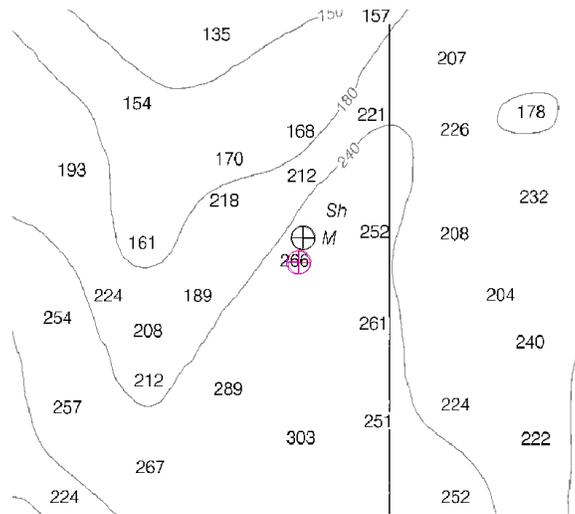


Figure 1.12.1

## **2 - Features from Imagery**

## 2.1) Charted Piles

### Survey Summary

**Survey Position:** 041° 12' 13.251" N, 72° 07' 14.724" W  
**Least Depth:** [None]  
**Timestamp:** 2004-093.18:29:10 (04/02/2004)  
**Survey Line:** b370\_03\_h11250g / 1005\_100 / 2003-304 / 052\_1710  
**Contact/Point:** 0007/1  
**Charts Affected:** 13212\_1, 12372\_1, 13209\_1, 12354\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is a side scan sonar (SSS) contact at the position of two charted visible piles. The position of the two charted piles was covered with 200% SSS and lies at the very outer edge of the MBES coverage. Piles, either visible or submerged, are not apparent in the SSS or MBES data. Also, the launch crew reported not seeing piles at the location of the charted piles.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_03_h11250g/1005_100/2003-304/052_1710	0007	0.00	000.0	Primary
B370_03_H11250G_ChartItems.txt	26	3.80	311.1	Secondary
b370_03_h11250g/1005_100/2003-304/053_1711	0001	5.55	289.6	Secondary

### Hydrographer Recommendations

Hydrographer recommends deleting the two charted visible piles. **Concur with clarification - Revise charted visible piles to submerged piles.**

### Feature Images



Figure 2.1.1

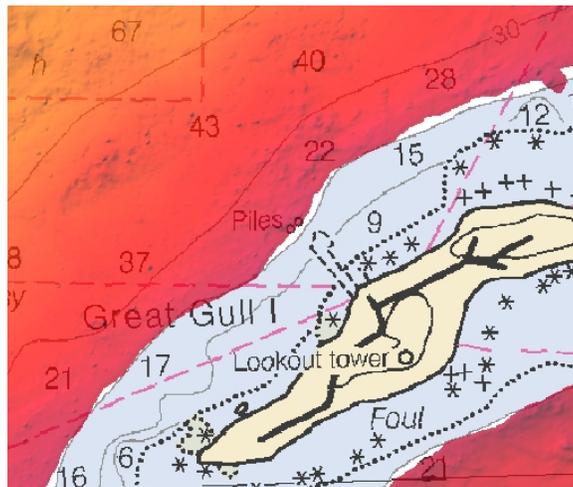


Figure 2.1.2



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: January 21, 2004

HYDROGRAPHIC BRANCH: Atlantic  
HYDROGRAPHIC PROJECT: OPR-B370-TJ-2003  
HYDROGRAPHIC SHEET: H11250

LOCALITY: The Race, Long Island Sound  
TIME PERIOD: October 6 - October 30, 2003

TIDE STATION USED: 851-0719 Silver Eel Pond, NY  
Lat. 41° 15.4'N Lon. 72° 01.8'W  
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters  
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.772 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: LIS100, LIS101, LIS102, LIS103,  
LIS104, LIS107, LIS107A, LIS107B, BIS21, BIS24, and BIS25

Refer to attachments for zoning information.

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

*Fm* 

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CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION



## **ATLANTIC HYDROGRAPHIC BRANCH EVALUATION REPORT FOR H11250 (2003)**

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. EQUIPMENT**

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

- MapInfo, version 6.5
- CARIS HIPS/SIPS 6.0
- PYDRO, version 6.4.9 HF7
- CARIS HOM 3.3

#### **B.2. PROCESSING**

BASE Editor H-cell processing consisted of generating two product surfaces from a 5-m combined surface generated from the field-submitted series of BASE surfaces: a product surface from which the sounding layer was generated and a product surface from which the skin-of-the-earth layer was generated.

The sounding layer product surface, **AHB\_H11250\_10k\_100Rad\_5res\_hor5.hns**, was created with a generalization radius of 100 meters, a resolution of 5 meters, and a defocusing factor of 5 meters. The sounding layer, **H11250\_Soundings\_10k\_100Rad\_5res\_hor5.hob**, was generated using the *Use Radius* option in BASE Editor's *Selected Sounding Wizard*. The single defined radius was set a 5 mm at a map scale of 1:10,000. Additionally, sounding features were only generated from grid cells that had a residual shoal-side uncertainty of greater than 0.2. This 5mm-at-survey-scale-density sounding set was then suppressed in HOM to mimic the existing charted-depth density of the largest scale chart in the survey area. The user defined suppression option was used with (0.0001,0.1,7).

The skin-of-the-earth product surface, **AHB\_H11250\_20000k\_500Rad\_10res\_hor5.hns**, was generated with a generalization radius of 500 meters, a resolution of 10 meters, and a horizontal defocusing factor of 5 meters (although, as the office processor later realized, the horizontal defocusing factor is only effective if it is equal to or greater than the resolution). The BASE-Editor-produced skin-of-the-earth layer, **H11250\_Contours.hob**, was generated using the contour interval file **H11250\_contours.txt**. The BASE Editor-produced contour/depth area layer was modified, in HOM, in certain places to maintain cartographic clarity.

### Layer Use

100	Soundings
200	Skin of the Earth
300	Non-bathy Features (wrecks, rocks, and obstructions)
600	Meta Objects

CARIS Hydrographic Object Manger (HOM) was used to generate two S-57-based files (.000), US511250\_CU.000 and US511250\_SS.000.

### **Junctions**

There are no junction surveys to the north, south, east, or west. Present survey depths are in harmony with the charted hydrography to the north, south, east, and west.

## **C. VERTICAL AND HORIZONTAL CONTROL**

### **Vertical Control**

Final vertical correction processing was completed using zoning and water level data provided by N/OPSI CO-OPS.

### **Horizontal Control**

There was no horizontal control for this survey. Data acquisition relied on GPS and Coast Guard differential corrector beacons.

## **D. RESULTS AND RECOMMENDATIONS**

### **D.1. COMPARISON WITH CHARTS 12300 (44<sup>th</sup> Edition Jul. 01/04)**

**Corrected through NM Jul. 03/04**

**Corrected through LNM Jun. 15/04**

### **12354 (41<sup>st</sup> Edition NM Apr. 24/04)**

**Corrected through NM Apr. 24/04**

**Corrected through LNM Apr. 13/04**

### **12372 (33<sup>rd</sup> Edition, Aug. 01/04)**

**Corrected through NM Aug. 21/04**

**Corrected through LNM Aug. 03/04**

### **13205 (37<sup>th</sup> Edition, Sep. 01/04)**

**Corrected through NM Sep. 11/04**

Corrected through LNM Aug. 31/04  
13209 (24<sup>th</sup> Edition, Jun. 01/04)  
 Corrected through NM Jun. 26/04  
 Corrected through LNM Jun. 08/04  
13211 (14<sup>th</sup> Edition, Sep. 01/04)  
 Corrected through NM Sep. 11/04  
 Corrected through LNM Aug. 31/04  
13212 (36<sup>th</sup> Edition, Mar. 01/04)  
 Corrected through NM Mar. 06/04  
 Corrected through LNM Feb. 24/04  
13214 (27<sup>th</sup> Edition, Jun. 01/02)  
 Corrected through NM Jun. 08/02  
 Corrected through LNM May 28/02

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section D.1 of the Descriptive Report. Attention is directed to the following:

Seventeen uncharted dangerous rocks were noted during office processing and are listed below.

<u>Depth (ft)</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
24	41° 15' 08.44"	72° 02' 33.70"
76	41° 14' 38.71"	72° 03' 40.39"
11	41° 12' 23.86"	72° 06' 44.53"
23	41° 11' 38.98"	72° 07' 57.67"
12	41° 12' 11.70"	72° 07' 17.44"
20	41° 12' 01.05"	72° 06' 51.78"
61	41° 12' 34.44"	72° 07' 10.59"
61	41° 12' 17.49"	72° 07' 35.63"
22	41° 11' 50.00"	72° 07' 59.73"
34	41° 12' 30.51"	72° 05' 51.85"
14	41° 11' 54.69"	72° 07' 41.41"
7	41° 12' 08.75"	72° 06' 48.05"
12	41° 11' 51.28"	72° 07' 43.51"
15	41° 11' 42.94"	72° 08' 02.38"
9	41° 11' 51.94"	72° 07' 38.30"
11	41° 12' 02.99"	72° 07' 30.45"
26	41° 13' 35.86"	72° 04' 00.09"

It is recommended that these features be charted as shown on the present survey.

The present survey is adequate to supersede the charted hydrography within the common area.

## **Dangers to Navigation**

One Danger to Navigation report was submitted to the Marine Chart Division, N/CS3x1, Silver Spring, Maryland. A copy of this report is appended to the Descriptive Report. The following should be noted:

The dangers to navigation submitted by the hydrographer are presently shown on the continual maintenance raster updated to Nov. 30/02. It is recommended that these features and soundings be retained as charted.

Danger to Navigation items #9 and #10 were reexamined during office processing and are not considered dangers to navigation. Surrounding depths in the immediate vicinity are equal or shoaler. It is recommended that these soundings not be charted. It is recommended that present survey soundings be charted as shown on the present survey.

## **Comparison with 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.

## **Adequacy of Survey**

The 5 meter BASE surface submitted by the field unit shows holidays in two locations:

<u>Size</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
40m X 100m	41° 12' 40.50"	72° 06' 57.35"
35m X 82m	41° 11' 51.53"	72° 07' 33.49"

This is an adequate hydrographic/side scan sonar/multibeam survey. No additional field work is recommended.

## **Miscellaneous**

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Hydrographic Surveys Division (HSD), Silver Spring, Maryland. Survey data was compiled using CARIS Hydrographic Object Manager (HOM).

*Nicholas A. Forfinski*

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**Nicholas A. Forfinski**  
Physical Scientist  
Verification of Field Data  
Evaluation and Analysis



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE, Office of Coast Survey  
Atlantic Hydrographic Branch  
439 W. York Street  
Norfolk, VA 23510-1114

October 13, 2006

MEMORANDUM FOR: The Record

FROM: CDR P. Tod Schattgen, NOAA  
Chief, Atlantic Hydrographic Branch

SUBJECT: Addendum to H11250

The following documentation on two features found during the AHB evaluation process, were omitted from the evaluation report for survey H11250. These two features appear in the H-Cell and are not supported by the Descriptive Report or Evaluation and Analysis reports.



**Registry Number:** H11250  
**State:** New York Connecticut  
**Locality:** Long Island Sound  
**Sub-locality:** The Race  
**Project Number:** OPR-B370-TJ-03  
**Survey Date:** 10/06/2003

### Charts Affected

Number	Version	Date	Scale
13212	36th Ed.	03/01/04	1:20000
13214	27th Ed.	06/01/02	1:20000
12372	32nd Ed.	10/01/03	1:40000
13209	23rd Ed.	10/30/99	1:40000
13205	36th Ed.	04/14/01	1:80000
12300	43rd Ed.	03/01/03	1:400000
13006	31st Ed.	06/01/03	1:675000
5161	13th Ed.	10/01/03	1:1058400
13003	47th Ed.	06/01/03	1:1200000

### Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	16 Rk	Rock	5.06 m	041:14:51.255 N	72:01:39.299 W	---

## 1.1) 16 Rk

### Survey Summary

**Survey Position:** 041:14:51.255 N, 72:01:39.299 W  
**Least Depth:** 5.06 m  
**Timestamp:** 2003-279.19:35:36.084 (10/06/2003)  
**Survey Line:** h11250 / 1014\_mb / 2003-279 / 603\_1927  
**Profile/Beam:** 2137/235  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

[None]

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11250/1014_mb/2003-279/603_1927	2137/235	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

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

16ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)  
 2 ¾fm (12300\_1, 13006\_1, 13003\_1)  
 5.0m (5161\_1)

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Geo object 2:** Underwater rock / awash rock (UWTROC)  
**Attributes:** VALSOU - 5.06 m

### Office Notes

Chart 16 Rk with danger curve.

# 59-ft Obstruction

**Registry Number:** H11250  
**State:** New York Connecticut  
**Locality:** Long Island Sound  
**Sub-locality:** The Race  
**Project Number:** OPR-B370-TJ-03  
**Survey Date:** 10/09/2003

## Charts Affected

Number	Version	Date	Scale
13212	36th Ed.	03/01/04	1:20000
13214	27th Ed.	06/01/02	1:20000
12372	32nd Ed.	10/01/03	1:40000
13209	23rd Ed.	10/30/99	1:40000
13205	36th Ed.	04/14/01	1:80000
12300	43rd Ed.	03/01/03	1:400000
13006	31st Ed.	06/01/03	1:675000
5161	13th Ed.	10/01/03	1:1058400
13003	47th Ed.	06/01/03	1:1200000

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	59 Obstn	Obstruction	18.03 m	041:15:26.837 N	72:02:37.152 W	---

## 1.1) 59 Obstn

### Survey Summary

**Survey Position:** 041:15:26.837 N, 72:02:37.152 W  
**Least Depth:** 18.03 m  
**Timestamp:** 2003-282.17:16:34.694 (10/09/2003)  
**Survey Line:** h11250 / 1014\_mb / 2003-282 / 269\_1715  
**Profile/Beam:** 63/240  
**Charts Affected:** 13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

[None]

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11250/1014_mb/2003-282/269_1715	63/240	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

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

59ft (13212\_1, 13214\_1, 12372\_1, 13209\_1, 13205\_1)

9 ¾fm (12300\_1, 13006\_1, 13003\_1)

18.0m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** VALSOU - 18.03 m  
**Geo object 2:** Sounding (SOUNDG)

### Office Notes

This Obstn was found during office processing. Chart 59 Obstn.

APPROVAL SHEET  
H11250

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. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

  
Nicholas A. Forfinski  
Physical Scientist  
Atlantic Hydrographic Branch

Date: 7/31/06

I have reviewed the ENC exchange file (\*.000), accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved:   
P. Tod Schattgen  
Commander, NOAA  
Chief, Atlantic Hydrographic Branch

Date: 7/31/2006