

H11318

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

*Type of Survey* BASIC HYDROGRAPHIC

*Field No.*

*Registry No.* H11318

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### LOCALITY

*State* MASSACHUSSETTS

*General Locality* BUZZARDS BAY

*Locality* 4 NM EAST OF WEST ISLAND

2004

CHIEF OF PARTY  
TODD A. HAUPT, LT/NOAA

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DATE

**H11318**

**HYDROGRAPHIC TITLE SHEET**

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

FIELD No.

**State** Massachussetts

**General Locality** Buzzards Bay

**Sub-Locality** 4 NM East of West Island

**Scale** 1:10000 **Date of Survey** 2/9/04 – 3/28/04

**Instructions dated** March 20, 2004 **Project No.** S-B912-RU

**Vessel** NOAA Ship RUDE s590  
LT Todd Haupt, NOAA

**Chief of Party** LCDR Schattgen, LT Haupt, LTjg Yoos, ENS Edmundson, SST Kitt, ST Stephens

**Surveyed by** \_\_\_\_\_

**Soundings by echo sounder, hand lead, pole** ODOM Echotrak DE3200 Mk II, Reson Seabat 8125  
RUDE Personnel

**Graphic record scaled by** \_\_\_\_\_

**Graphic record checked by** RUDE Personnel **Automated Plot** N/A  
*Hewlett Packard Design Jet 2500 CP (Office)*

**Verification by** Atlantic Hydrographic Branch Personnel

**Soundings in** fathoms **feet at MLW MLLW** feet at MLLW

**REMARKS:** All times are in UTC  
Soundings have been corrected with verified tides

Projection in UTM zone 19

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

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## **DESCRIPTIVE REPORT**

To accompany

### **HYDROGRAPHIC SURVEY H11318**

Scale of Survey: 1:10000  
Year(s) of Survey: 2004-2004  
NOAA Ship RUDE  
LT Todd A Haupt, Commanding Officer

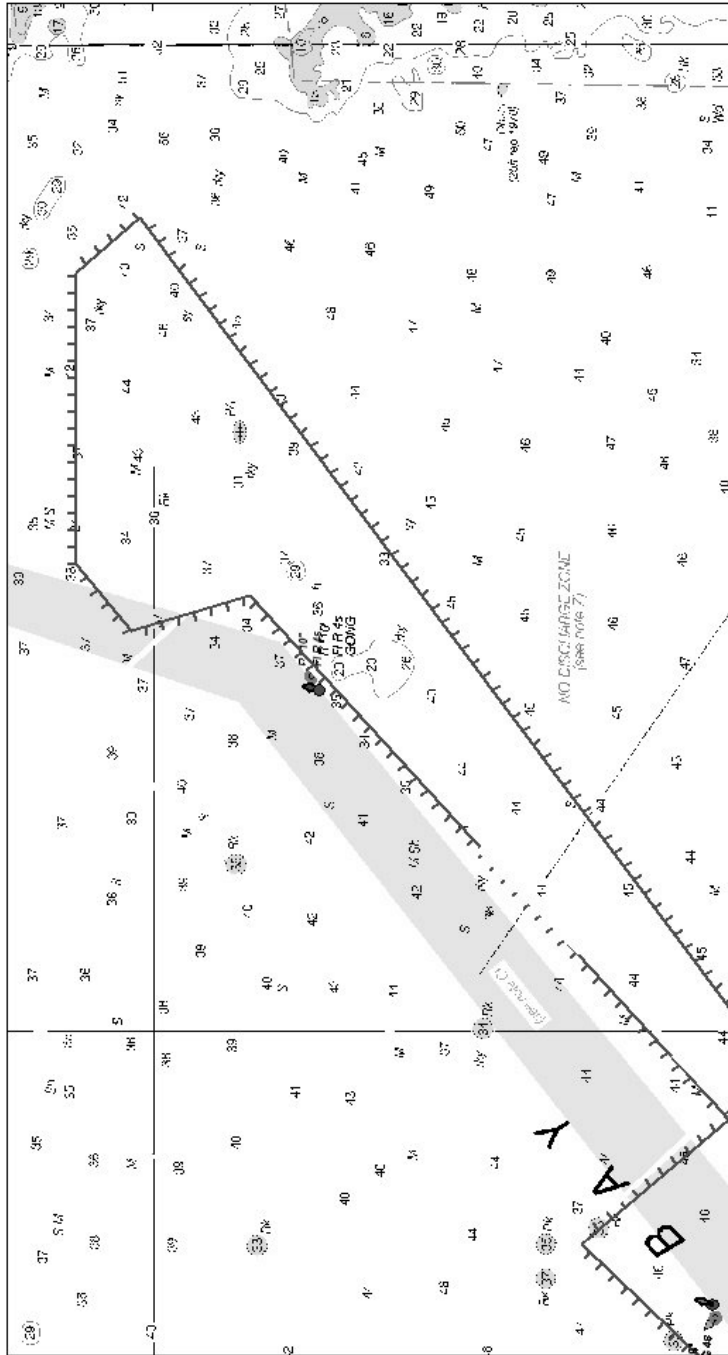
#### **A. Area Surveyed**

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project S-B912-RU updated March 30, 2004.

This project is being conducted to provide side scan sonar and/or multibeam data in support of National Ocean Service (NOS) nautical charts, as a response to requests from the Northeast Marine Pilots. This project was conducted in accordance with NOS requirements for side scan sonar and multibeam data acquisition and processing.


Full bottom coverage, consisting of 100% side scan sonar and 100% multibeam sonar coverage was achieved for this entire survey.

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



**Chartlet 1 of 1** Red border denotes Survey Limits

This chartlet has been corrected through  
 Notice to Mariners dated Sep 1, 2004  
 NOT FOR NAVIGATION.

 <p><b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE</b></p>	<p>Project: S-8912-RU-04          Survey: H11318          State: MA          Locality: Buzzards Bay          Sub-locality: 4 NM East of West Island          Survey Scale: 1:10,000</p>	<p>Sounding Units: Meters          Sounding Datum: MLLW          Horizontal Datum: MAD 83          Projection: UTM 19          Central Meridian: 069° 00 00          Scale Factor: 0.9996</p>	<p><b>NOAA Ship RUDE</b>  <b>LT Todd A. Haupt, NOAA</b>  <b>Commanding</b>          March 25 to          April 6, 2004</p>
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## **B. DATA Acquisition and Processing Equipment** *See also the Evaluation Report*

### **B.1 Equipment**

Data were acquired by NOAA Ship RUDE (S-590)

The RUDE is 90 feet in length with a 22-foot beam and 7-foot draft

Vertical-beam echo sounding data were acquired on RUDE with an Odom Echotrac dual-beam echo sounder (24 and 200 kHz). RUDE vertical-beam data was used in conjunction with Side Scan Sonar to ensonify objects on the bottom not apparent at side scan nadir and also for crossline checks with the mainscheme lines. No vertical beam data were acquired during multibeam operations. All data is included in the final data set.

RUDE acquired all side scan sonar data using a Klein 5500 towfish. Side scan sonar data was recorded digitally on RUDE using Triton ISIS software and archived in Extended Triton Format.

Single frequency (455 kHz) multi-beam data were acquired with a Reson SeaBat 8125 shallow water sonar system. Positioning and attitude on the RUDE were determined with a TSS POS/MV and utilizing a Trimble DSM-212L DGPS receiver.

Sound velocity data were acquired using a Sea-Bird SBE 19 SEACAT Conductivity, Temperature and Depth (CTD) Profiler.

The RUDE encountered random timing issues throughout the project. This timing issue was reconfigured in a different project. Data acquisition and Processing Report (DAPR)\* for 2002, 2003, and 2004 has been submitted. Please refer to the 2004 DAPR for detailed equipment and vessel configuration.

*\*Data filed with original field records*

## **B.2 QUALITY CONTROL**

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

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. A good check consisted of distinguishing contacts, i.e. lobster pots, drag scours, cable lines, or sand waves across the entire range of the side scan trace. Under conditions of questionable data quality due to high refraction or surface noise, these confidence checks were conducted as often as possible. SSS data acquisition was suspended when targets approximately 1 meter in characteristic size could not be resolved to the edge of the range scale in use.

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

There were no major faults with the shallow water multibeam system which affected data integrity in this survey. Confidence checks were provided by comparing nadir sounding data to the VBES and ensonification of known side scan contacts. Please refer to the project's DAPR\* for detailed discussion of SWMB system calibrations, patch test, data acquisition, and data processing.

### **Crosslines**

The total distance of crosslines is 8.7 linear nautical miles which equates to 05.3% of total mainscheme lines. Crossline to mainscheme line comparison was conducted using CARIS GIS software. The second method used was comparing a single crossline grid and mainscheme grid. The comparisons are adequate, with the majority of differences being one foot or less. The result of this test is in Separates V.\*

Junctions *See also the Evaluation Report*

Survey H11318 junctions with survey H11319 (2004) to the south. The soundings in the present survey were in general agreement with those in survey H11318. Their soundings differ no more than 1 foot, please view. *Concur*

..\Pydro\_Proj\B-912\_Buzz\_bay\SheetA\Plots\Junction\A\_B\_Junction. WOR

## **B.3 CORRECTIONS TO ECHO SOUNDINGS**

All methods or instruments were implemented as described in the Correction to Echo Sounding section of the DAPR\* for this project. A table detailing all sound velocity profiles 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). All soundings are referenced to MLLW. The operating National Water Level Observation Network (NWLON) station at Newport, RI (845-2660) served as datum control for the survey area. All soundings were reduced to Mean Lower Low Water with verified tides. Opening and closing levels were performed by CO-OPS. A Request for Smooth Tides letter was sent to N/OPS1 September 24, 2004 (Appendix IV) \*. Verified tides from the N/OPS1 CO-OPS website were downloaded and applied to all soundings for this sheet. Tide corrections were applied to the soundings using CARIS HIPS and SIPS v5.3. \* *Approved tides and zones were reapplied in CARIS, during office processing.*

### **HORIZONTAL CONTROL** *See also the Evaluation Report*

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 19.

Sounding positional control was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon stations. The primary DGPS beacon used for this survey was Acushnet, MA. When the primary signal was weak or disabled, the secondary DGPS beacon (Portsmouth, NH) was used. No horizontal control stations were established for this survey.

Horizontal dilution of precision (HDOP) was monitored daily. Data were re-acquired if the HDOP value exceeded 2.5. The TSS POS/MV positioning system was also used to monitor the accuracy of the ship's position and orientation. Data were re-acquired if POS M/V's estimated position accuracy exceeded 4 m. Refer to section A.3 of the 2004 field season DAPR for more details regarding RUDE's POS M/V settings and operation.

## **D. Results and Recommendations** *See also the Evaluation Report*

### **D.1 Chart Comparison**

Charts Affected: All or parts of the following NOAA nautical charts are contained within the limits of H11318:

<b>Chart Number</b>	<b>Edition Date</b>	<b>Scale</b>
13218	10 Jun 2004	1:80000
13221	01 Dec 2003	1:40000
13229	01 Jan 2004	1:40000
13230	01 Dec 2003	1:40000
13232	30 Jun 2003	1:20000
13233	14 Apr 2001	1:40000



United States Coast Guard Notice to Mariners and Local Notice to Mariners corrections were applied through 01 Sep 2004. *Concur*

Current survey soundings and features were compared to charted depths and features on NOAA charts 13218. *Concur*

The hydrographer recommends that the current multibeam soundings should supersede all previous charted depths. *Concur*

## **D.2 Additional Results**

### **Item Investigation**

There was one (1) AWOIS #12263 assigned to this sheet. In this project 100 percent multibeam was used to survey. All significant contacts from the Side Scan Sonar survey were investigated. There were 11 uncharted items, one charted item, and one AWIOS item to be submitted in this descriptive report. Please refer to appendix VI\*\* for the AWOIS information and Separates I\*\*I for all the investigated items to be submitted. There were no Danger to Navigation Reports (DTONS) submitted for this survey. *Concur*

### **General Description of Surveyed Area and Sounding Comparison**

H11318 covers an area approximately 2.72 square nautical miles from 1.5 nautical miles east of red buoy 10 in Buzzards Bay to 0.70 nautical miles southeast green buoy 9. The bottom is quite uniform in various areas and rocky in some areas. Red “10” buoy was relocated by the USCG. This buoy relocation can be found on Local Notice to Mariners #25/2004 for District 1. On this survey, an uncharted trench was visible on the multibeam and side scan data. The trench is visible on the western end and cuts through of the survey area in a southeast – northwest direction. *Concur* For a complete list of uncharted features, please view ..\Pydro\_Proj\B-912\_Buzz\_bay\SheetA \Descriptive Report \ DR Body\ H11318\_DR.pdf and ..\Pydro\_Proj\B-912\_Buzz\_bay\SheetA \PSS\H11318.pss\*

### **Shoreline**

Shoreline investigation was not required.

### **Bottom Samples**

Bottom sediment samples were collected at five sites within the survey area. All the bottom sediment samples were mud in various forms. The hydrographer recommends updating the charts with the given characteristics from the bottom samples is Appendix V \*, Supplemental Survey Records and Correspondence.

*\*Data filed with original field records*

*\*\* Data appended to this report.*

# H11318 PYDRO FEATURES REPORT

**Registry Number:** H11318  
**State:** MA  
**Locality:** Buzzards Bay  
**Sub-locality:** 4 NM East of West Island  
**Project Number:** S-B912-RU  
**Survey Dates:** 03/25/2004 - 04/05/2004

## Charts Affected

Number	Version	Date	Scale
13229	28th Ed.	01/01/2004	1:40000
13230	47th Ed.	12/01/2003	1:40000
13218	38th Ed.	03/10/2001	1:80000
12300	43rd Ed.	03/01/2003	1:400000
13200	33rd Ed.	01/19/2002	1:400000
13009	30th Ed.	08/01/2002	1:500000
13006	31st Ed.	06/01/2003	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	47th Ed.	06/01/2003	1:1200000

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	30 ft depth	Shoal	9.12 m	41° 34' 10.428" N	070° 43' 08.541" W	---
1.2	41 ft Wreck	Wreck	12.60 m	41° 34' 39.420" N	070° 41' 58.000" W	---
1.3	33 ft depth	Shoal	9.98 m	41° 35' 11.363" N	070° 42' 24.588" W	---
2.1	37 foot depth	Shoal	11.37 m	41° 35' 01.608" N	070° 41' 12.494" W	---
2.2	41 ft depth	Shoal	12.67 m	41° 34' 45.989" N	070° 41' 36.785" W	---
2.3	35 ft rock	Rock	10.74 m	41° 34' 25.445" N	070° 42' 10.937" W	---
2.4	36 ft depth	Shoal	11.08 m	41° 34' 33.889" N	070° 42' 09.602" W	---
2.5	36 ft depth	Shoal	11.14 m	41° 35' 13.410" N	070° 41' 25.099" W	---
2.6	40 ft rock	Rock	12.37 m	41° 32' 53.984" N	070° 45' 00.482" W	---
2.7	30 ft depth	Shoal	9.35 m	41° 34' 40.179" N	070° 42' 13.401" W	---

2.8	27 ft rock	Rock	8.38 m	41° 34' 07.314" N	070° 43' 13.382" W	---
2.9	34 ft depth	Shoal	10.30 m	41° 34' 04.541" N	070° 43' 32.599" W	---
2.10	30 ft rock	Rock	9.21 m	41° 35' 02.558" N	070° 42' 24.910" W	---
2.11	28 ft depth	Shoal	8.63 m	41° 34' 07.464" N	070° 43' 07.331" W	---
2.12	29 ft depth	Shoal	9.06 m	41° 34' 27.541" N	070° 42' 40.311" W	---
2.13	30 ft depth	Shoal	9.18 m	41° 34' 16.155" N	070° 43' 09.240" W	---
2.14	M	Bottom Sample	11.92 m	41° 33' 01.375" N	070° 44' 50.080" W	---
2.15	M	Checked buoy	11.91 m	41° 33' 40.700" N	070° 43' 39.951" W	---
2.16	M	Bottom Sample	9.58 m	41° 34' 21.763" N	070° 42' 40.642" W	---
2.17	M	Bottom Sample	11.35 m	41° 35' 05.121" N	070° 41' 14.527" W	---

# **1 - Charted Features**

## 1.1) 30 ft depth

### Survey Summary

**Survey Position:** 41° 34' 10.428" N, 070° 43' 08.541" W  
**Least Depth:** 9.12 m  
**Timestamp:** 2004-086.01:25:06.158 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 823\_0111  
**Profile/Beam:** 8390/134  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

30ft rk charted as 23ft snd

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/823_0111	8390/134	0.00	000.0	Primary
ChartGPs - Digitized	1	2.13	175.0	Secondary (grouped)

### Hydrographer Recommendations

Delete charted 23ft sounding and redraw local 30ft contour according to current bathymetry

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

30ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)  
 5fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)  
 9.1m (5161\_1)

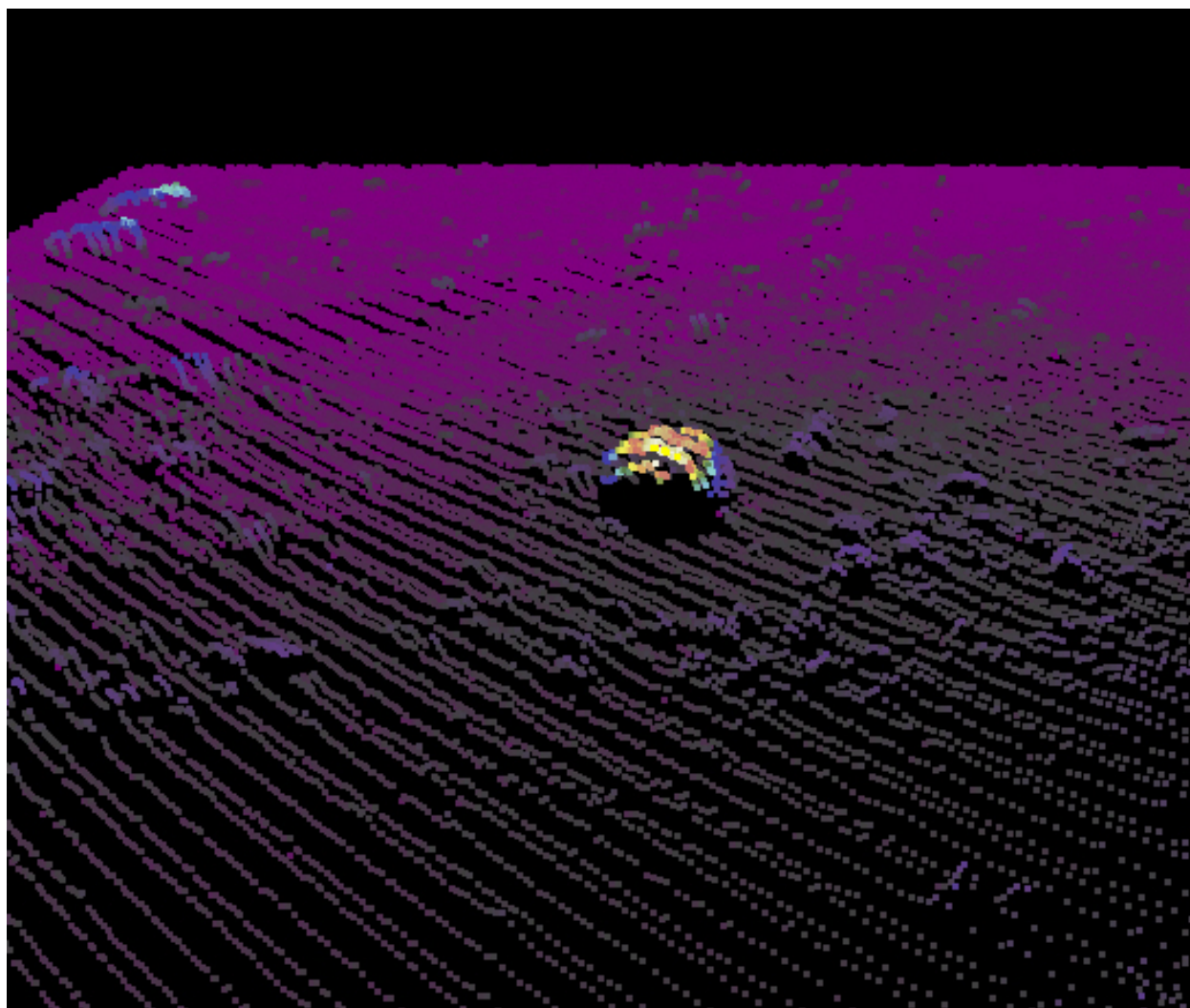
### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** EXPSOU - 1:within the range of depth of the surrounding depth area  
 INFORM - 30ft rk charted as 23ft snd  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam

## Office Notes

Concur, delete charted 23 foot depth and update area with present survey data.

## Feature Images



*Figure 1.1.1*

## 1.2) 41 ft Wreck

### Survey Summary

**Survey Position:** 41° 34' 39.420" N, 070° 41' 58.000" W  
**Least Depth:** 12.60 m  
**Timestamp:** 2004-096.19:39:19.357 (04/05/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-096 / 523\_1938  
**Profile/Beam:** 319/154  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

AWOIS 12263 located

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-096/523_1938	319/154	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted dangerous wreck, depth unknown symbol with associated PA annotation. Chart as 41ft sunken wreck, non-dangerous to surface navigation. Update AWOIS database accordingly.

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

41ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)  
 6 <sup>3</sup>/<sub>4</sub>fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)  
 12.6m (5161\_1)

### S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
 CONVIS - 2:not visual conspicuous  
 INFORM - 41 foot wreck  
 TECSOU - 3:found by multi-beam  
 VALSOU - 12.60 m



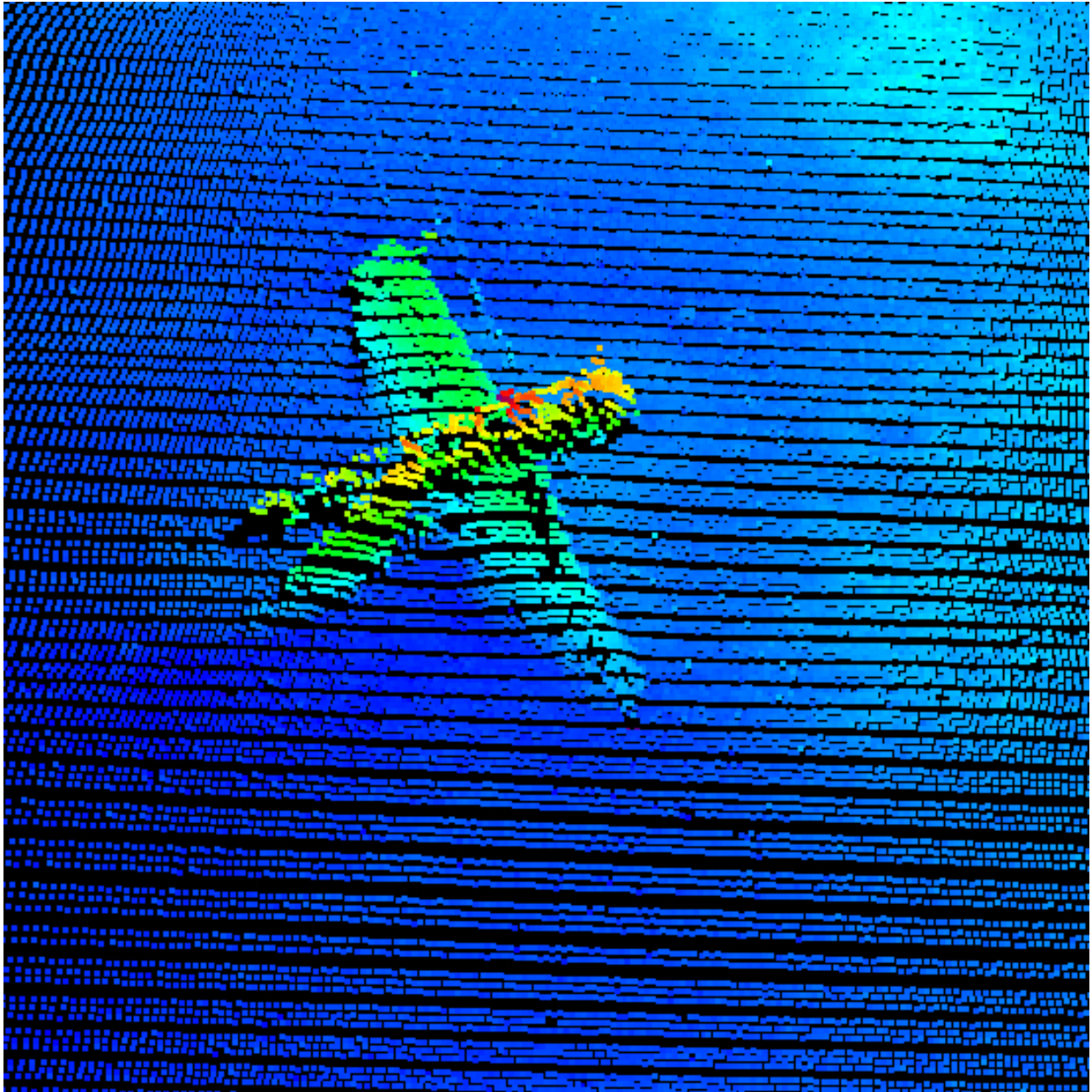
VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Do not concur. Chart a 41 foot wreck with a danger curve, and delete the dangerous sunken wreck, PA from chart.

## Feature Images



*Figure 1.2.1*

### 1.3) 32 ft depth

#### Survey Summary

**Survey Position:** 41° 35' 11.363" N, 070° 42' 24.588" W  
**Least Depth:** 9.98 m  
**Timestamp:** 2004-089.23:02:22.142 (03/29/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-089 / 712\_2258  
**Profile/Beam:** 2159/227  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rk outcrop w/ least depth of 32 ft

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-089/712_2258	2159/227	0.00	000.0	Primary
h11318/ru00_sss/2004-090/117_2016	0001	1.72	097.7	Secondary

#### Hydrographer Recommendations

Chart as 32 ft snd

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

32ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)

5 ½fm (13200\_1, 13009\_1, 13006\_1, 13003\_1)

10.0m (5161\_1)

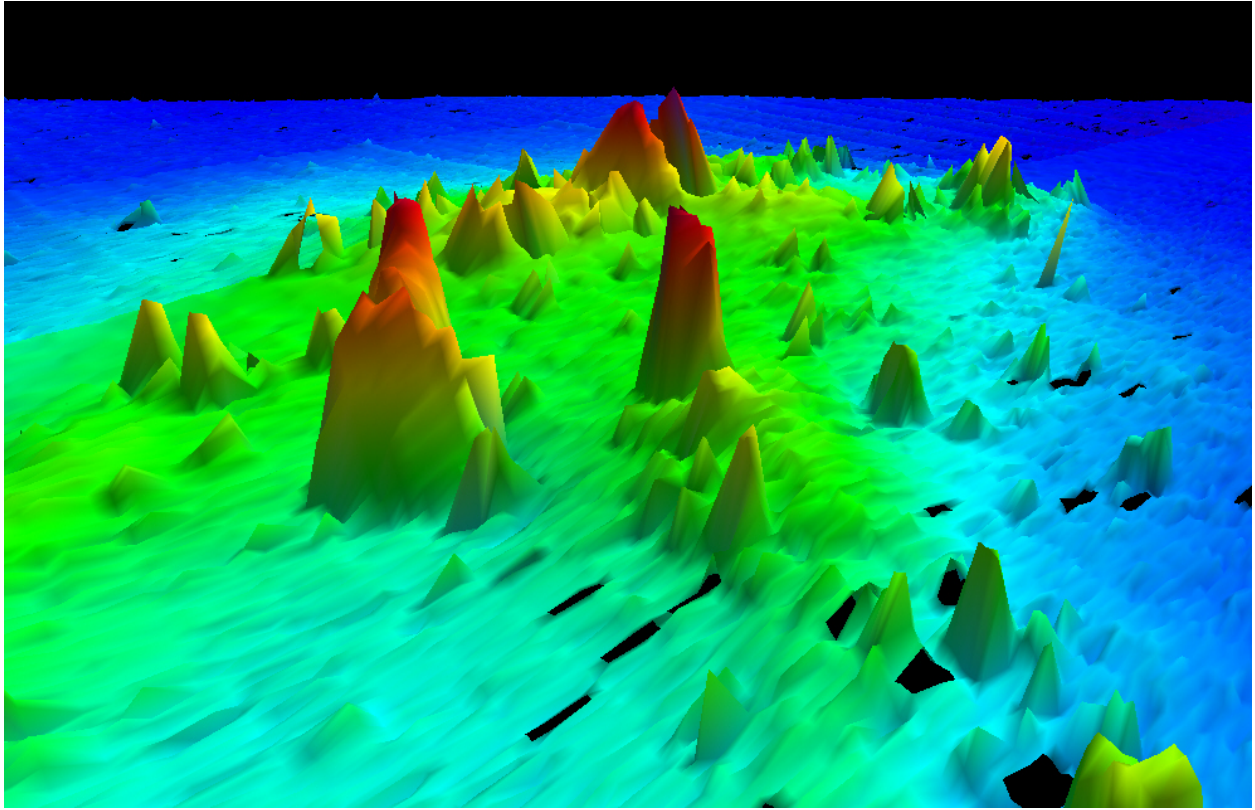
#### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** EXPSON - 2:shoaler than range of depth of the surrounding depth area  
 INFORM - Rk outcrop w/ least depth of 32 ft  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam

## Office Notes

Concur chart a 32 ft depth.

## Feature Images



*Figure 1.3.1*

## **2 - New Features**

## 2.1) 37 foot depth

### Survey Summary

**Survey Position:** 41° 35' 01.608" N, 070° 41' 12.494" W  
**Least Depth:** 11.37 m  
**Timestamp:** 2004-086.12:12:17.038 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 803\_1210  
**Profile/Beam:** 1089/228  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

pair of rks w/ least depth of 37 ft no danger to nav This contact is significant by NOAA Hydro Specs, but would add no value to the mariner and therefore does not warrant charting.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/803_1210	1089/228	0.00	000.0	Primary
h11318/ru00_sss/2004-090/101_1422	0001	5.48	235.2	Secondary
h11318/ru00_sss/2004-090/100_1449	0002	19.72	314.5	Secondary (grouped)

### Hydrographer Recommendations

#### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** QUASOU - 1:depth known  
 TECSOU - 1:found by echo-sounder

### Office Notes

Chart a 37' snd.

## 2.2) 41 ft depth

### Survey Summary

**Survey Position:** 41° 34' 45.989" N, 070° 41' 36.785" W  
**Least Depth:** 12.67 m  
**Timestamp:** 2004-096.23:54:23.384 (04/05/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-096 / 003\_2348  
**Profile/Beam:** 3562/4  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

rk

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-096/003_2348	3562/4	0.00	000.0	Primary
h11318/ru00_sss/2004-090/101_1422	0002	8.34	182.8	Secondary

### Hydrographer Recommendations

chart as 41 ft snd

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

41ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)  
 6 ¾fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)  
 12.6m (5161\_1)

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** EXPSOU - 2:shoaler than range of depth of the surrounding depth area  
 INFORM - big rock  
 QUASOU - 1:depth known  
 STATUS - 1:permanent  
 TECSOU - 3:found by multi-beam

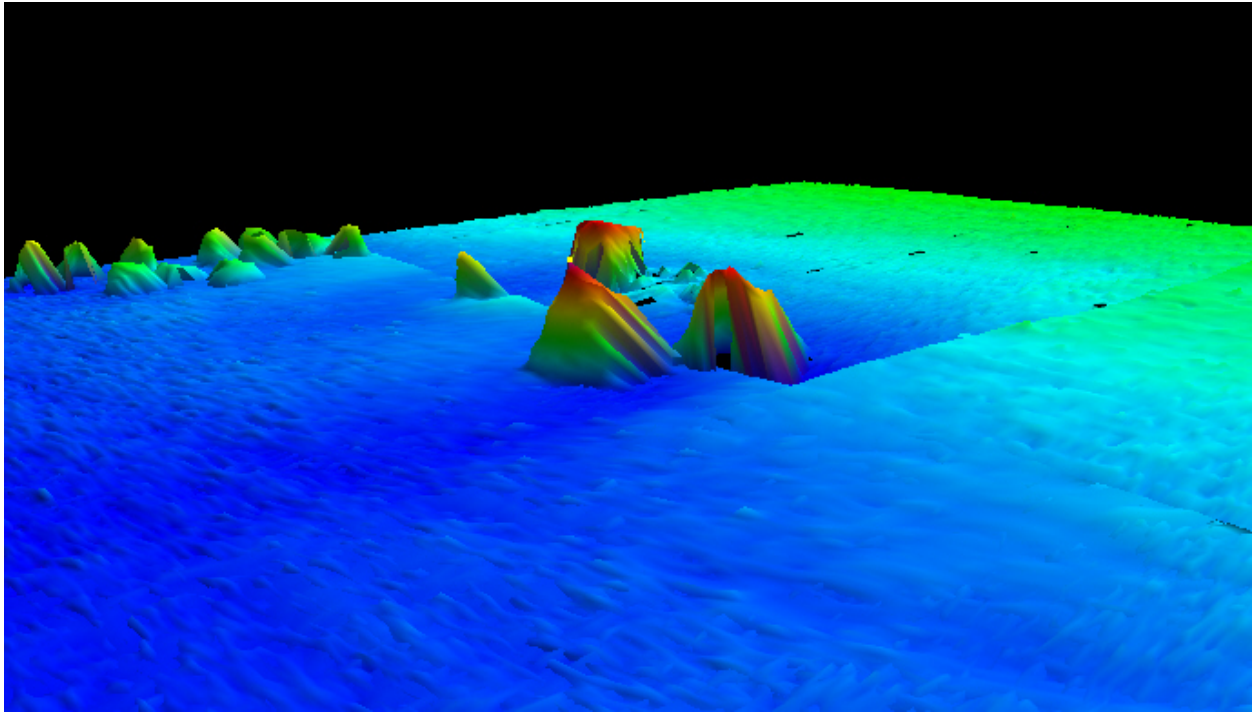


VERDAT - 12:Mean lower low water

## Office Notes

Concur with clarification, add a 41 foot depth.

## Feature Images



*Figure 2.2.1*

## 2.3) 35 ft rock

### Survey Summary

**Survey Position:** 41° 34' 25.445" N, 070° 42' 10.937" W  
**Least Depth:** 10.74 m  
**Timestamp:** 2004-096.23:30:45.052 (04/05/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-096 / 005\_2323  
**Profile/Beam:** 4127/22  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

big rk

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-096/005_2323	4127/22	0.00	000.0	Primary
h11318/ru00_sss/2004-090/101_1423	0001	7.03	215.1	Secondary

### Hydrographer Recommendations

chart as 35 ft snd

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

35ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)  
 5 ¾fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)  
 10.7m (5161\_1)

### S-57 Data

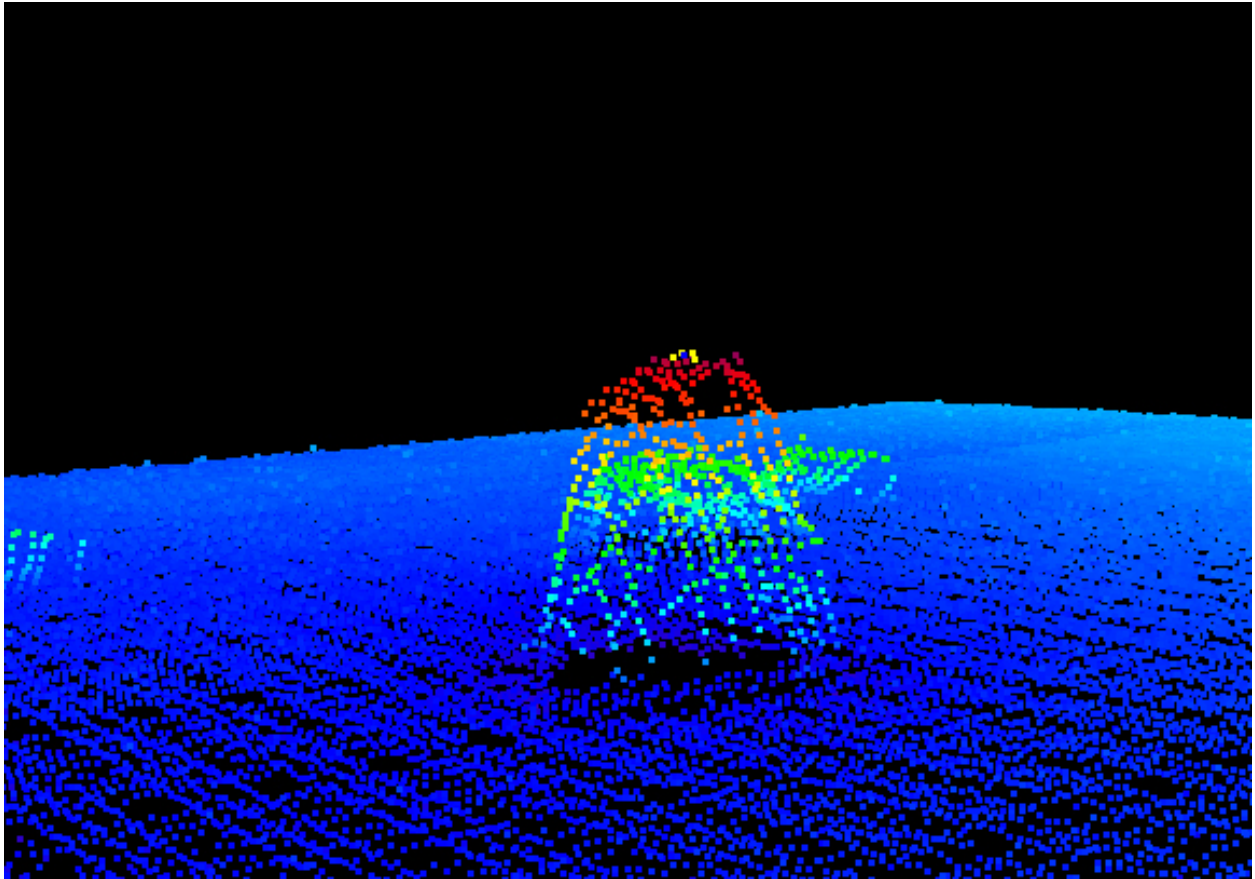
**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** INFORM - 35 foot rock  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam  
 VALSOU - 10.74 m  
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur with clarification. Add a 35 foot Rk and danger curve

## Feature Images



*Figure 2.3.1*

## 2.4) 36 ft depth

### Survey Summary

**Survey Position:** 41° 34' 33.889" N, 070° 42' 09.602" W  
**Least Depth:** 11.08 m  
**Timestamp:** 2004-086.08:10:27.823 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 811\_0749  
**Profile/Beam:** 12773/71  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

rk - not sig

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/811_0749	12773/71	0.00	000.0	Primary
h11318/ru00_sss/2004-090/104_1137	0001	10.53	227.2	Secondary (grouped)

### Hydrographer Recommendations

#### S-57 Data

**Geo object 1:** Sounding (SOUNDG)

#### Office Notes

Concur.

## 2.5) 36 ft depth

### Survey Summary

**Survey Position:** 41° 35' 13.410" N, 070° 41' 25.099" W  
**Least Depth:** 11.14 m  
**Timestamp:** 2004-086.03:34:04.228 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 819\_0332  
**Profile/Beam:** 736/168  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

pair of rks

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/819_0332	736/168	0.00	000.0	Primary
h11318/ru00_sss/2004-090/107_1540	0002	5.78	239.1	Secondary
h11318/ru00_sss/2004-090/106_1250	0002	6.52	256.5	Secondary

### Hydrographer Recommendations

remove adj 37ft snd chart as 36ft snd

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

36ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)

6fm (13200\_1, 13009\_1, 13006\_1, 13003\_1)

11.1m (5161\_1)

### S-57 Data

**Geo object 1:** Sounding (SOUNDG)

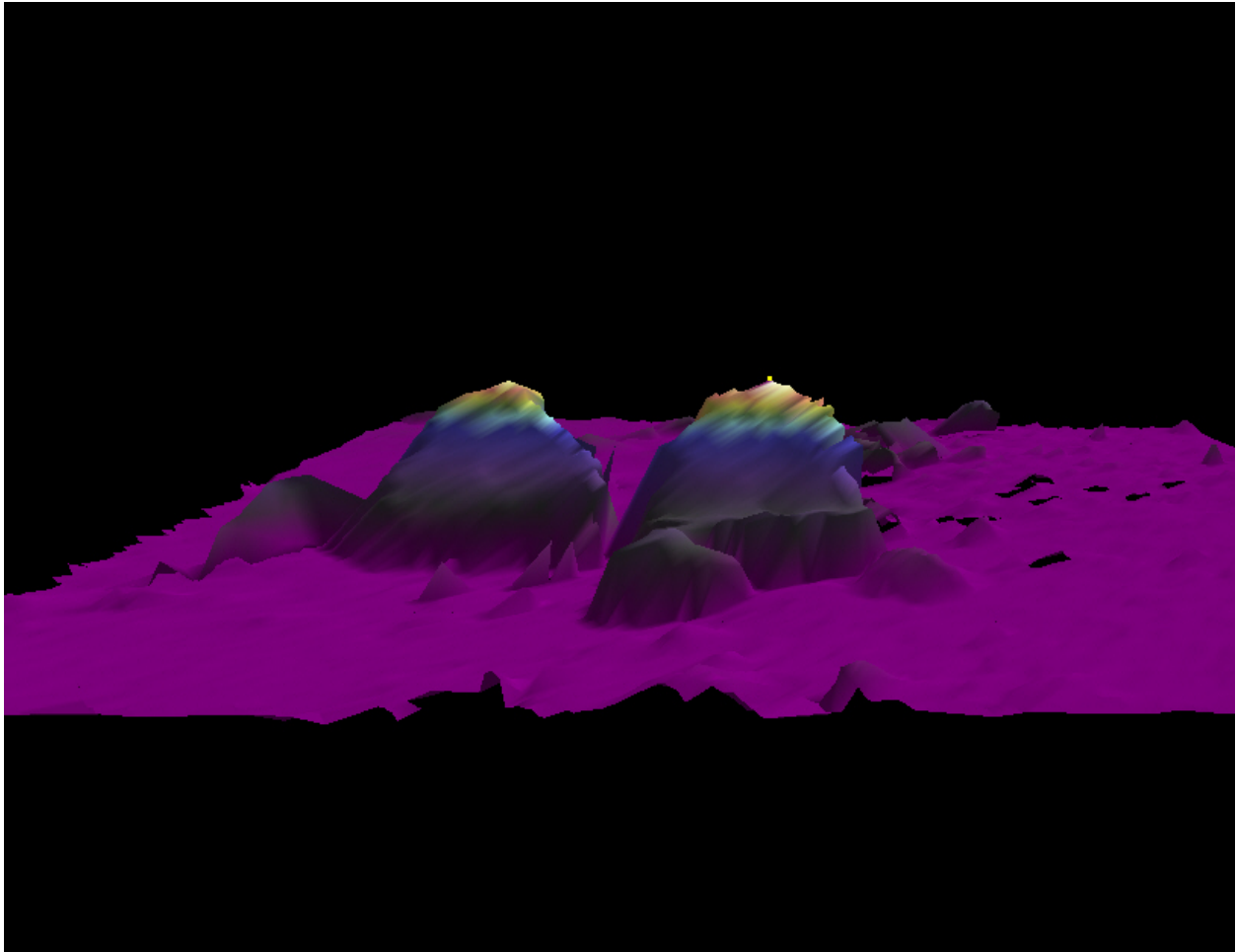
**Attributes:** INFORM - pair of rks

## Office Notes

Concur. Replace 37 foot depth with a 36 foot depth.



## Feature Images



*Figure 2.5.1*

## 2.6) 40 ft rock

### Survey Summary

**Survey Position:** 41° 32' 53.984" N, 070° 45' 00.482" W  
**Least Depth:** 12.37 m  
**Timestamp:** 2004-086.02:47:06.333 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 821\_0218  
**Profile/Beam:** 17465/29  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rk 6ft tall

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/821_0218	17465/29	0.00	000.0	Primary
h11318/ru00_sss/2004-090/107_1543	0001	11.65	248.8	Secondary

### Hydrographer Recommendations

Chart as 40ft snd

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

40ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)  
 6 ¾fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)  
 12.3m (5161\_1)

### S-57 Data

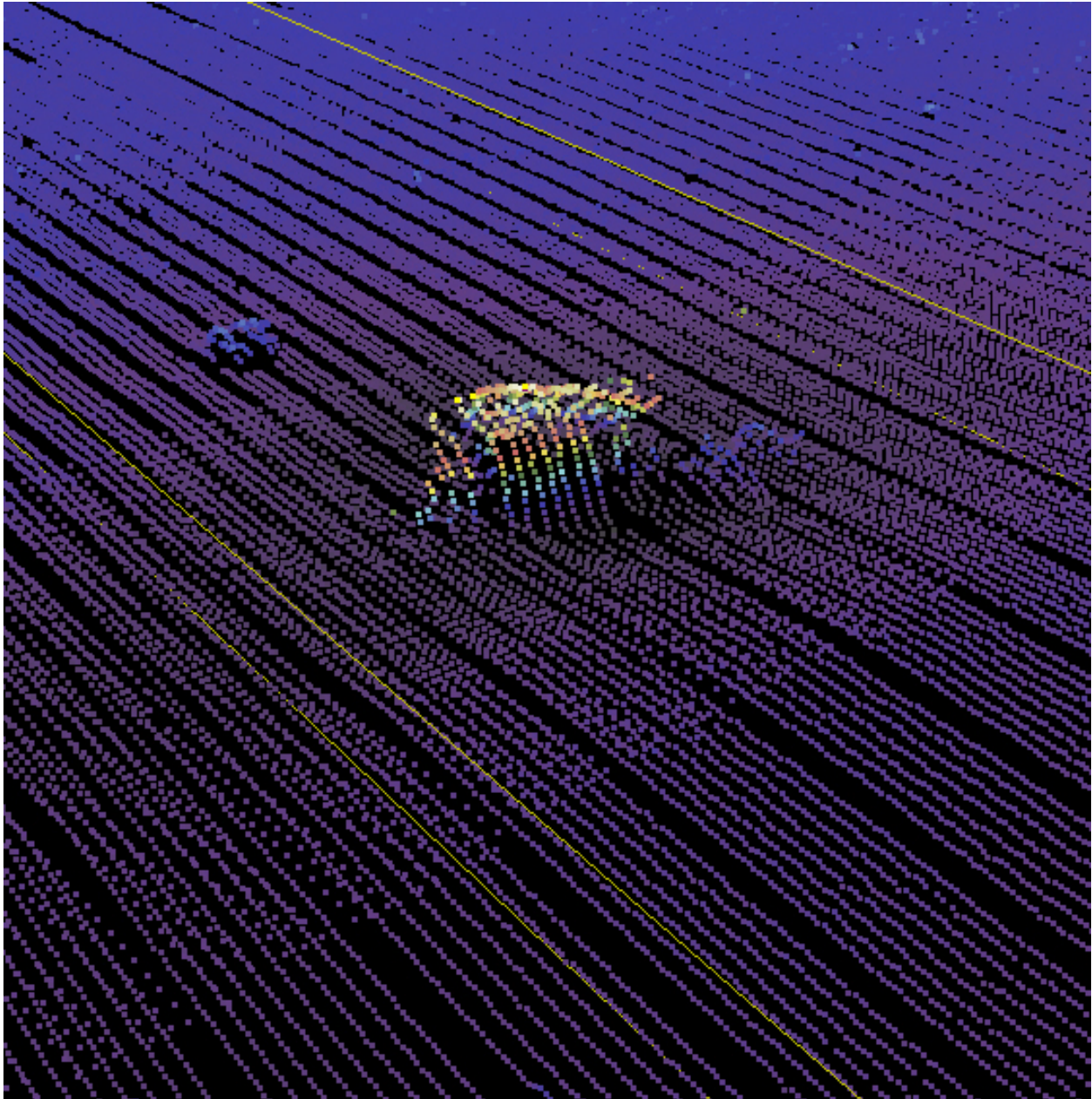
**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** INFORM - 40 foot rock  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam  
 VALSOU - 12.37 m  
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur with clarification. Add 40 Rk and danger curve

## Feature Images



*Figure 2.6.1*

## 2.7) 30 ft depth

### Survey Summary

**Survey Position:** 41° 34' 40.179" N, 070° 42' 13.401" W  
**Least Depth:** 9.35 m  
**Timestamp:** 2004-086.04:27:26.016 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 818\_0405  
**Profile/Beam:** 13308/167  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

rk outcrop w/ least depth of 30 ft

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/818_0405	13308/167	0.00	000.0	Primary
h11318/ru00_sss/2004-090/106_1249	0004	29.28	148.5	Secondary (grouped)
h11318/ru00_sss/2004-090/107_1540	0001	56.73	169.9	Secondary (grouped)

### Hydrographer Recommendations

Remove adj 31ft snd and chart as 30ft snd

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

30ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)

5fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)

9.3m (5161\_1)

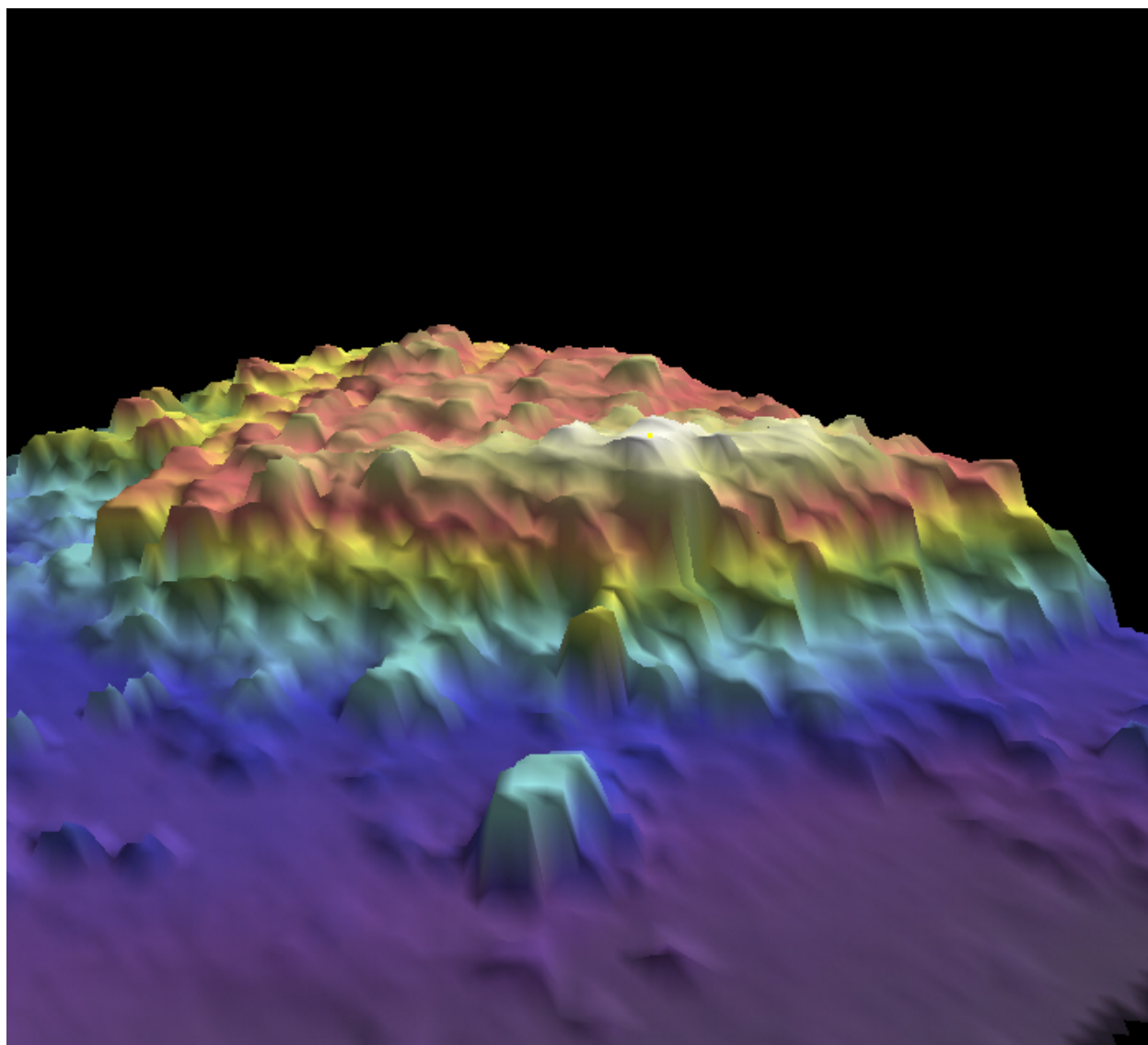
### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** EXPSOU - 2:shoaler than range of depth of the surrounding depth area  
 INFORM - rk outcrop w/ least depth of 30 ft  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam

## Office Notes

Concur, chart a 30 ft depth.

## Feature Images



*Figure 2.7.1*

## 2.8) 27 ft rock

### Survey Summary

**Survey Position:** 41° 34' 07.314" N, 070° 43' 13.382" W  
**Least Depth:** 8.38 m  
**Timestamp:** 2004-086.01:25:44.351 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 823\_0111  
**Profile/Beam:** 8772/101  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

big rk within rocky area

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/823_0111	8772/101	0.00	000.0	Primary
h11318/ru00_sss/2004-090/108_1619	0003	15.32	036.1	Secondary (grouped)

### Hydrographer Recommendations

Chart as 27ft snd and redraw local 30ft contour according to current bathymetry

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

27ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)  
 4 ½fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)  
 8.4m (5161\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** INFORM - 27 foot rock  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam  
 VALSOU - 8.38 m  
 VERDAT - 12:Mean lower low water

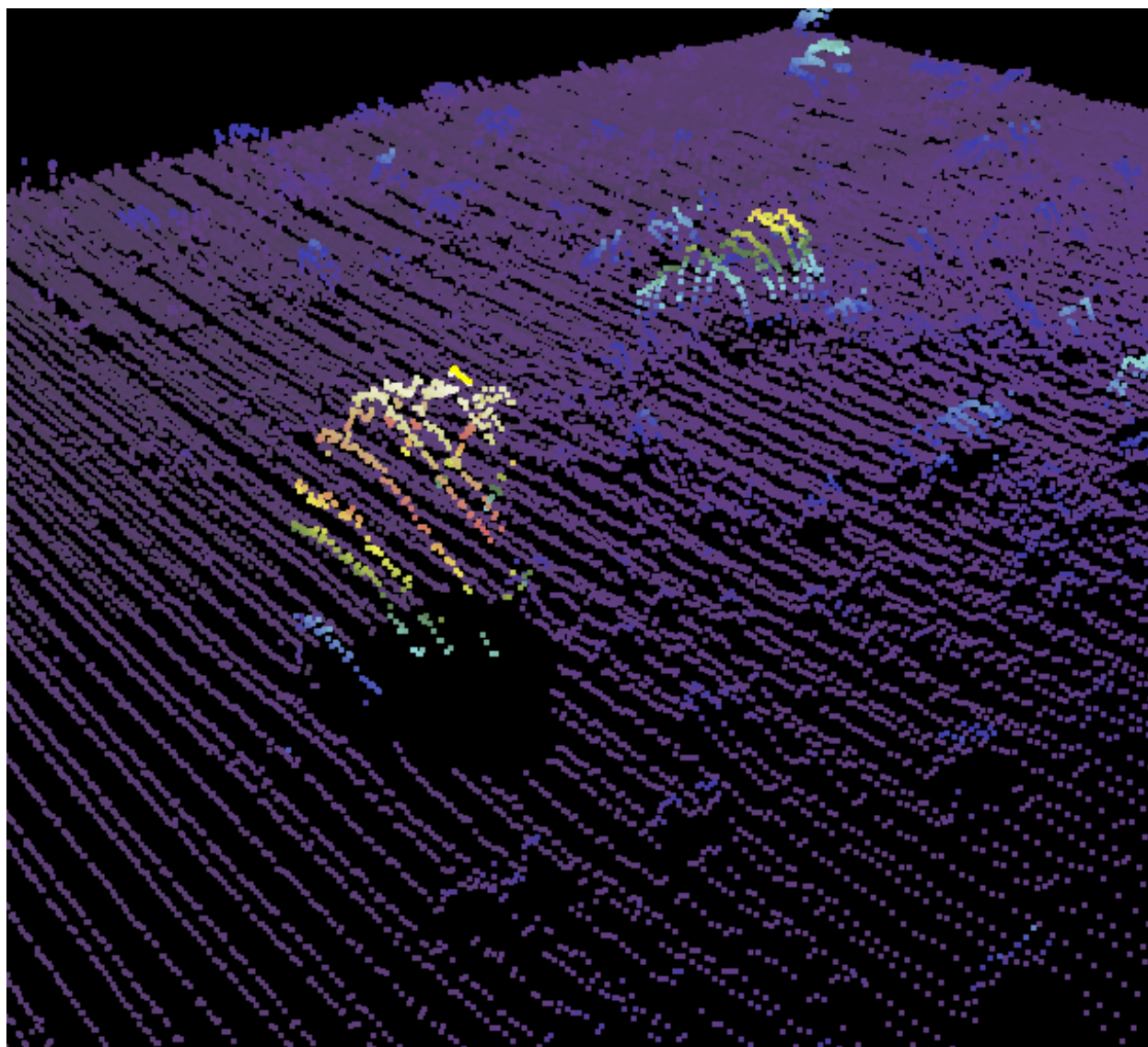


WATLEV - 3:always under water/submerged

## Office Notes

Concur with conditions. Chart a 27 foot rock.

## Feature Images



*Figure 2.8.1*

## 2.9) 34 ft depth

### Survey Summary

**Survey Position:** 41° 34' 04.541" N, 070° 43' 32.599" W  
**Least Depth:** 10.30 m  
**Timestamp:** 2004-085.17:15:42.301 (03/25/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-085 / 831\_1701  
**Profile/Beam:** 8250/4  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

big rk at 34 ft

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-085/831_1701	8250/4	0.00	000.0	Primary
h11318/ru00_sss/2004-090/111_1819	0001	8.66	059.1	Secondary

### Hydrographer Recommendations

Chart as 34ft snd

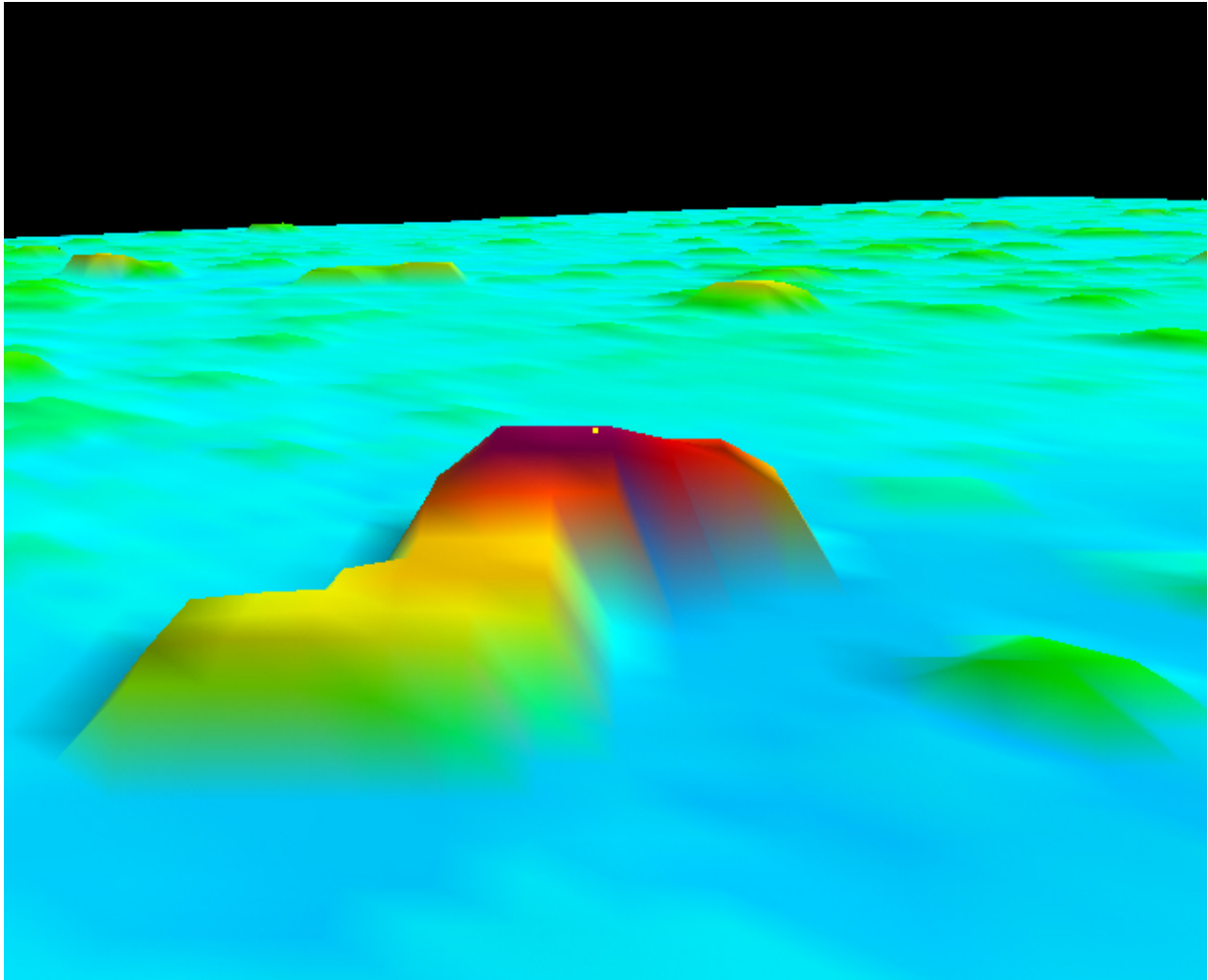
### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** EXPSOU - 2:shoaler than range of depth of the surrounding depth area  
 INFORM - big rk at 34 ft  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam

### Office Notes

Concur with clarification. Shoaler depth in vicinity. Chart present survey soundings.

## Feature Images



*Figure 2.9.1*

## 2.10) 30 ft rock

### Survey Summary

**Survey Position:** 41° 35' 02.558" N, 070° 42' 24.910" W  
**Least Depth:** 9.21 m  
**Timestamp:** 2004-089.21:50:08.843 (03/29/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-089 / 720\_2146  
**Profile/Beam:** 2016/63  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Tall Rk w/ a least depth of 30ft

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-089/720_2146	2016/63	0.00	000.0	Primary
h11318/ru00_sss/2004-090/115_1959	0001	2.99	087.7	Secondary

### Hydrographer Recommendations

Chart as 30ft snd

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

30ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)

5fm (13200\_1, 13009\_1, 13006\_1, 13003\_1)

9.2m (5161\_1)

### S-57 Data

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

**Attributes:** INFORM - 30 foot rock

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

VALSOU - 9.21 m

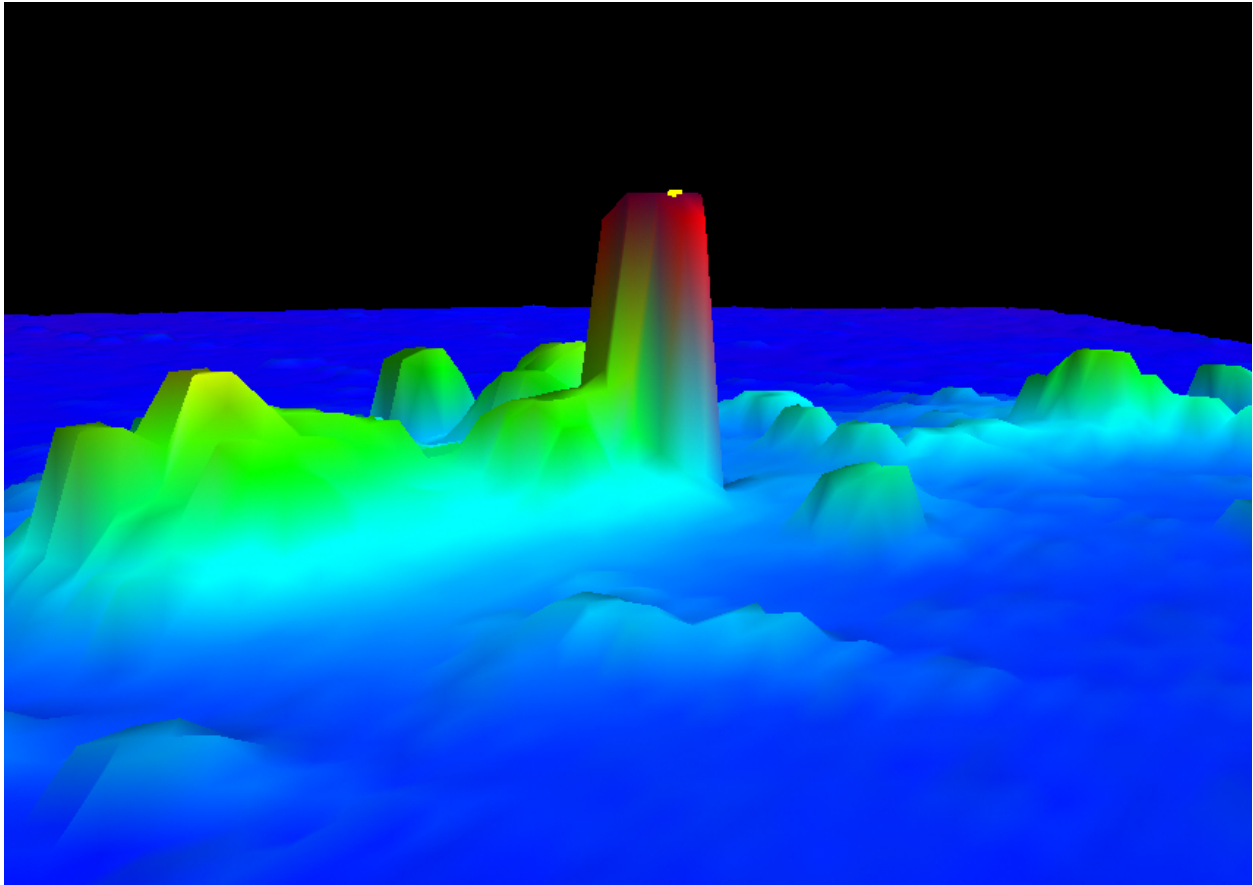
VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur with clarification. Add 30 Rks and danger curve. Delete notation Rk from 36 ft rock in vicinity of 30 Rks.

## Feature Images



*Figure 2.10.1*

## 2.11) 28 ft depth

### Survey Summary

**Survey Position:** 41° 34' 07.464" N, 070° 43' 07.331" W  
**Least Depth:** 8.63 m  
**Timestamp:** 2004-086.03:17:00.232 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 820\_0313  
**Profile/Beam:** 1940/94  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

lg rk, surround by more rks

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/820_0313	1940/94	0.00	000.0	Primary
h11318/ru00_sss/2004-090/107_1541	0002	14.97	256.6	Secondary

### Hydrographer Recommendations

Chart as 28ft snd and redraw local 30ft contour according to current bathymetry

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

28ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)  
 4 ¾fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)  
 8.6m (5161\_1)

### S-57 Data

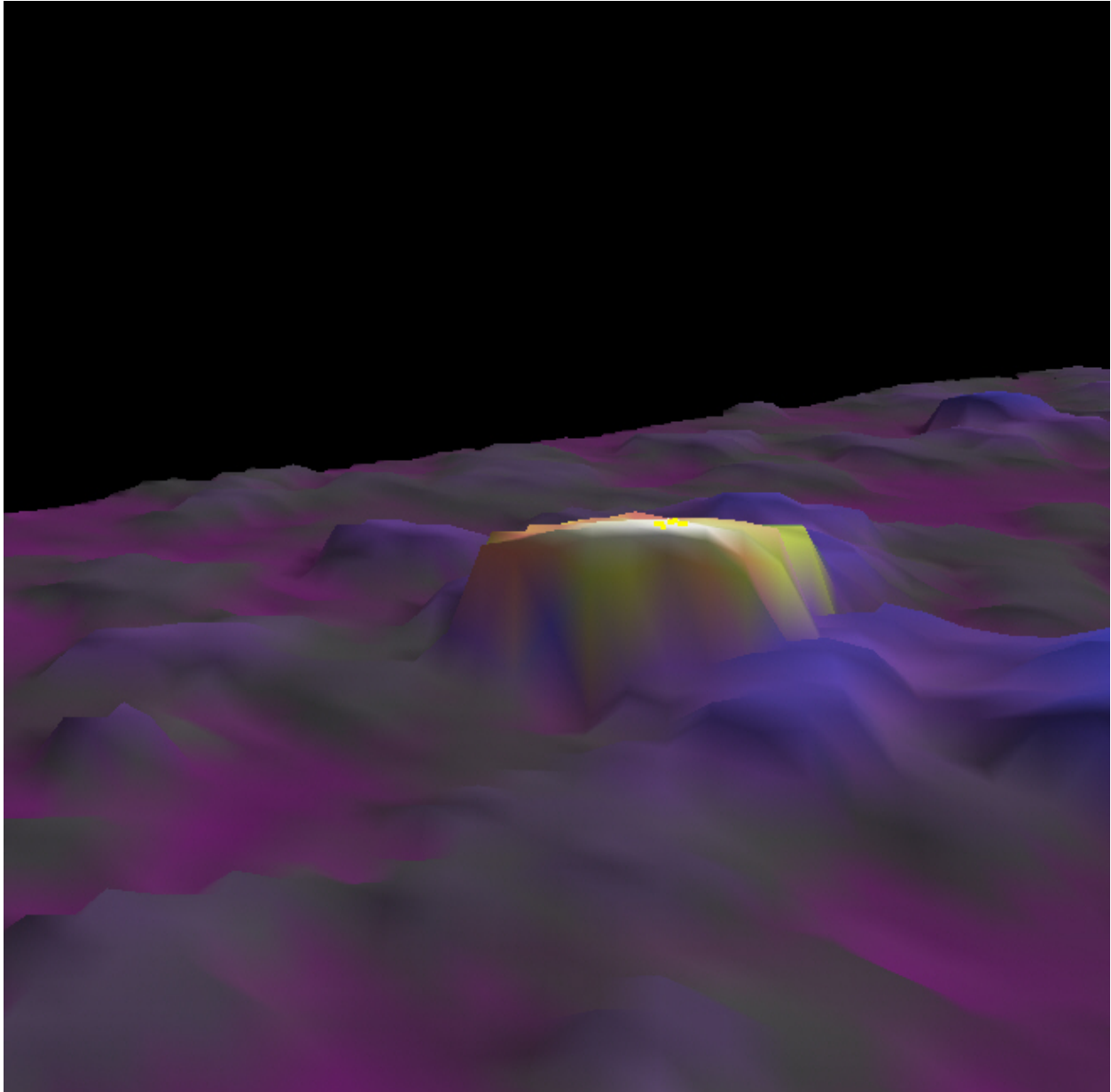
**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** EXPSOU - 2:shoaler than range of depth of the surrounding depth area  
 INFORM - lg rk, surround by more rks  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam



## Office Notes

Concur with clarification. Due to chart scale, the 28 foot sounding should not be charted because shoaler depths exist in the area. Update the remainder of the area with present survey soundings.

## Feature Images



*Figure 2.11.1*

## 2.12) 29 ft depth

### Survey Summary

**Survey Position:** 41° 34' 27.541" N, 070° 42' 40.311" W  
**Least Depth:** 9.06 m  
**Timestamp:** 2004-086.02:04:47.811 (03/26/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-086 / 822\_0145  
**Profile/Beam:** 11558/198  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Charted 29ft snd This contact is significant by NOAA Hydro Specs, but would add no value to the mariner and therefore does not warrant charting

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-086/822_0145	11558/198	0.00	000.0	Primary

### Hydrographer Recommendations

#### S-57 Data

**Geo object 1:** Sounding (SOUNDG)

### Office Notes

Chart a 29' sounding.

## 2.13) 30 ft depth

### Survey Summary

**Survey Position:** 41° 34' 16.155" N, 070° 43' 09.240" W  
**Least Depth:** 9.18 m  
**Timestamp:** 2004-096.21:08:00.268 (04/05/2004)  
**Survey Line:** h11318 / ru00\_mb / 2004-096 / 502\_2107  
**Profile/Beam:** 398/39  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Rk w/ least depth of 30ft

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11318/ru00_mb/2004-096/502_2107	398/39	0.00	000.0	Primary
h11318/ru00_sss/2004-090/110_1746	0004	5.37	269.1	Secondary

### Hydrographer Recommendations

Chart as 30ft snd and redraw local 30ft contour according to current bathymetry

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

30ft (13229\_10, 13229\_15, 13230\_1, 13218\_1)

5fm (12300\_1, 13200\_1, 13009\_1, 13006\_1, 13003\_1)

9.2m (5161\_1)

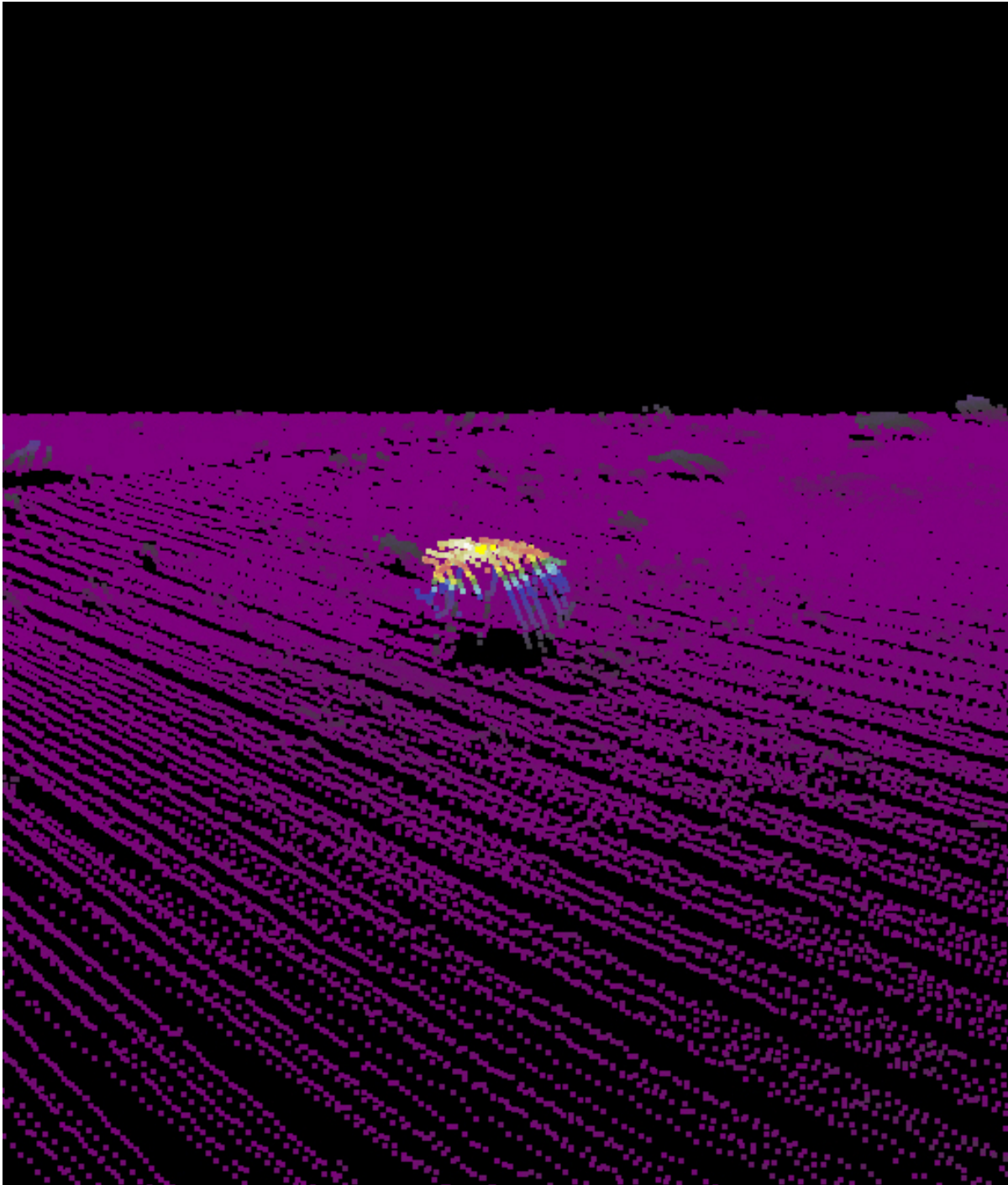
### S-57 Data

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** EXPSOU - 2:shoaler than range of depth of the surrounding depth area  
 INFORM - Rk w/ least depth of 30ft  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam

## Office Notes

Concur with clarification. Chart present survey soundings in the area.

## Feature Images



*Figure 2.13.1*

## 2.14) M

### Survey Summary

**Survey Position:** 41° 33' 01.375" N, 070° 44' 50.080" W  
**Least Depth:** 11.92 m  
**Timestamp:** 2004-096.18:02:32.000 (04/05/2004)  
**GP Dataset:** Bottom\_samples.txt  
**GP No.:** 1  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

gy stk M

### Feature Correlation

Address	Feature	Range	Azimuth	Status
Bottom_samples.txt	1	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

### S-57 Data

[None]

### Office Notes

Add notation M.

## 2.15) M

### Survey Summary

**Survey Position:** 41° 33' 40.700" N, 070° 43' 39.951" W  
**Least Depth:** 11.91 m  
**Timestamp:** 2004-096.18:20:24.000 (04/05/2004)  
**GP Dataset:** Bottom\_samples.txt  
**GP No.:** 2  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

gy stk M

### Feature Correlation

Address	Feature	Range	Azimuth	Status
Bottom_samples.txt	2	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

### S-57 Data

[None]

### Office Notes

Add notation M.



## 2.16) M

### Survey Summary

**Survey Position:** 41° 34' 21.763" N, 070° 42' 40.642" W  
**Least Depth:** 9.58 m  
**Timestamp:** 2004-096.18:30:34.000 (04/05/2004)  
**GP Dataset:** Bottom\_samples.txt  
**GP No.:** 3  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 12300\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

gy M

### Feature Correlation

Address	Feature	Range	Azimuth	Status
Bottom_samples.txt	3	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

### S-57 Data

[None]

### Office Notes

Remove charted notation h and add notation M.

## 2.17) M

### Survey Summary

**Survey Position:** 41° 35' 05.121" N, 070° 41' 14.527" W  
**Least Depth:** 11.35 m  
**Timestamp:** 2004-096.18:51:08.000 (04/05/2004)  
**GP Dataset:** Bottom\_samples.txt  
**GP No.:** 5  
**Charts Affected:** 13229\_10, 13229\_15, 13230\_1, 13218\_1, 13200\_1, 13009\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

gy stk M

### Feature Correlation

Address	Feature	Range	Azimuth	Status
Bottom_samples.txt	5	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

### S-57 Data

[None]

### Office Notes

Do not chart, retain rky notation.

**E. APPROVAL SHEET**

**LETTER OF APPROVAL**

**REGISTRY NO. H11318**

Data acquisition, processing, and analysis contributing to the accomplishment of this navigable area survey were conducted under my direct supervision with frequent personal checks of progress and adequacy. All data, field sheets, this Descriptive Report, and accompanying records were reviewed in their entirety and are approved.

This survey is adequate to supersede all prior surveys in common areas and is considered complete and adequate for nautical charting.

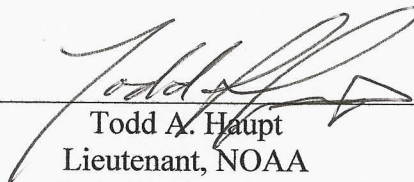
Respectfully Submitted:



---

Richard A Edmundson  
ENS, NOAA  
Field Operations Officer  
NOAA Ship RUDE

Approved:



---

Todd A. Haupt  
Lieutenant, NOAA  
Commanding Officer  
NOAA Ship RUDE



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 1, 2005

HYDROGRAPHIC BRANCH: Atlantic  
HYDROGRAPHIC PROJECT: S-B912-RU-2004  
HYDROGRAPHIC SHEET: H11318

LOCALITY: 4 NM East of West Island  
Buzzards Bay, MA

TIME PERIOD: March 25 - April 6, 2004

TIDE STATION USED: 845-2660 Newport, RI  
Lat.  $41^{\circ} 30.3'N$  Lon.  $71^{\circ} 19.6'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters  
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.099 meters

REMARKS: RECOMMENDED ZONING  
Use zone(s) identified as: SCM9 & SCM110

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).

*Thomas V. Yero 3/8/05*  
-----  
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION



**ATLANTIC HYDROGRAPHIC BRANCH  
EVALUATION REPORT FOR H11318 (2004)**

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**

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

Hydrographic Processing System  
MicroStation J, version 7.1  
I/RAS B, version 5.01  
MapInfo, version 6.5  
CARIS HIPS/SIPS 2000  
PYDRO, version 2.8.2

The smooth sheet was plotted using a Hewlett Packard DesignJet 2500CP plotter.

**JUNCTIONS**

Survey H11318 (2004) junctions with Survey H11319 (2004) to the south. Present survey soundings compare well with the junctional survey. Present survey depths are in harmony with the charted hydrography to the north, east and west.

**C. Horizontal Control**

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM Zone 19N. Office processing of this survey is based on these values.

**D. COMPARISON WITH CHART 13230 (48<sup>th</sup> Edition, Oct. 2005)**

**Hydrography**

The charted hydrography originates with the prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in Section D. of the Descriptive Report. The following should be noted:

H11318

The following items were verified by the present survey.

<u>Item</u>	<u>Latitude"N</u>	<u>Longitude"W</u>
rky	41°35'12.50	70°41'20.00
rky	41°34'38.00	70°42'10.00
rky	41°34'03.50	70°42'59.50

It is recommended that the items be retained as charted.

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.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

### MISCELLANEOUS

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

The following NOS Chart was used for compilation of the present survey:

13230 (48<sup>th</sup> Edition) Oct/05 1: 40,000 Scale

### ADEQUACY OF SURVEY

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

---

**Deborah A. Bland**

Cartographer

Verification of Field Data

Evaluation and Analysis

**APPROVAL SHEET**  
**H11318**

**Initial Approvals:**

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Date: \_\_\_\_\_

\_\_\_\_\_  
Norris Wike  
Cartographer  
Atlantic Hydrographic Branch

I have reviewed the smooth sheet, 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: \_\_\_\_\_ Date: \_\_\_\_\_

Shepard Smith  
Lieutenant Commander, NOAA  
Chief, Atlantic Hydrographic Branch