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. H11310

LOCALITY

State RHODE ISLAND

General Locality NARRAGANSETT BAY

Sublocality WEST PASSAGE

2004

CHIEF OF PARTY

LT Todd A. Haupt, NOAA

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 (11-72)

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

REGISTRY No.

HYDROGRAPHIC TITLE SHEET

H11310

FIELD No.

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

State RHODE ISLAND

General Locality NARRAGANSETT BAY

Sub-Locality West Passage

Scale 1:10000 **Date of Survey** 4/19 – 7/29, 2004

Instructions dated March 4, 2004 **Project No.** OPR-B301-RU-04

Vessel NOAA Ship RUDE s590

Chief of Party LT Todd A. Haupt, NOAA

Surveyed by LCDR Schattgen, LT Haupt LT Zerula, LTJG Yoos, ENS Edmundson, ENS Blankenship, SST Kitt, ST Stephens

Soundings by echo sounder, hand lead, pole CODIM Echotrac MKIV/VBES, Reson 8125 MB, RESON 8124 MB

Graphic record scaled by RUDE Personnel

Graphic record checked by RUDE Personnel **Automated Plot** N/A

Verification by Atlantic Hydrographic Branch

Soundings in fathoms feet at MLW MLLW feet at MLLW

REMARKS: All times in UTC

All soundings corrected with verified tides

Map Projection is UTM zone 19

Red, bold, italic notes in Descriptive Report were made during office processing.

TABLE OF CONTENTS

DESCRIPTIVE REPORT

To accompany

HYDROGRAPHIC SURVEY H11310

Scale of Survey: 1:10000
Year of Survey: 2004
NOAA Ship RUDE
LT Todd A. Haupt, Commanding

A. AREA SURVEYED

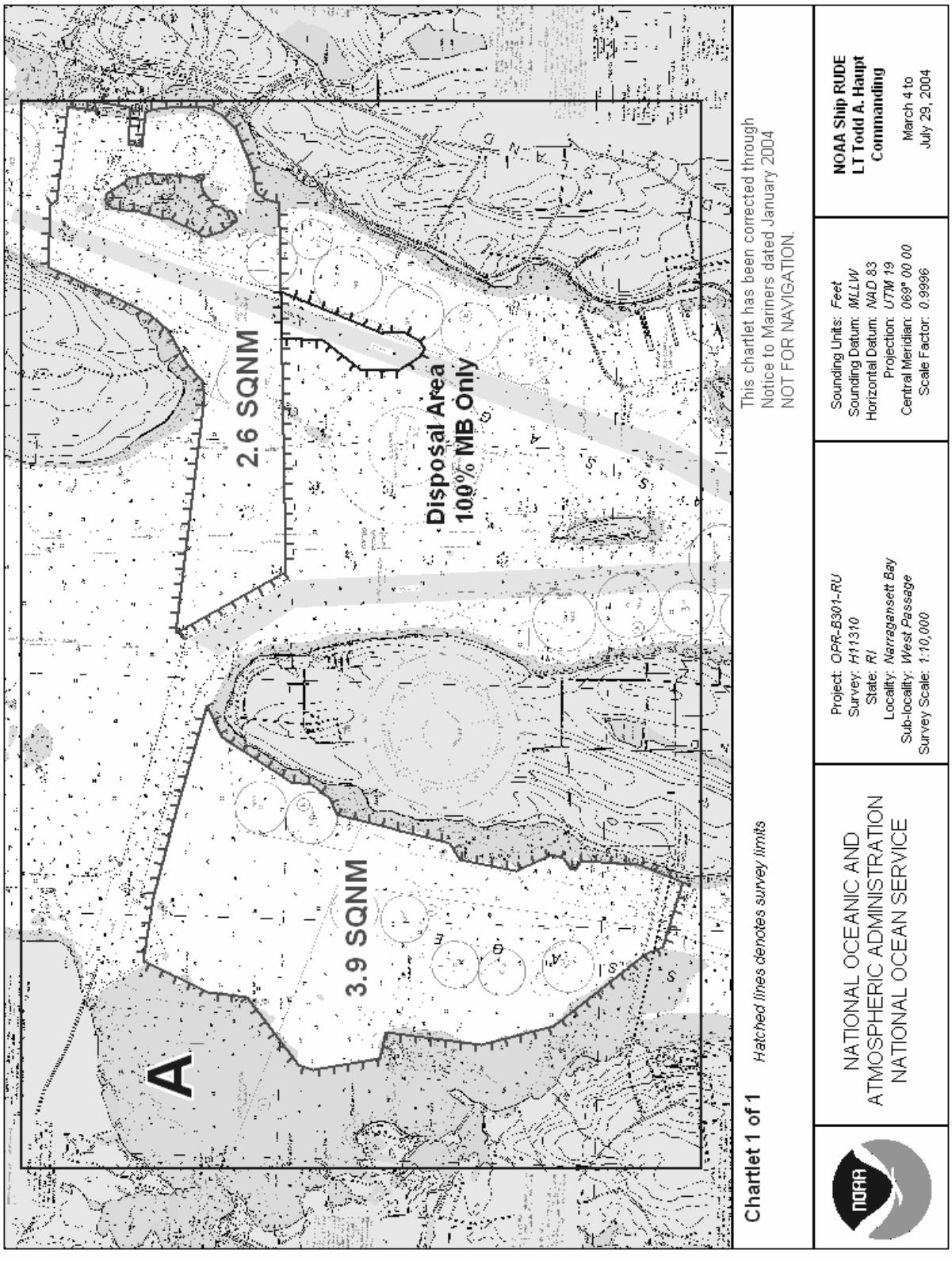
This hydrographic survey was conducted in accordance with Hydrographic Survey Letter of Instructions for project OPR-B301-RU dated March 4, 2004.**** Filed with original field records.***

This project was conducted to provide side scan sonar and/or multibeam data in support of National Ocean Service (NOS) nautical charts, as a response to a request from the Northeast Marine Pilots. Survey H11310 was performed in accordance with NOS requirements for side scan sonar and multibeam data acquisition and processing.

Full bottom coverage of the assigned survey area, consisting of 100% side scan sonar and 100% multibeam, was achieved. As a special request while on scene, 100% multibeam was acquired throughout the charted disposal area in East Passage after a large discrepancy resulting in a Danger to Navigation Report* was filed. ****Filed with original field records; See Appendix 1.***

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

H11310 NOAA Ship RUDE



B. DATA ACQUISITION and PROCESSING EQUIPMENT

B.1 EQUIPMENT

Data were acquired by NOAA Ship RUDE (s-590) and NOAA Launch 1419.

The RUDE is 90 feet in length with a 22-foot beam and 7-foot draft. Launch 1419 is 24 feet in length with a 6-foot beam and 1.5-foot draft.

Vertical-beam echo sounding ***(VBES)*** data were acquired on RUDE and Launch 1419 with Odom Echotrac dual-beam echo sounders (24 and 200 kHz). Vertical-beam data was used in conjunction with Side Scan Sonar to ensonify objects on the bottom not apparent at side scan nadir. No vertical beam data was necessary nor acquired during multibeam operations. Although 100% multibeam coverage is used for sounding purposes, single-beam data is included in the final data set.

RUDE and Launch 1419 acquired all side scan sonar data using a Klein 5500 and Klein 3000 towfish, respectively. Side scan sonar data on both platforms were recorded digitally using Triton ISIS software and archived in Extended Triton Format (xtf).

Single frequency (455 kHz) multi-beam data on RUDE 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.

Single frequency (100 kHz) multi-beam data on Launch 1419 were acquired with a Reson SeaBat 8124 shallow water sonar system. Positioning and attitude on Launch 1419 were determined with a TSS DMS-05 in conjunction with a Starlink DNAV-212 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 errors the first few days of the project. These timing errors were resolved and data was recollected. 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, 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. Side scan data acquisition was suspended when targets approximately one cubic meter in size could not be resolved to the edge of the range scale. ***Concur.***

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. ***Data filed with original field records. See Evaluation Report.***

Crosslines

The total distance of crosslines is 45 linear nautical miles which equates to 05.7% of total mainscheme lines. Crossline to mainscheme line comparison was conducted by 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*. ***Concur.***

Junctions

There were no current surveys junctioning this survey. All current soundings should supercede any prior surveys of this area. ***Concur.***

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

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 (845-2260) 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 November 29, 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 v5.4. ***See Evaluation Report.***

Horizontal Control

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.

Data filed with original field records.

D. RESULTS and RECOMMENDATIONS

D.1 CHART COMPARISON

Charts Affected: The following charts contain soundings within the survey limits of H11310:

13223	37th Ed	01/01/04	1:20000
13221	54th Ed	12/01/03	1:40000

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

The hydrographer recommends that the current multibeam soundings should supercede all previous charted depths. ***See Evaluation Report.***

D.2 ADDITIONAL RESULTS

There were no AWOIS items assigned for investigation in this project. Due to the dense rocky nature of this survey area, it was deemed more efficient to run 100% multibeam coverage in conjunction with 100% side scan as opposed to developing each and every contact found. Many contacts were selected for review and, although significant by NOAA hydrographic specifications, not worthy for charting. However, since the entire survey area is covered by dense multibeam soundings, the hydrographer recommends updating the charts utilizing all current sounding results. Please refer to SEPARATES II* for all investigated items.
Data filed with original field records.

Dangers to Navigation

There were two Dangers to Navigation items discovered during this survey. For details, the reader may refer to APPENDIX I of this report. ***During office processing two Dangers were submitted to Marine Chart Division.***

East Passage Disposal Area

The disposal area had been last surveyed in 1949. The depths shown on the charts showed the area to be almost of uniform depth, ranging in the 90 – 100 ft range. During

this survey, a large rise was discovered 40 feet shoaler than charted. A wreck was discovered on top of the rise, thus bringing the least depth to 36 feet. As this is a high density large vessel traffic lane, a Danger to Navigation Report was timely submitted and a buoy marking the wreck was placed by the Coast Guard. Upon hearing of this development, it was requested that RUDE survey the entire disposal area which extended approximately 1 mile to the southwest outside the southern survey limit. This area was undertaken immediately following the Danger discovery and was surveyed with 100% multibeam only. ***See Evaluation Report.***

Vicinity of Fowler Rock

Upon final review of this survey before submittal, it was determined that a rock, already deemed significant, should be classified as a Danger to Navigation in order to expedite its placement on the chart. The rock is located approximately 500 ft northwest of Fowler Rk in the west passage. It has a least depth of 14.86 ft near the current 30-ft contour line. A Danger to Navigation Report was submitted on 13 February 2005. ***Concur.***

General Description of Surveyed Area and Sounding Comparison

Survey H11310 is split into the East Passage and West Passage of Narragansett Bay. The purpose of the survey was to provide modern hydrographic data to assist in the safe and efficient passage of vessels using the west passage of Narragansett Bay in the event the east passage becomes unavailable for vessel transit. ***Concur.***

The majority of soundings in west passage are in the 20-30 foot range and significant dredging would be required due to the abundance of rocks and strong north-south currents, for deeper draft, heavy laden vessel transits. ***Concur.***

The southern boundary of the West Passage survey was just south of the Jamestown fixed bridge. Bridge abutments evident in the multibeam and side scan data, although edited out for depth purposes, confirm the charted position of the bridge. ***Concur.***

In general, charted soundings are in agreement with current soundings (± 1 ft). However, depth curves need minor adjusting, particularly near shore. ***See Evaluation Report.***

Detached Positions

Twenty-six detached positions (DPs) were taken during this survey with aids to navigation in adequate agreement. However, Navy-maintained buoys in the east passage are particularly out of position when compared to the chart. For complete details of all

DPs, please refer to SEPARATES V, and also …\Pydro_Proj\B301 Narragansett\PSS\ H11310.pss. ***See Evaluation Report.***

Shoreline

Shoreline investigation was not required. Detached positions were taken on Melville Pier and South Point Pier in the east passage. The hydrographer recommends that South Point Pier be corrected to current position points. ***See Evaluation Report.***

Bottom Samples

Bottom sediment samples were collected at 8 locations in the west passage and 6 locations in the east passage. They consisted of a combination of mud, sand, and shell. The hydrographer recommends updating the charts with the given characteristics in APPENDIX V. ***Concur.***

E. APPROVAL SHEET

LETTER OF APPROVAL

REGISTRY NO. H11310

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:

Wesley G. Kitt
Senior Survey Technician
NOAA Ship RUDE

Approved:

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

APPENDIX I

Danger to Navigation Reports

There were two Dangers-to-Navigation reported for this survey as mentioned in the Descriptive Report. Complete details are in the Pydro-generated reports in the Appendix 1 sub-folder.**

Data filed with original field records.

Danger to Navigation 1 (Wreck)

LEAST DEPTH REPORT, VELOCITY PROGRAM, Version 8.50

PROJECT: OPR-B912-RU-04 SURVEY: H11321 DATE OF DIVE: 04-29-2004

NOAA UNIT: RUDE YEAR 2004
AWOIS NUMBER: N/A FIX NUMBER: NONE CONTACT NUMBER: NONE

DATA SET IDENTIFIER: UNKNOWN CAST INSTRUMENT: SBE19 SEACAT S/N:1991 CD:12/9/2003
DAY OF CAST (UTC): 120 TIME OF CAST (UTC): 12:38

DIVER GAUGE SERIAL NUMBER: 68336
DAY OF DIVE (UTC): 120 TIME OF LD MEASUREMENT (UTC): 14:48
LATITUDE OF DIVE: 41/34/31.90 N
LONGITUDE OF DIVE: 071/19/00.70 W
PREDIVE GAUGE PRESSURE (psia): 15.14
GAUGE PRESSURE AT DESIGNATED LEAST DEPTH (psia): 31.48

RESULTS
COMPUTED LEAST DEPTH (m): 11.29
TIDE CORRECTOR (m): -0.18
CORRECTED LEAST DEPTH (m): 11.11

COMMENTS AND RECOMMENDATIONS:

Item submitted as DTON, April 26. Dove April 29. Steel hull with least depth 36 ft. See Dive Ops log for more details.

Upon receipt, Coast Guard 1st District made the following corrections:

CHART	Action	Item	Charting Label	LAT	LON
13223 37Ed	Add	Dangerous Wreck	36 Wk	N 41/34/31.938	W 071/19/00.750

13221 54Ed Add Dangerous Wreck 36 Wk N 41/34/31.938 W 071/19/00.750
H11310 NOAA Ship RUDE

Danger to Navigation 2 (Rock)

No dive was made on this item. Least depth was obtained by multibeam. A copy of the correspondance follows:

Subject:
Danger to Navigation #2, OPR-B301 Narragansett Bay
Date:
Sun, 13 Feb 2005 15:27:10 -0500
From:
wesley kitt <wesley.kitt@noaa.gov>
To:
mcd.dton@noaa.gov, Todd.A.Haupt@noaa.gov, Andrew L Beaver <Andrew.L.Beaver@noaa.gov>,
Tod Schattgen <Tod.Schattgen@noaa.gov>

Good Afternoon,

Upon final review of OPR-B301-RU before submittal to AHB, it was determined that a rock, already deemed significant, should be classified as a Danger to Navigation in order to expedite its placement on the chart. On Chart 13223, the rock is located 146m NW of Fowler Rk in the West Passage of Narragansett Bay (see attached chartlet) with a least depth, verified tides applied, of 14.86 feet. Also attached is the pydro created DtoN report. If you have any questions or require further information, please let us know.

Respectfully,

Wes Kitt, SST
NOAA Ship RUDE

RUDE DtoN1

Registry Number: H11310

State: Rhode Island

Locality: Narragansett Bay

Sub-locality: West Passage

Project Number: OPR-B301-RU-04

Survey Date: 04/26/2004

One wreck found. 36-ft least depth with multibeam, preliminary tides applied.

Features

Feature Type	Survey Depth [m]	Survey Latitude	Survey Longitude	AWOIS Item
Sounding	11.07	~~41.57553878°~~ N	~~71.31687523~~° W	---

41° 34' 32.064" N 071° 19' 00.767" W

1.1 Profile/Beam - 248/164 from b301_narragansett / ru00_mb / 2004-117 / 001_1849

DANGER TO NAVIGATION

Survey Summary

Survey Position: ~~41.57553878° N, 71.31687523° W~~ ***41°34'32.064"N 071°19'00.767"W***

Least Depth: 11.07

Timestamp: 2004-117.18:50:03.321 (04/26/2004)

Survey Line: b301_narragansett / ru00_mb / 2004-117 / 001_1849

Profile/Beam: 248/164

Charts Affected:

Remarks:

Wreck located with side scan sonar and developed with multibeam. Intend to dive on for least depth accuracy and possible identification at a later date.

Hydrographer Recommendations

Chart as 36 Wk

Refer to Item Investigation Form 3.2

RUDE H11310 Danger to Navigation #2

Registry Number: H11310

State: Rhode Island

Locality: Narragansett Bay

Sub-locality: West Passage

Project Number: OPR-B301-RU

Survey Date: 06/29/2004

Charts Affected

Number	Version	Date	Scale
13223	37th Ed.	01/01/2004	1:20000
13221	54th Ed.	12/01/2003	1:40000
13218	39th Ed.	06/01/2004	1:80000
12300	44th Ed.	07/01/2004	1:400000
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.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Rock	4.53 m	041° 32' 06.463~~4~~" N	71° 23' 35.107" W	---

Generated by Pydro v4.9.2 on Sun Feb 13 17:34:28 2005 [UTC]

1.1) Profile/Beam - 3594/6 from b301_narragansett / ru01_mb / 2004-181 / 564_1859

DANGER TO NAVIGATION

Survey Summary

Survey Position: 041° 32' 06.463" N, 71° 23' 35.107" W

Least Depth: 4.53 m

Timestamp: 2004-181.19:03:21.302 (06/29/2004)

Survey Line: b301_narragansett / ru01_mb / 2004-181 / 564_1859

Profile/Beam: 3594/6

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Submitted as DToN

Feature Correlation

Address	Feature	Range	Azimuth	Status
b301_narragansett/ru01_mb/2004-181/564_1859	3594/6	0.00	000.0	Primary
b301_narragansett/ru01_sss/2004-209/112_1328	0011	11.89	024.1	Secondary
b301_narragansett/ru01_sss/2004-209/112_1314	0003	14.04	038.9	Secondary

Hydrographer Recommendations

Chart as 15 ft Rk with Danger Circle. ***Refer to Item Investigation form Feature 3.1.***

Cartographically-Rounded Depth (Affected Charts):

15ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ½fm (12300_1, 13006_1, 13003_1)

4.5m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.53 m

WATLEV - 3:always under water/submerged

H11310AHB DTONs

Registry Number: H11310

State: Rhode Island

Locality: Narragansett Bay

Sub-locality: West Passage

Project Number: OPR-B301-RU

Survey Dates: April 19, 2004 - July 29, 2004

The following feature is a Danger to Navigation identified during office processing at AHB.

Charts Affected

Number	Version	Date	Scale
13223	38th Ed.	04/01/2005	1:20000
13221	55th Ed.	12/01/2004	1:40000
13218	39th Ed.	06/01/2004	1:80000
12300	45th Ed.	03/01/2005	1:400000
13006	32nd Ed.	02/01/2005	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
1.1	Sounding	0.49 m	~~041° 34' 47.685" N~~	~~71° 17' 49.003" W~~
			41°34'47.707"N	***071°17'49.015"W***

Generated by Pydro v6.2.9-HF4 on Mon May 15 16:33:13 2006 [UTC]

1.1) Profile/Beam - 1802/1 from h11310 / ru01_mb / 2004-142 / 625_1403

DANGER TO NAVIGATION

Survey Summary

Survey Position:	041° 34' 47.~~685~~ *707*" N, 71° 17' 49.~~003~~ *015*" W
Least Depth:	0.49 m
Timestamp:	2004-142.14:05:00.804 (05/21/2004)
Survey Line:	h11310 / ru01_mb / 2004-142 / 625_1403
Profile/Beam:	1802/1
Charts Affected:	13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is a shoal. Soundings were generated by RESON 8125 MBES and corrected to MLLW using approved water levels and final tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-142/625_1403	1802/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart present survey findings.

Cartographically-Rounded Depth (Affected Charts):

1ft (13223_1, 13221_1, 13221_2, 13218_1)

0 ¼fm (12300_1, 13006_1, 13003_1)

.5m (5161_1)

S-57 Data

[None]

Office Notes

Refer to Item Investigation form Feature 3.3.

AHB H11310 Danger to Navigation #2

Registry Number: H11310

State: Rhode Island

Locality: Narragansett Bay

Sub-locality: West Passage

Project Number: OPR-B301-RU

Survey Dates: April 19, 2004 - July 29, 2004

This report describes a Danger to Navigation identified by the branch processor for survey H11310.

Charts Affected

Number	Version	Date	Scale
13223	38th Ed.	04/01/2005	1:20000
13221	55th Ed.	12/01/2004	1:40000
13218	39th Ed.	06/01/2004	1:80000
12300	45th Ed.	03/01/2005	1:400000
13006	32nd Ed.	02/01/2005	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
1.1	Shoal	18.05 m	~~041° 34' 29.326"~~ N	~~71° 18' 49.909"~~ W
			41°34'29.306"N	***071°18'49.676"W***

Generated by Pydro v6.8.0 on Mon Jan 08 15:09:16 2007 [UTC]

1.1) Profile/Beam - 1865/27 from h11310 / ru00_mb / 2004-145 / 006_1409

DANGER TO NAVIGATION

Survey Summary

Survey Position:	041° 34' 29.~~326~~ ***306***" N, 71° 18' 49.~~909~~ ***676***" W
Least Depth:	18.05 m
Timestamp:	2004-145.14:12:13.150 (05/24/2004)
Survey Line:	h11310 / ru00_mb / 2004-145 / 006_1409
Profile/Beam:	1865/27
Charts Affected:	13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is a shoal. Although the currently charted depth is 102 feet, the surveyed depths within a 200m radius range from 59 feet to 80 feet. This item was not addressed by the field unit. Depths were acquired with RESON 8125 multibeam echosounder and corrected to MLLW using approved water levels with verified tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-145/006_1409	1865/27	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

59ft (13223_1, 13221_1, 13221_2, 13218_1)

9 ¾fm (12300_1, 13006_1, 13003_1)

18.0m (5161_1)

Office Notes

Chart shoal with least depth 59 feet at the present surveyed position. This Danger to Navigation was submitted on June 12th, 2006.

This shoal has been applied to the continual maintenace raster dated August 29th, 2006. Chart present survey soundings in common areas.

Registry Number: H11310

State: Rhode Island

Locality: Narragansett Bay

Sub-locality: West Passage

Project Number: OPR-B301-RU

Survey Date: 05/19/2004

Charts Affected

Number	Version	Date	Scale
13223	38th Ed.	04/01/2005	1:20000
13221	55th Ed.	12/01/2004	1:40000
13218	39th Ed.	06/01/2004	1:80000
12300	45th Ed.	03/01/2005	1:400000
13006	32nd Ed.	02/01/2005	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	22-ft Subm Pile AHB DtoN 09/28/07 2476/163	Sounding	6.73 m	41° 34' 41.223" N	071° 19' 16.081" W	---

1.1) 22-ft Subm Pile AHB DtoN 09/28/07 2476/163

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 34' 41.223" N, 071° 19' 16.081" W
Least Depth:	6.73 m
Timestamp:	2004-140.17:03:15.618 (05/19/2004)
Survey Line:	h11310 / ru00_mb / 2004-140 / 368_1700
Profile/Beam:	2476/163
Charts Affected:	13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AHB Submitted Documentation for Submerged Pile located at Latitude 43°34'41.223"N, Longitude 071°19'16.081"W. 07/30/07 H11310 Charted Pier and associate Hazard (Pile) AHB to NSD NE Navigation Manager

H11310 Rhode Island Narragansett Bay West Passage Survey dates: April 19, 2004 to July 29, 2004

The following feature was located and noted during final processing stages of survey H11310 AHB. H11310 survey is located in Rhode Island, Narragansett Bay. The pile is located in Lat 41-34-41.223N, Long 071-19-16.081W and appears to be lying horizontal within the water column and extending outward or seaward from the pier and seafloor beneath the pier. The hazard extends seaward from the pier facing in a southerly direction and should be considered as a hazard to any vessel mooring alongside the pier.

The item noted is being passed to Navigations Services Division NE Regional Navigation Manager for further investigation and resolution. It would be advantageous for the Nav Manager to contact the pier owners and inform them of this situation. The dangerous pile is located at the southern corner of the west end of the pier and extends seaward in a southerly direction. The attributes of the feature are as follows: Record Line Profile Beam Depth (m) Lat (DMS) Lon (DMS) 368_1700 2476 163 6.734 1 41-34-41.223N 071-19-16.081W

The hazardous pile was not detailed during field processing and only highlighted during the latter stages of product generation and the product quality assurance review. AHB feels that the Nav Manager should contact pier owner or responsible party and inform them of the hazard. It is in OCS best interest to have the pile removed as opposed to issuing a Danger to Navigation and placing the obstruction on the chart. The most expeditious method is to notify the pier owners for investigation and removal of the hazard.

Any questions related to this hazard should be forwarded to Gene Parker at Atlantic Hydrographic Branch, 439 West York St., Norfolk, VA 23510; 757-441-6413; email: castle.e.parker@noaa.gov

09/28/07 Update: No information has been provided by the NE Navigation Manager, thus AHB submits feature to MCD as a DtoN.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-140/368_1700	2476/163	0.00	000.0	Primary

Hydrographer Recommendations

Chart Subm Pile, least depth 22-ft Latitude 41°34'41.223"N, Longitude 071°19'16.081"W. Submitted as DtoN 09/28/07.

Cartographically-Rounded Depth (Affected Charts):

22ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ½fm (12300_1, 13006_1, 13003_1)

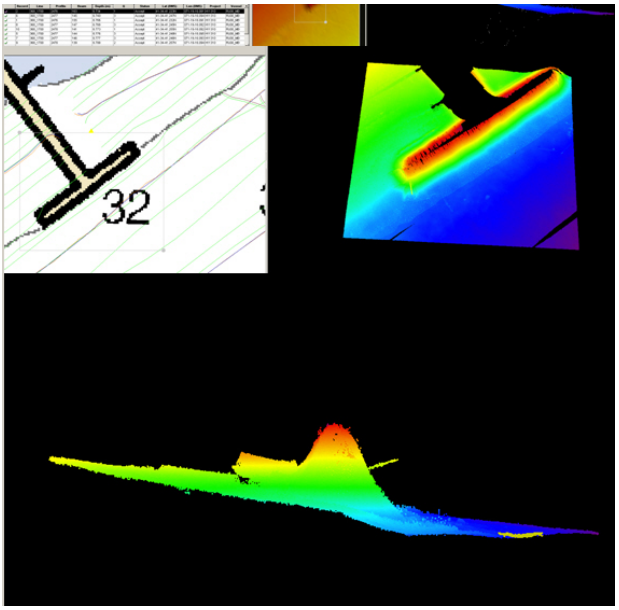
6.7m (5161_1)

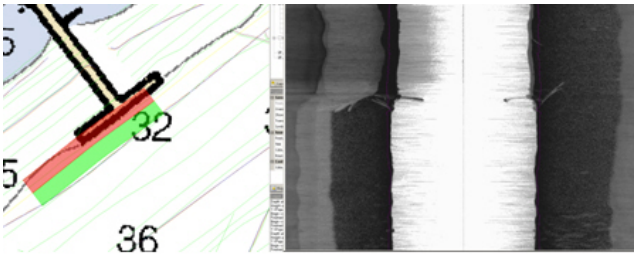
S-57 Data

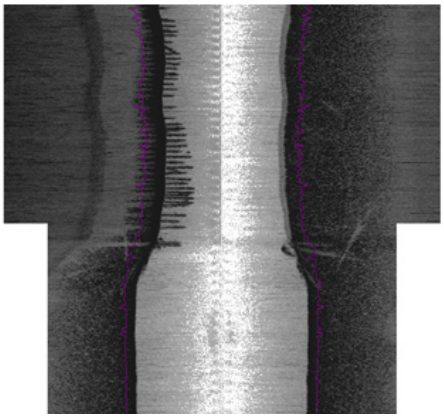
Geo object 1:	Pile (PILPNT): feature documented as an Obstruction (snag) in the S57 H11310 BASE Cell File.
Attributes:	CATPLE - 3:post
	CONDTN - 2:ruined
	CONVIS - 2:not visual conspicuous
	INFORM - DtoN located at AHB and submitted 09/28/07
	OBJNAM - 22-ft Subm Pile
	RECDAT - 2004-140
	SORDAT - 20040729
	SORIND - US,US,SURVE,H11310

Office Notes

Concur.







Appendix 2: H11310 Feature Reports

Registry Number: H11310

State: Rhode Island

Locality: Narragansett Bay

Sub-locality: West Passage

Project Number: OPR-B301-RU

Survey Dates: 04/29/2004 - 07/26/2004

Charts Affected

Number	Version	Date	Scale
13223	38th Ed.	04/01/2005	1:20000
13221	55th Ed.	12/01/2004	1:40000
13218	39th Ed.	06/01/2004	1:80000
12300	45th Ed.	03/01/2005	1:400000
13006	32nd Ed.	02/01/2005	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	16-ft Rk 500/68	Rock	4.88 m	41° 33' 56.451" N	071° 24' 40.287" W	---
1.2	32-ft Rk 808/56	Rock	9.70 m	41° 32' 43.624" N	071° 23' 47.344" W	---
1.3	23-ft Rk 15548/113	Rock	6.98 m	41° 32' 50.403" N	071° 23' 43.739" W	---
1.4	36-ft Rk 1518/49	Rock	11.00 m	41° 32' 39.033" N	071° 23' 49.132" W	---
1.5	47-ft Rk 2602/94	Sounding	14.35 m	41° 32' 20.775" N	071° 23' 50.201" W	---
1.6	25-ft Rk 4955/198	Rock	7.68 m	41° 32' 39.374" N	071° 24' 18.826" W	---
1.7	38-ft Rk 18040/141	Rock	8.46 m	41° 32' 49.196" N	071° 24' 19.930" W	---
1.8	18-ft Rk 45/76	Rock	5.47 m	41° 33' 14.199" N	071° 24' 26.356" W	---
1.9	19-ft Obstn 6855/66	Obstruction	5.96 m	41° 33' 53.069" N	071° 24' 27.412" W	---
1.10	22-ft Rk 8008/239	Rock	6.80 m	41° 33' 05.365" N	071° 24' 35.583" W	---
1.11	18-ft Rk 15927/235	Rock	5.60 m	41° 33' 55.066" N	071° 24' 34.442" W	---
1.12	19-ft Rk 5638/119	Rock	6.00 m	41° 33' 31.114" N	071° 24' 38.004" W	---

1.13	19-ft Rk 3014/68	Rock	5.89 m	41° 32' 34.353" N	071° 24' 45.203" W	---
1.14	45-ft Wk 1839/2	Wreck	13.94 m	41° 34' 26.379" N	071° 19' 09.186" W	---
1.15	12-ft Rk 392/69	Rock	3.60 m	41° 35' 14.767" N	071° 18' 02.279" W	---
1.16	20-ft Rk 1277/5	Rock	6.32 m	41° 34' 59.479" N	071° 18' 09.328" W	---
1.17	10-ft Rk 643/54	Rock	3.20 m	41° 34' 37.367" N	071° 18' 18.121" W	---
1.18	17-ft Rk 1979/5	Rock	5.38 m	41° 34' 41.908" N	071° 19' 21.263" W	---
1.19	18-ft Rk 3490/76	Rock	5.50 m	41° 32' 03.162" N	071° 23' 30.726" W	---
1.20	13-ft Rk 637/72	Rock	4.01 m	41° 32' 55.510" N	071° 23' 25.176" W	---
1.21	12-ft Rk 1862/24	Rock	3.83 m	41° 33' 50.970" N	071° 22' 52.307" W	---
1.22	9-ft Rk 2129/1	Rock	2.86 m	41° 34' 36.478" N	071° 24' 30.321" W	---
1.23	9-ft Rk 569/35	Rock	2.71 m	41° 34' 09.924" N	071° 24' 40.982" W	---
1.24	21-ft sounding 210/2	Rock	6.52 m	41° 33' 21.030" N	071° 24' 54.598" W	---
1.25	20-ft Rk 10064/220	Rock	6.12 m	41° 32' 55.458" N	071° 24' 44.607" W	---
1.26	16-ft Rk 3753/34	Rock	5.07 m	41° 32' 47.352" N	071° 24' 50.391" W	---
1.27	15-ft Rk 4847/8	Rock	4.64 m	41° 33' 11.130" N	071° 24' 52.881" W	---
1.28	14-ft Rk 422/28	Rock	4.40 m	41° 33' 44.453" N	071° 24' 39.564" W	---
1.29	11-ft Rk 1940/80	Rock	3.46 m	41° 34' 18.219" N	071° 24' 39.316" W	---
1.30	28-ft Rk102/74	Rock	8.55 m	41° 31' 41.232" N	071° 23' 35.980" W	---
1.31	15-ft Rk 3594/6	Rock	4.54 m	41° 32' 06.463" N	071° 23' 35.107" W	---
1.32	27-ft Rk 4288/66	Rock	8.29 m	41° 32' 01.278" N	071° 23' 35.981" W	---
1.33	16-ft Rk 2148/26	Rock	4.87 m	41° 32' 46.008" N	071° 23' 30.355" W	---
1.34	15-ft Rk 283/67	Rock	4.62 m	41° 32' 58.849" N	071° 23' 26.267" W	---
1.35	25-ft Rk 7538/11	Rock	7.83 m	41° 33' 50.733" N	071° 23' 12.957" W	---
1.36	21-ft Rk 490/43	Rock	6.39 m	41° 33' 40.752" N	071° 23' 12.547" W	---
1.37	36-ft Wk 321/41	Wreck	11.07 m	41° 34' 32.063" N	071° 19' 00.767" W	---
1.38	28-ft Rk 319/127	Rock	8.72 m	41° 34' 22.001" N	071° 19' 27.014" W	---
1.39	34-ft Sounding 392/115	Rock	10.32 m	41° 34' 41.517" N	071° 19' 06.678" W	---
1.40	45-ft Obstn 1152/75	Obstruction	13.73 m	41° 34' 41.200" N	071° 17' 38.560" W	---
1.41	23-ft Rk 1864/39	Rock	7.23 m	41° 34' 20.814" N	071° 18' 21.652" W	---
1.42	13-ft Rk 2674/57	Rock	3.96 m	41° 35' 30.063" N	071° 17' 16.902" W	---
1.43	30-ft Rk 695/74	Rock	9.16 m	41° 34' 27.958" N	071° 17' 35.252" W	---
1.44	17-ft Rk 1822/2	Rock	5.33 m	41° 34' 22.919" N	071° 22' 32.275" W	---
1.45	13-ft Rk 3899/67	Rock	4.20 m	41° 34' 12.927" N	071° 22' 40.060" W	---
1.46	14-ft Rk 487/72	Rock	4.42 m	41° 34' 06.273" N	071° 22' 45.351" W	---
1.47	22-ft Rk 2517/69	Rock	6.80 m	41° 33' 25.070" N	071° 23' 15.756" W	---
1.48	27-ft Rk 443/5	Rock	8.30 m	41° 32' 39.106" N	071° 23' 34.770" W	---

1.49	19-ft Rk 3828/1	Rock	5.87 m	41° 32' 34.801" N	071° 23' 35.738" W	---
1.50	17-ft Rk 4075/70	Rock	5.40 m	41° 32' 53.258" N	071° 23' 28.239" W	---
1.51	31-ft Obstn 1782/80	Obstruction	9.41 m	41° 31' 32.712" N	071° 23' 47.115" W	---
1.52	16-ft Rk 2295/67	Rock	4.97 m	41° 32' 09.758" N	071° 23' 29.338" W	---
1.53	1-ft Sounding 1802/1	Sounding	0.49 m	41° 34' 47.685" N	071° 17' 49.003" W	---
1.54	59-ft Sounding on Shoal 1865/27	Shoal	18.05 m	41° 34' 29.326" N	071° 18' 49.909" W	---

1.1) 16-ft Rk 500/68

Survey Summary

Survey Position: 41° 33' 56.451" N, 071° 24' 40.287" W

Least Depth: 4.88 m

Timestamp: 2004-192.16:06:01.844 (07/10/2004)

Survey Line: h11310 / ru01_mb / 2004-192 / 540_1605

Profile/Beam: 500/68

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted as 17ft rky

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-192/540_1605	500/68	0.00	000.0	Primary
h11310/ru01_sss/2004-209/122_1850	0001	5.75	247.8	Secondary
ChartGPs - Digitized	1	19.99	123.0	Secondary (grouped)
h11310/ru01_sss/2004-209/121_1858	0001	43.54	155.2	Secondary (grouped)

Hydrographer Recommendations

Replace Charted 17ft rky with 16ft rky

Cartographically-Rounded Depth (Affected Charts):

16ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ½fm (12300_1, 13006_1, 13003_1)

4.9m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted as 17ft rky

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.877 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart dangerous submerged rock, least depth 16-ft in Latitude 41° 33' 56.451" N, Longitude 071° 24' 40.287" W. Retain notation "rky" as currently charted.

Feature Images

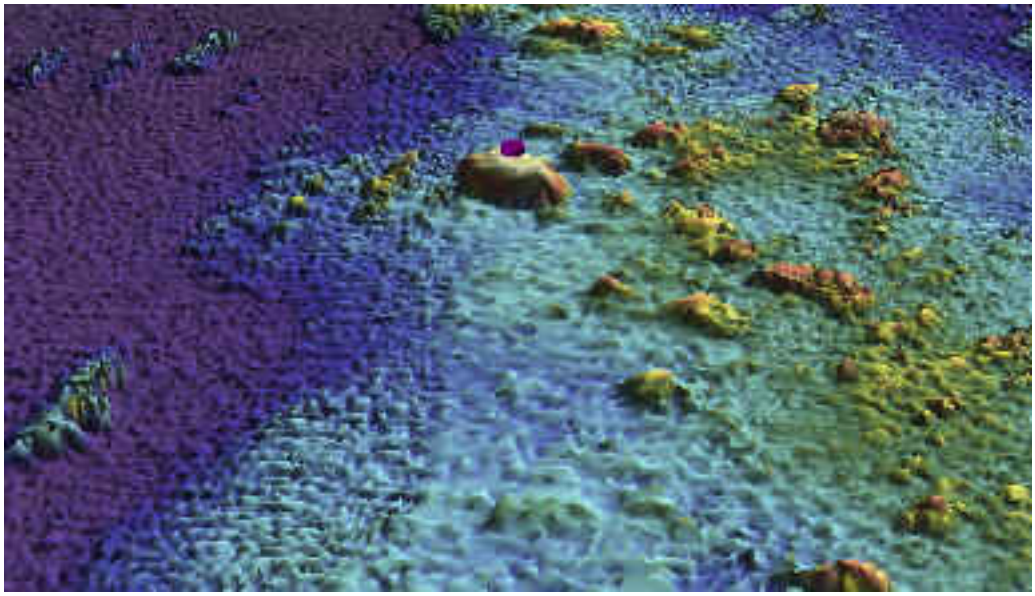


Figure 1.1.1

1.2) 32-ft Rk 808/56

Survey Summary

Survey Position: 41° 32' 43.624" N, 071° 23' 47.344" W

Least Depth: 9.70 m

Timestamp: 2004-174.14:22:57.494 (06/22/2004)

Survey Line: h11310 / ru00_mb / 2004-174 / 711_1421

Profile/Beam: 808/56

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-174/711_1421	808/56	0.00	000.0	Primary
h11310/ru00_sss/2004-112/161_1454	0001	7.83	043.0	Secondary

Hydrographer Recommendations

Chart as 32 ft Rk

Cartographically-Rounded Depth (Affected Charts):

32ft (13223_1, 13221_1, 13221_2, 13218_1)

5 ¼fm (12300_1, 13006_1, 13003_1)

9.7m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 1:depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 9.699 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous submerged rock with least depths of 32-ft in Latitude 41°32'43.624"N, Longitude 071°23'47.344"W.

Feature Images

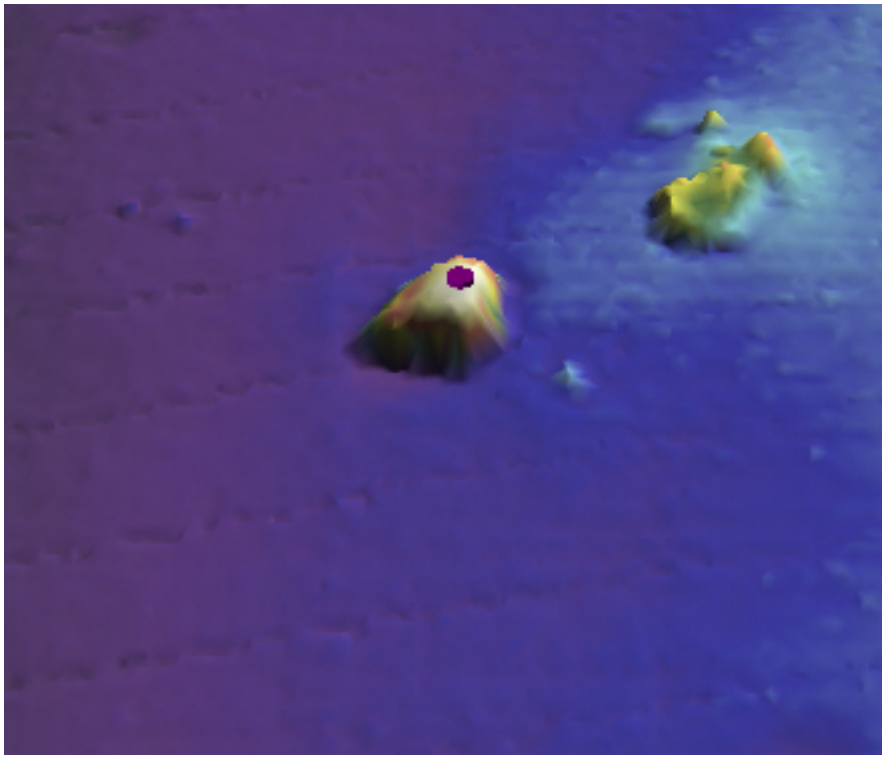


Figure 1.2.1

1.3) 23-ft Rk 15548/113

Survey Summary

Survey Position: 41° 32' 50.403" N, 071° 23' 43.739" W

Least Depth: 6.98 m

Timestamp: 2004-202.17:34:04.533 (07/20/2004)

Survey Line: h11310 / ru00_mb / 2004-202 / 683_1720

Profile/Beam: 15548/113

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 26 ft sounding

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-202/683_1720	15548/113	0.00	000.0	Primary
h11310/ru00_sss/2004-112/160_1426	0003	4.62	182.9	Secondary

Hydrographer Recommendations

Chart as 23 ft Rk.

Cartographically-Rounded Depth (Affected Charts):

23ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ¾fm (12300_1, 13006_1, 13003_1)

7.0m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 26 ft sounding

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 6.978 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous submerged rock with a least depth of 23-ft in Latitude 41°32'50.403"N , Longitude 071°23'43.739"W.

Feature Images

Figure 1.3.1

1.4) 36-ft Rk 1518/49

Survey Summary

Survey Position: 41° 32' 39.033" N, 071° 23' 49.132" W

Least Depth: 11.00 m

Timestamp: 2004-205.15:35:03.535 (07/23/2004)

Survey Line: h11310 / ru00_mb / 2004-205 / 917_1532

Profile/Beam: 1518/49

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-205/917_1532	1518/49	0.00	000.0	Primary
h11310/ru00_sss/2004-112/161_1454	0002	4.14	014.6	Secondary

Hydrographer Recommendations

Chart as 36 ft Rk

Cartographically-Rounded Depth (Affected Charts):

36ft (13223_1, 13221_1, 13221_2, 13218_1)

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

11.0m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 11.001 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous submerged rock with a least depth of 36-ft in Latitude 41° 33' 09.934" N, Longitude 071° 24' 22.760" W.

Feature Images

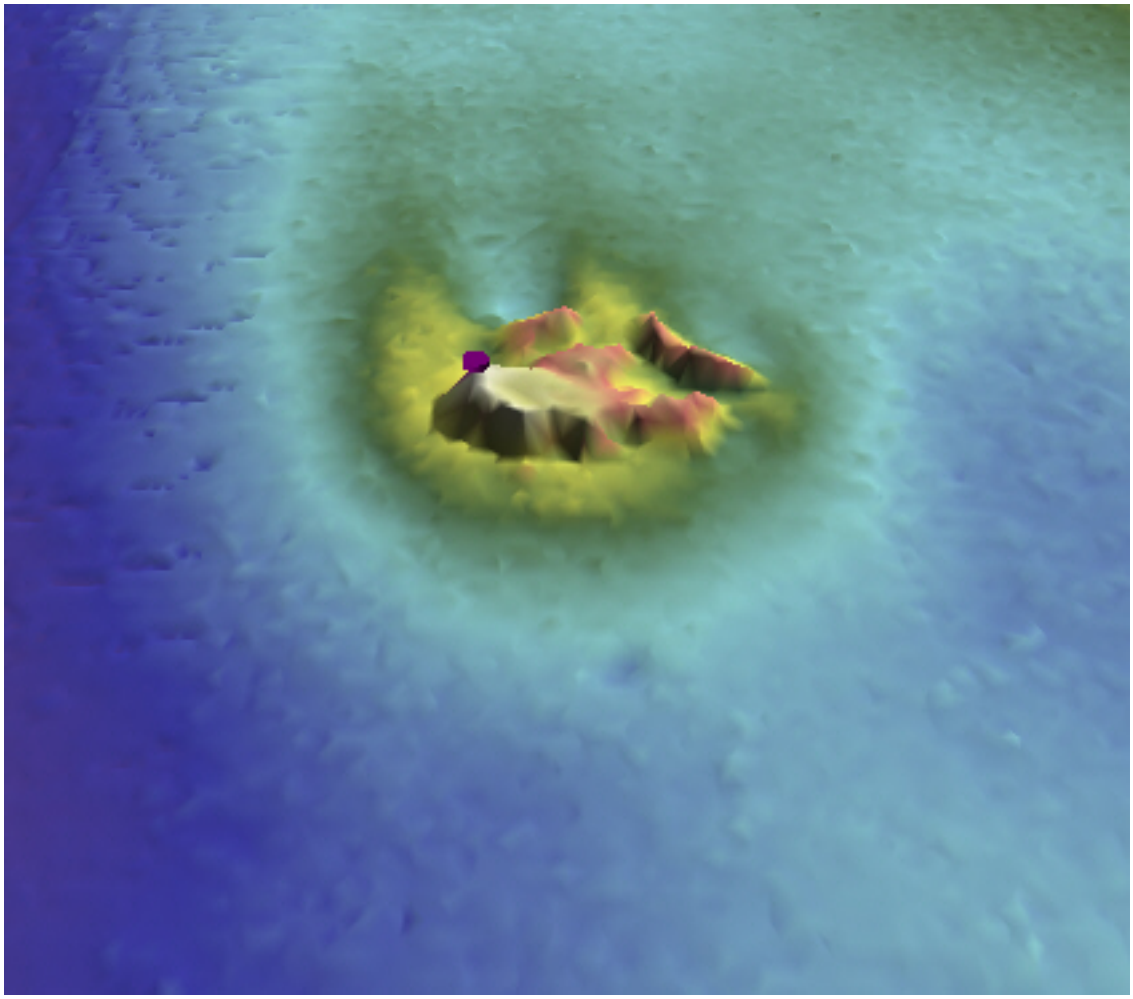


Figure 1.4.1

1.5) 47-ft Rk 2602/94

Survey Summary

Survey Position: 41° 32' 20.775" N, 071° 23' 50.201" W

Least Depth: 14.35 m

Timestamp: 2004-174.14:43:54.801 (06/22/2004)

Survey Line: h11310 / ru00_mb / 2004-174 / 709_1437

Profile/Beam: 2602/94

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

located a isolated Rk.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-174/709_1437	2602/94	0.00	000.0	Primary
h11310/ru00_sss/2004-112/161_1454	0003	5.38	031.7	Secondary
h11310/ru00_sss/2004-112/161_1454	0006	25.59	189.4	Secondary (grouped)

Hydrographer Recommendations

Chart rock with a least depths of 47-ft located in 41°32'20.775"N, 071°23'50.201"W.

Cartographically-Rounded Depth (Affected Charts):

47ft (13223_1, 13221_1, 13221_2, 13218_1)

7 ¾fm (12300_1, 13006_1, 13003_1)

14.3m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 14.354 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

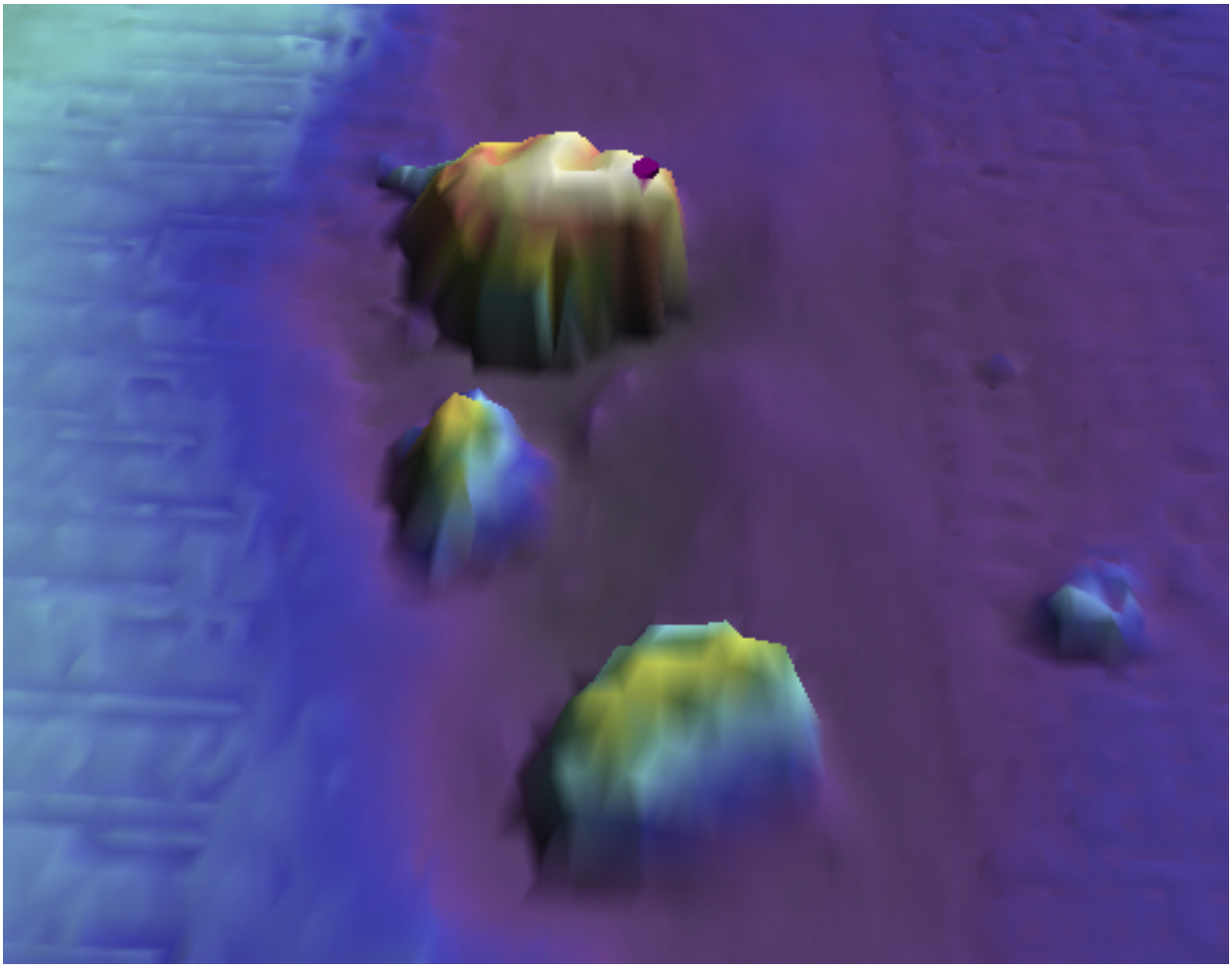


Figure 1.5.1

1.6) 25-ft Rk 4955/198

Survey Summary

Survey Position: 41° 32' 39.374" N, 071° 24' 18.826" W

Least Depth: 7.68 m

Timestamp: 2004-202.20:33:11.395 (07/20/2004)

Survey Line: h11310 / ru00_mb / 2004-202 / 603_2028

Profile/Beam: 4955/198

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-202/603_2028	4955/198	0.00	000.0	Primary
h11310/ru00_mb/2004-208/010_1846	3942/88	1.97	182.1	Secondary (grouped)
h11310/ru00_sss/2004-112/170_1825	0001	8.86	194.4	Secondary

Hydrographer Recommendations

Concur. Chart dangerous submerged rock with least depths of 25-ft at present survey location in Latitude 41°32'39.374"N, 071°24'18.825"W.

Cartographically-Rounded Depth (Affected Charts):

25ft (13223_1, 13221_1, 13221_2, 13218_1)

4 ¼fm (12300_1, 13006_1, 13003_1)

7.7m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 7.680 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous submerged rock with a least depth of 25-ft at present survey location in Latitude 41° 33' 39.374" N, Longitude 071° 24' 18.825 W.

Feature Images

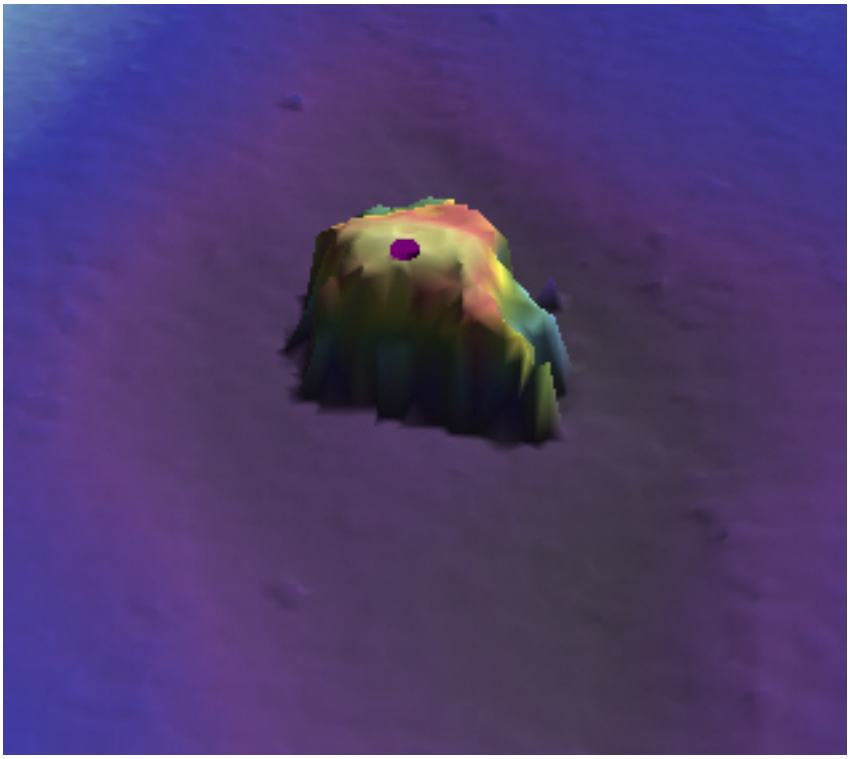


Figure 1.6.1

1.7) 38-ft Rk 18040/141

Survey Summary

Survey Position: 41° 32' 49.196" N, 071° 24' 19.930" W

Least Depth: 8.46 m

Timestamp: 2004-203.12:04:39.604 (07/21/2004)

Survey Line: h11310 / ru00_mb / 2004-203 / 604_1148

Profile/Beam: 18040/141

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-203/604_1148	18040/141	0.00	000.0	Primary
h11310/ru00_sss/2004-112/171_1850	0001	7.87	015.9	Secondary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

28ft (13223_1, 13221_1, 13221_2, 13218_1)

4 ½fm (12300_1, 13006_1, 13003_1)

8.4m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 8.459 m

WATLEV - 3:always under water/submerged

Office Notes

Chart a dangerous submerged rock with a least depth of 28-ft at present survey location in Latitude 41° 32' 49.196" N, Longitude 71° 24' 19.930" W.

Feature Images

Figure 1.7.1

1.8) 18-ft Rk 45/76

Survey Summary

Survey Position: 41° 33' 14.199" N, 071° 24' 26.356" W

Least Depth: 5.47 m

Timestamp: 2004-197.14:00:23.880 (07/15/2004)

Survey Line: h11310 / ru01_mb / 2004-197 / 533_1400

Profile/Beam: 245/76

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted as 18ft

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-197/533_1400	245/76	0.00	000.0	Primary
h11310/ru00_sss/2004-112/173_1935	0003	3.79	349.5	Secondary (grouped)
ChartGPs - Digitized	2	3.81	059.0	Secondary (grouped)
h11310/ru00_sss/2004-112/174_1955	0003	11.27	089.0	Secondary (grouped)
h11310/ru01_mb/2004-197/534_1401	145/63	41.96	326.9	Secondary
h11310/ru01_mb/2004-197/534_1401	145/63	41.96	326.9	Secondary (grouped)
h11310/ru00_sss/2004-112/173_1935	0004	46.54	329.9	Secondary (grouped)
h11310/ru00_sss/2004-113/182_1843	0001	46.98	209.8	Secondary (grouped)
h11310/ru00_sss/2004-112/173_1935	0001	49.68	206.6	Secondary (grouped)
h11310/ru01_mb/2004-197/534_1401	472/41	50.98	202.4	Secondary (grouped)
h11310/ru01_mb/2004-197/534_1401	472/41	50.98	202.4	Secondary (grouped)

Hydrographer Recommendations

Retained as charted

Cartographically-Rounded Depth (Affected Charts):

18ft (13223_1, 13221_1, 13221_2, 13218_1)

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

5.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - Side Scan contact and 100% Multibeam Coverage. Charted as 18ft
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 5.475 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete charted 18-ft sounding; chart dangerous submerged rock, least depth 18-ft at present survey location in Latitude 41° 33' 14.199" N, Longitude 071° 24' 26.356" W. Delete charted seabed characteristic (h) located at Halfway Ledge in Latitude 41°33'15.64"N, Longitude 071°24'28.68"W , and append chart with notation of "rky" at the same location.

Feature Images

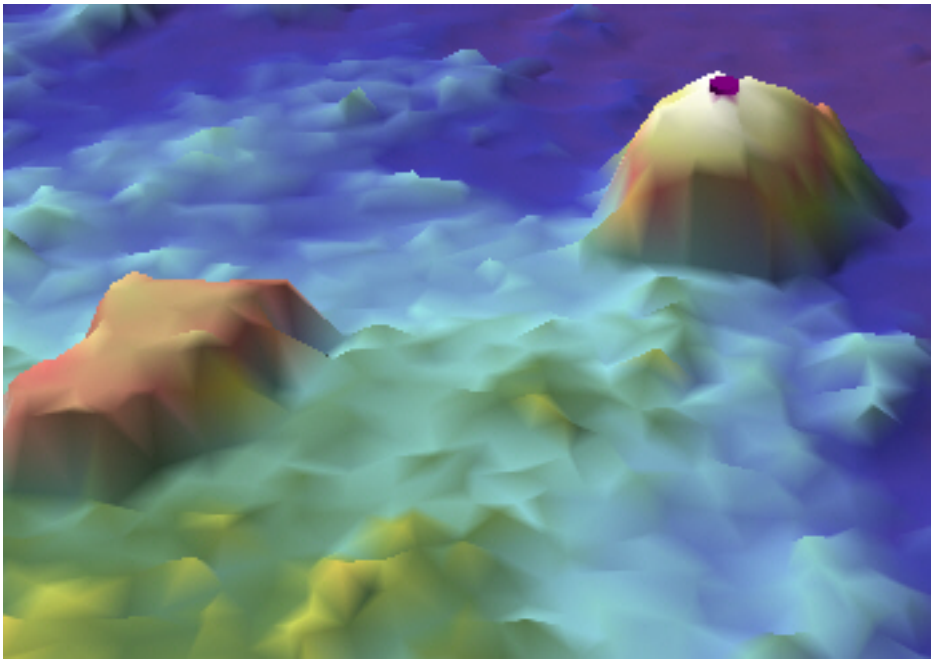


Figure 1.8.1

1.9) 19-ft Obstn 6855/66

Survey Summary

Survey Position: 41° 33' 53.069" N, 071° 24' 27.412" W

Least Depth: 5.96 m

Timestamp: 2004-203.17:21:20.243 (07/21/2004)

Survey Line: h11310 / ru00_mb / 2004-203 / 616_1715

Profile/Beam: 6855/66

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Two contacts very close to one another. One seems to be a rock while the other looks manmade, perhaps a section of culvert.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-203/616_1715	6855/66	0.00	000.0	Primary
h11310/ru01_sss/2004-209/126_1824	0001	0.71	125.9	Secondary
h11310/ru00_sss/2004-112/175_2016	0001	8.12	335.8	Secondary

Hydrographer Recommendations

Chart as 19 ft Obstr

Cartographically-Rounded Depth (Affected Charts):

19ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ¼fm (12300_1, 13006_1, 13003_1)

5.9m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: CATOBS - 7:foul ground

INFORM - Two contacts very close to one another. One seems to be a rock while the other looks manmade, perhaps a section of culvert.

NATCON - 4:hard surfaced

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.960 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous submerged obstruction with a least depth of 19-ft in Latitude 41° 33' 53.069" N, Longitude 071° 24' 27.412" W.

Note: SSS review indicates that the feature is one object. The two contacts reported by field unit is related to horizontal offsets in the bathy data, thus generating two separate objects in the BASE surface grid. SS indicates the object is one feature.

Feature Images

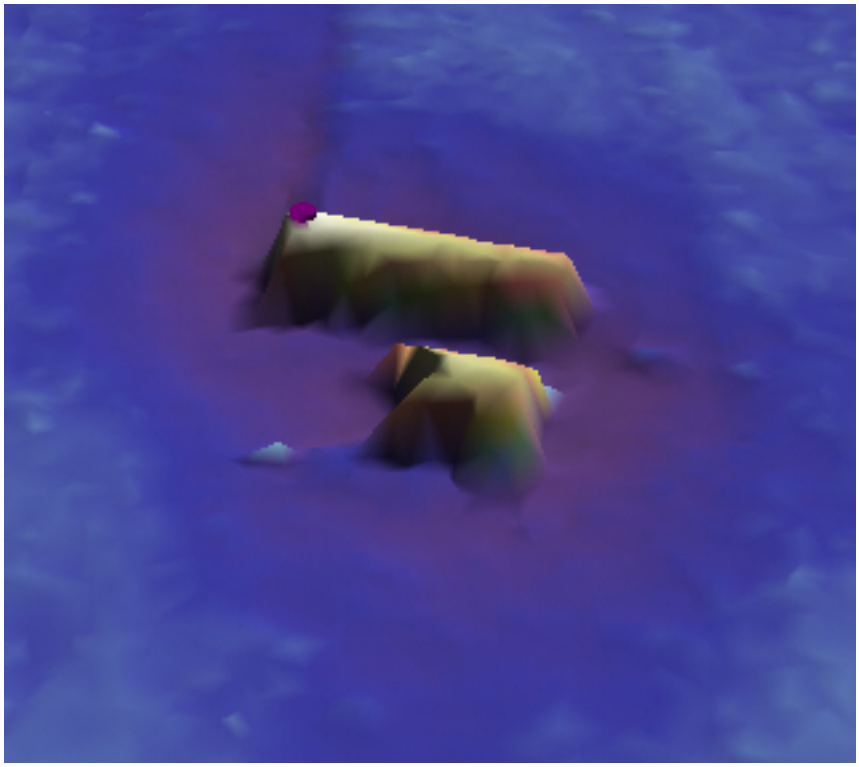


Figure 1.9.1

1.10) 22-ft Rk 8008/239

Survey Summary

Survey Position: 41° 33' 05.365" N, 071° 24' 35.583" W

Least Depth: 6.80 m

Timestamp: 2004-204.18:15:00.292 (07/22/2004)

Survey Line: h11310 / ru00_mb / 2004-204 / 629_1807

Profile/Beam: 8008/239

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-204/629_1807	8008/239	0.00	000.0	Primary
h11310/ru00_sss/2004-112/176_2036	0001	8.65	195.8	Secondary

Hydrographer Recommendations

Chart as 22 ft Rks

Cartographically-Rounded Depth (Affected Charts):

22ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ¾fm (12300_1, 13006_1, 13003_1)

6.8m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 6.801 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart dangerous submerged rock with a least depth of 22-ft in Latitude 41° 33' 05.365" N, Longitude 071° 24' 35.583" W.

Feature Images

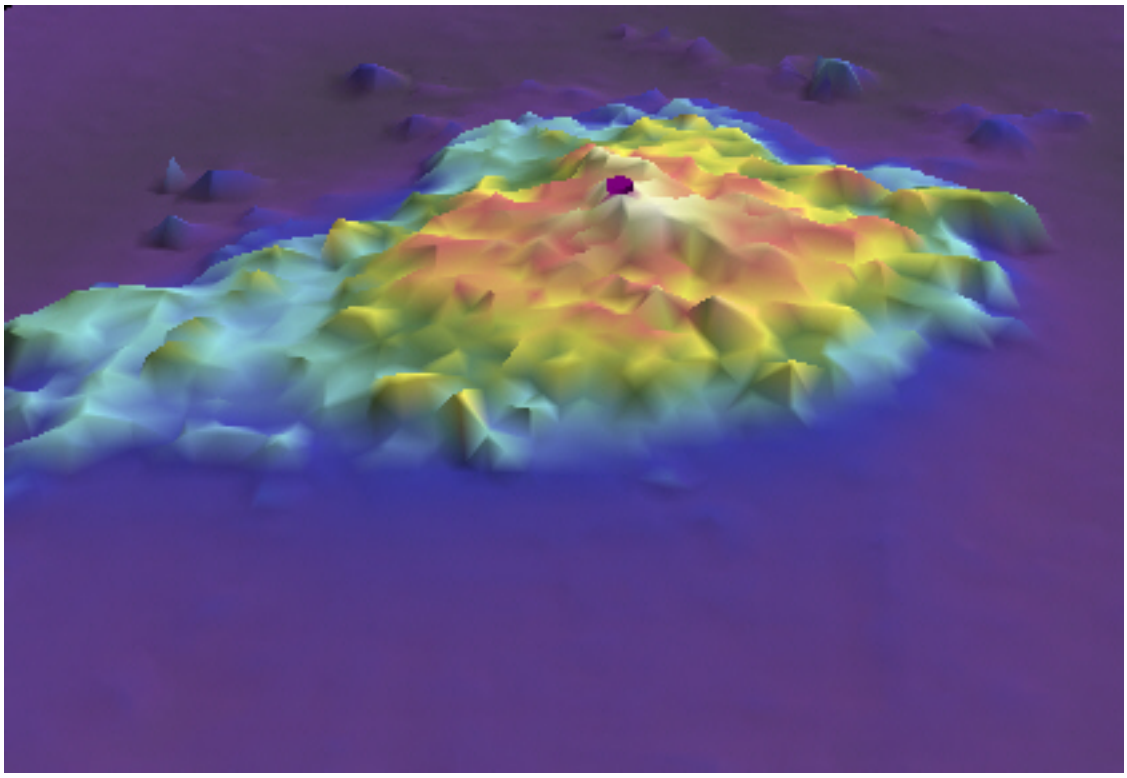


Figure 1.10.1

1.11) 18-ft Rk 15927/235

Survey Summary

Survey Position: 41° 33' 55.066" N, 071° 24' 34.442" W

Least Depth: 5.60 m

Timestamp: 2004-204.17:42:11.532 (07/22/2004)

Survey Line: h11310 / ru00_mb / 2004-204 / 627_1727

Profile/Beam: 15927/235

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-204/627_1727	15927/235	0.00	000.0	Primary
h11310/ru00_sss/2004-112/177_2057	0001	3.64	349.6	Secondary
h11310/ru01_sss/2004-209/124_1840	0001	5.20	134.0	Secondary
h11310/ru01_sss/2004-209/125_1832	0003	6.09	307.4	Secondary

Hydrographer Recommendations

Chart as 18 ft Rk

Cartographically-Rounded Depth (Affected Charts):

18ft (13223_1, 13221_1, 13221_2, 13218_1)

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

5.6m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.599 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous submerged rock with a least depth of 18-ft in Latitude 41° 33' 55.066" N, Latitude 071° 24' 34.442" W.

Feature Images

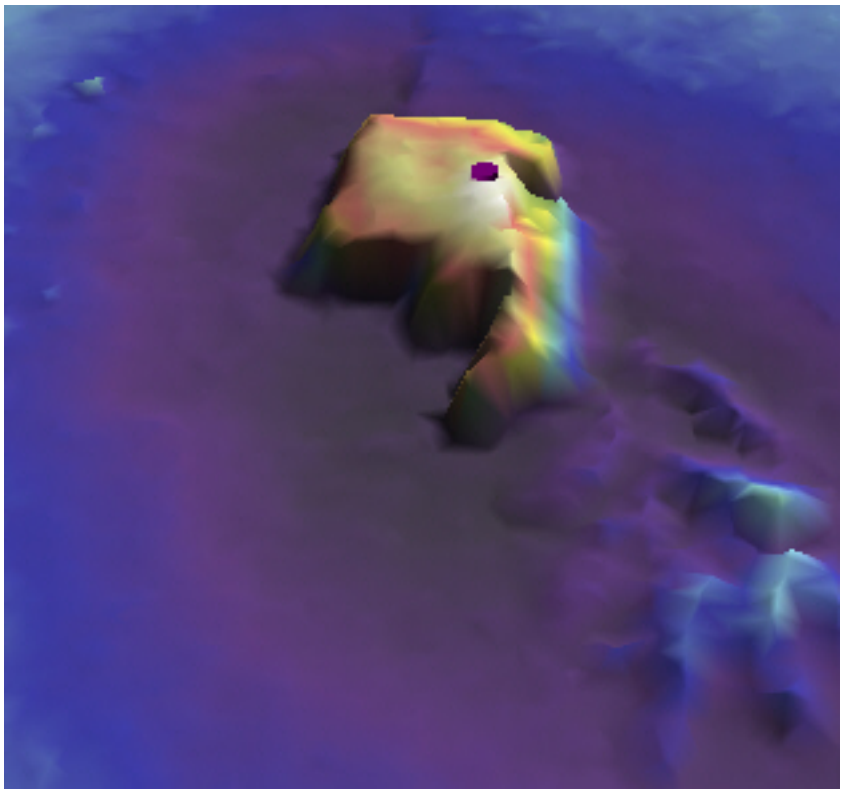


Figure 1.11.1

1.12) 19-ft Rk 5638/119

Survey Summary

Survey Position: 41° 33' 31.114" N, 071° 24' 38.004" W

Least Depth: 6.00 m

Timestamp: 2004-204.19:07:48.564 (07/22/2004)

Survey Line: h11310 / ru00_mb / 2004-204 / 632_1903

Profile/Beam: 5638/119

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-204/632_1903	5638/119	0.00	000.0	Primary
h11310/ru00_sss/2004-112/177_2058	0005	3.10	329.9	Secondary
h11310/ru01_sss/2004-209/133_1750	0001	4.35	297.2	Secondary
h11310/ru01_sss/2004-209/148_1647	0008	4.93	076.5	Secondary

Hydrographer Recommendations

Chart as 19 ft Rk.

Cartographically-Rounded Depth (Affected Charts):

19ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ¼fm (12300_1, 13006_1, 13003_1)

6.0m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.995 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Recommend charting 19-ft located in Latitude 41°33'31.114"N, Longitude 071°24'38.004"W.

Feature Images

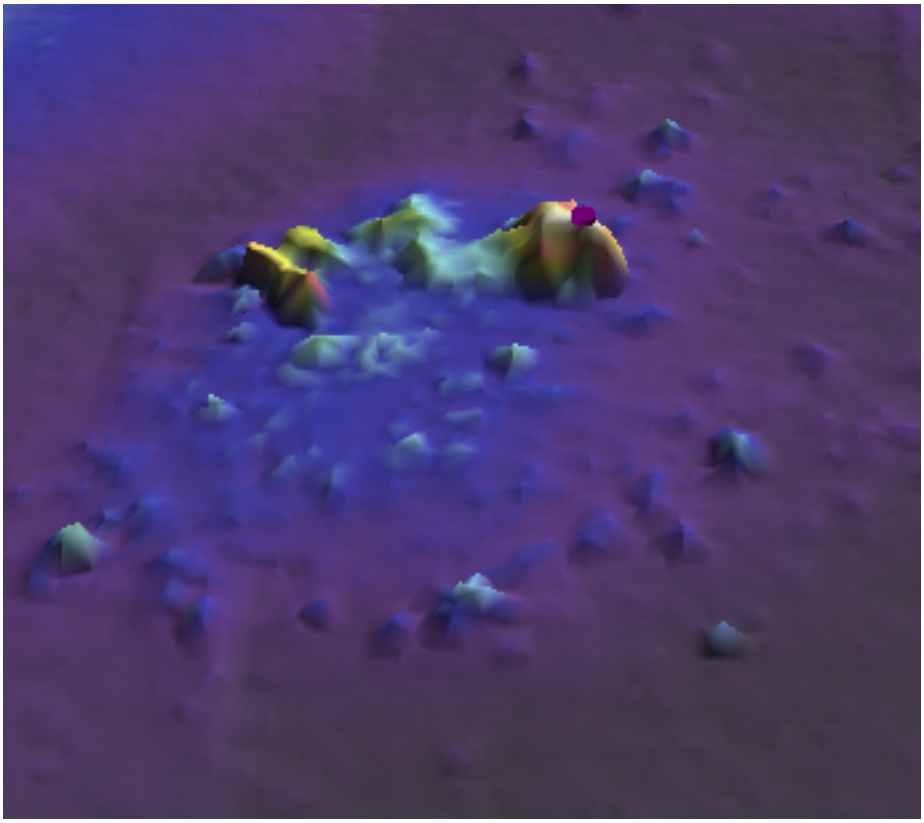


Figure 1.12.1

1.13) 19-ft Rk 3014/68

Survey Summary

Survey Position: 41° 32' 34.353" N, 071° 24' 45.203" W

Least Depth: 5.89 m

Timestamp: 2004-208.14:51:28.737 (07/26/2004)

Survey Line: h11310 / ru00_mb / 2004-208 / 643_1448

Profile/Beam: 3014/68

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-208/643_1448	3014/68	0.00	000.0	Primary
h11310/ru01_sss/2004-209/148_1647	0001	1.92	027.5	Secondary
h11310/ru00_sss/2004-112/177_2059	0001	3.46	009.4	Secondary

Hydrographer Recommendations

Chart as 19 ft Rk

Cartographically-Rounded Depth (Affected Charts):

19ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ¼fm (12300_1, 13006_1, 13003_1)

5.9m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.893 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a dangerous submerged rock with a least depth of 19-ft in Latitude 41° 32' 34.353" N, Longitude 071° 24' 45.203" W.

Feature Images

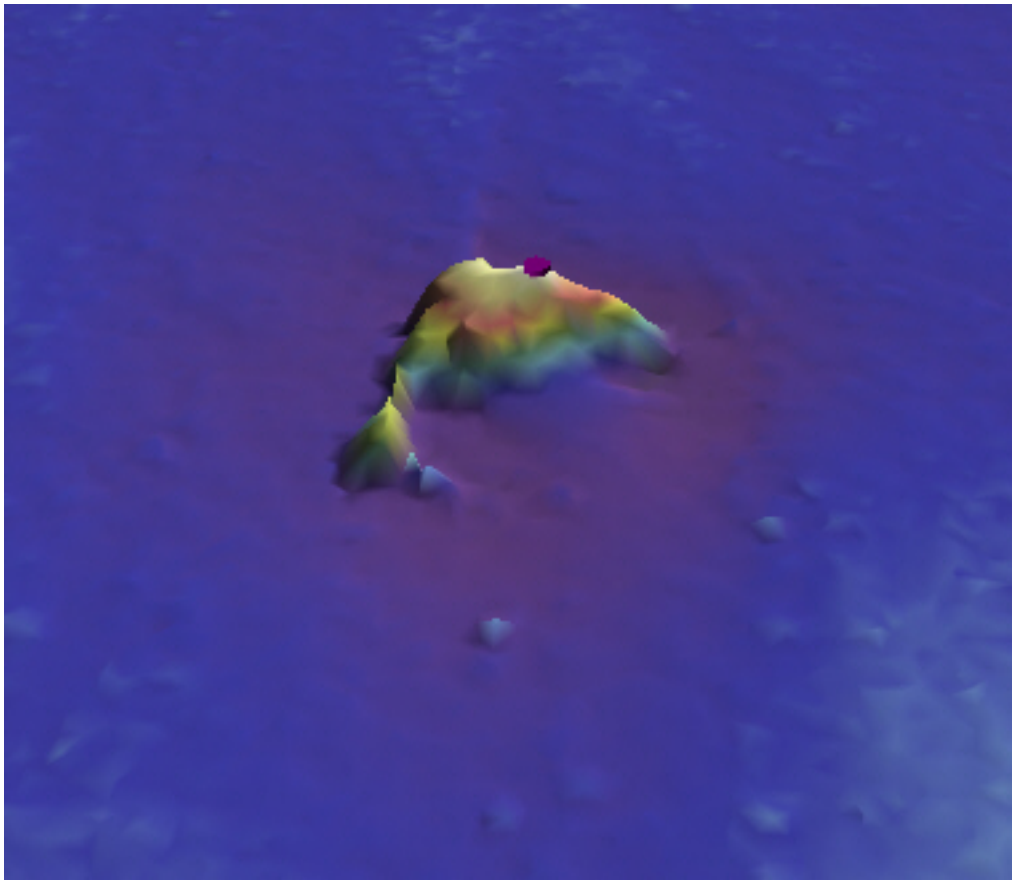


Figure 1.13.1

1.14) 45-ft Wk 1839/2

Survey Summary

Survey Position: 41° 34' 26.379" N, 071° 19' 09.186" W

Least Depth: 13.94 m

Timestamp: 2004-139.18:19:44.041 (05/18/2004)

Survey Line: h11310 / ru00_mb / 2004-139 / 317_1815

Profile/Beam: 1839/2

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Possible barge, non-dangerous.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-139/317_1815	1839/2	0.00	000.0	Primary
h11310/ru00_sss/2004-117/191_1722	0001	21.19	302.8	Secondary (grouped)
h11310/ru00_sss/2004-117/180_1441	0001	24.42	351.1	Secondary (grouped)

Hydrographer Recommendations

Chart as 45 ft Wk

Cartographically-Rounded Depth (Affected Charts):

45ft (13223_1, 13221_1, 13221_2, 13218_1)

7 ½fm (12300_1, 13006_1, 13003_1)

13.9m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 1:non-dangerous wreck

HEIGHT - 13.93 m

INFORM - Possible barge, non-dangerous.

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 13.935 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart a dangerous wreck, least depth 45 feet (13.9m), in Latitude 41°34'26.379" N, Longitude 071°19'09.186" W.

Feature Images

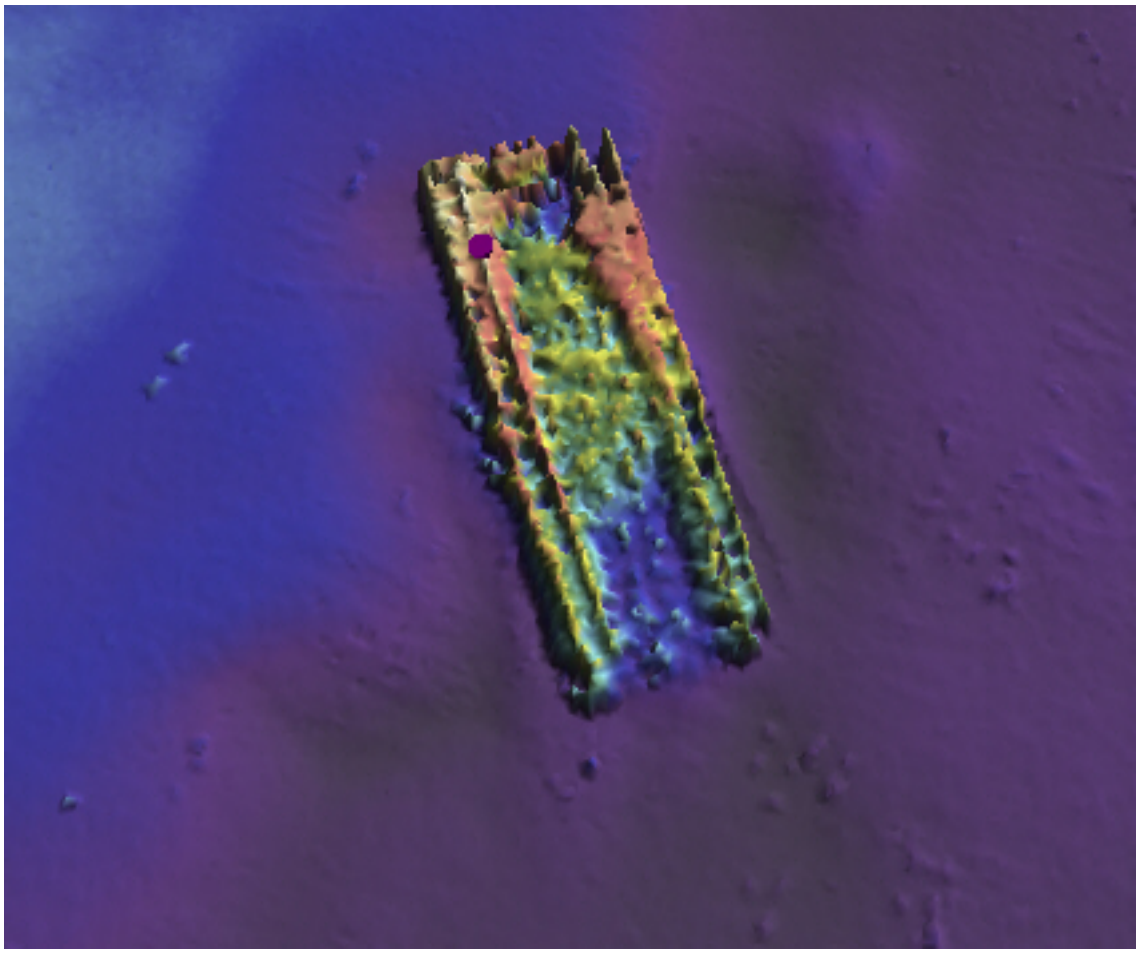


Figure 1.14.1

1.15) 12-ft Rk 392/69

Survey Summary

Survey Position: 41° 35' 14.767" N, 071° 18' 02.279" W

Least Depth: 3.60 m

Timestamp: 2004-140.15:50:47.956 (05/19/2004)

Survey Line: h11310 / ru01_mb / 2004-140 / 571_1550

Profile/Beam: 392/69

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-140/571_1550	392/69	0.00	000.0	Primary
h11310/ru01_sss/2004-211/141_1454	0002	1.54	083.5	Secondary

Hydrographer Recommendations

Chart as 11 ft Rk.

Cartographically-Rounded Depth (Affected Charts):

12ft (13223_1, 13221_1, 13221_2, 13218_1)

2fm (13006_1, 13003_1)

3.6m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.597 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. The cartographically rounded depth following application of approved water levels is 12 feet. Chart 12-ft rock at the surveyed location.

Feature Images

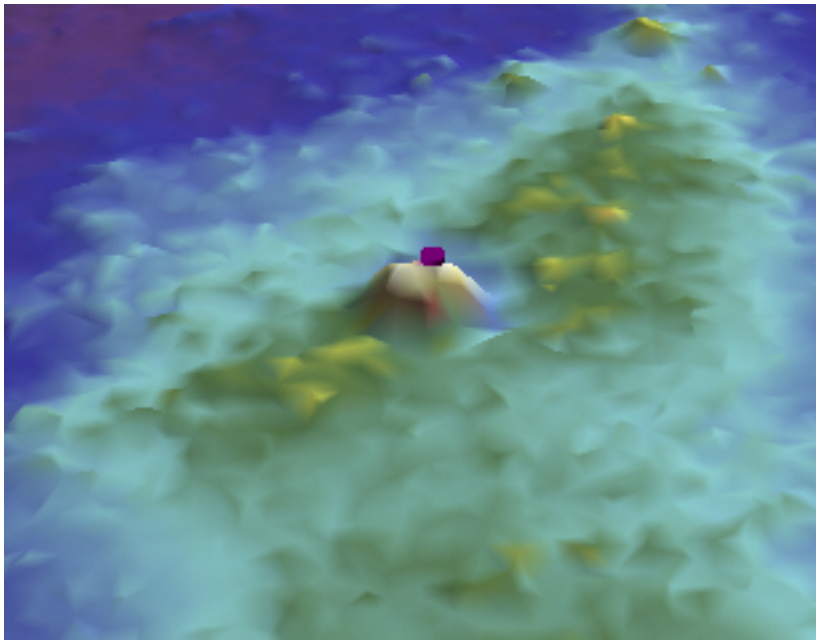


Figure 1.15.1

1.16) 20-ft Rk 1277/5

Survey Summary

Survey Position: 41° 34' 59.479" N, 071° 18' 09.328" W

Least Depth: 6.32 m

Timestamp: 2004-135.14:59:57.207 (05/14/2004)

Survey Line: h11310 / ru01_mb / 2004-135 / 708_1458

Profile/Beam: 1277/5

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-135/708_1458	1277/5	0.00	000.0	Primary
h11310/ru01_sss/2004-177/155_1344	0004	1.22	039.8	Secondary

Hydrographer Recommendations

Chart as 20 ft Rk.

Cartographically-Rounded Depth (Affected Charts):

20ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ½fm (12300_1, 13006_1, 13003_1)

6.3m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 6.324 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

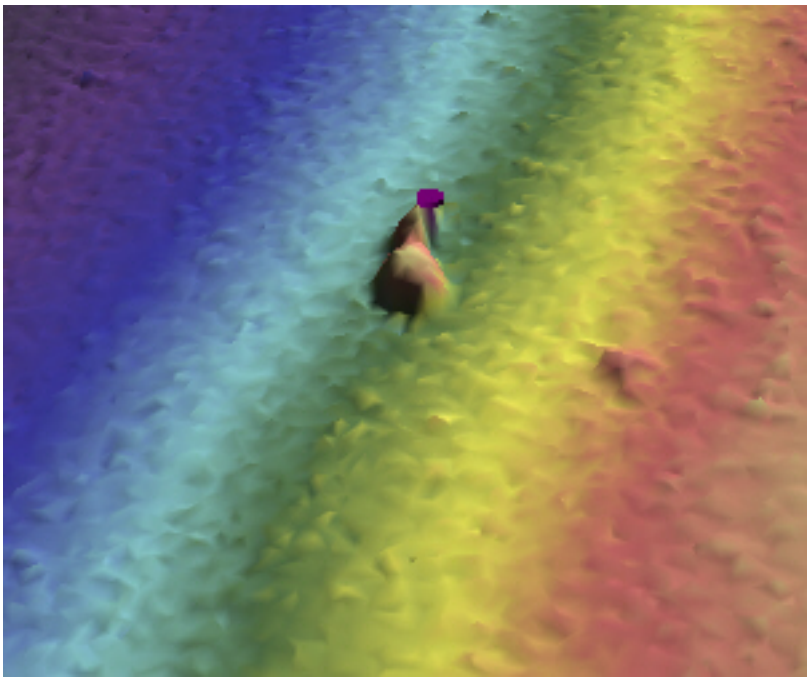


Figure 1.16.1

1.17) 10-ft Rk 643/54

Survey Summary

Survey Position: 41° 34' 37.367" N, 071° 18' 18.121" W

Least Depth: 3.20 m

Timestamp: 2004-135.14:23:52.226 (05/14/2004)

Survey Line: h11310 / ru01_mb / 2004-135 / 699_1423

Profile/Beam: 643/54

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 10 ft

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-135/699_1423	643/54	0.00	000.0	Primary
h11310/ru01_sss/2004-211/138_1445	0004	1.57	205.9	Secondary
ChartGPs - Digitized	12	9.31	285.5	Secondary (grouped)

Hydrographer Recommendations

Update charted 10 ft sounding to current position.

Cartographically-Rounded Depth (Affected Charts):

10ft (13223_1, 13221_1, 13221_2, 13218_1)

1 ¾fm (12300_1, 13006_1, 13003_1)

3.2m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 10 ft

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.197 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete charted 10-ft sounding; chart dangerous submerged rock, least depth 10-ft in Latitude 41° 34' 37.367"N, Longitude 0 71° 18' 18.121" W.

Feature Images

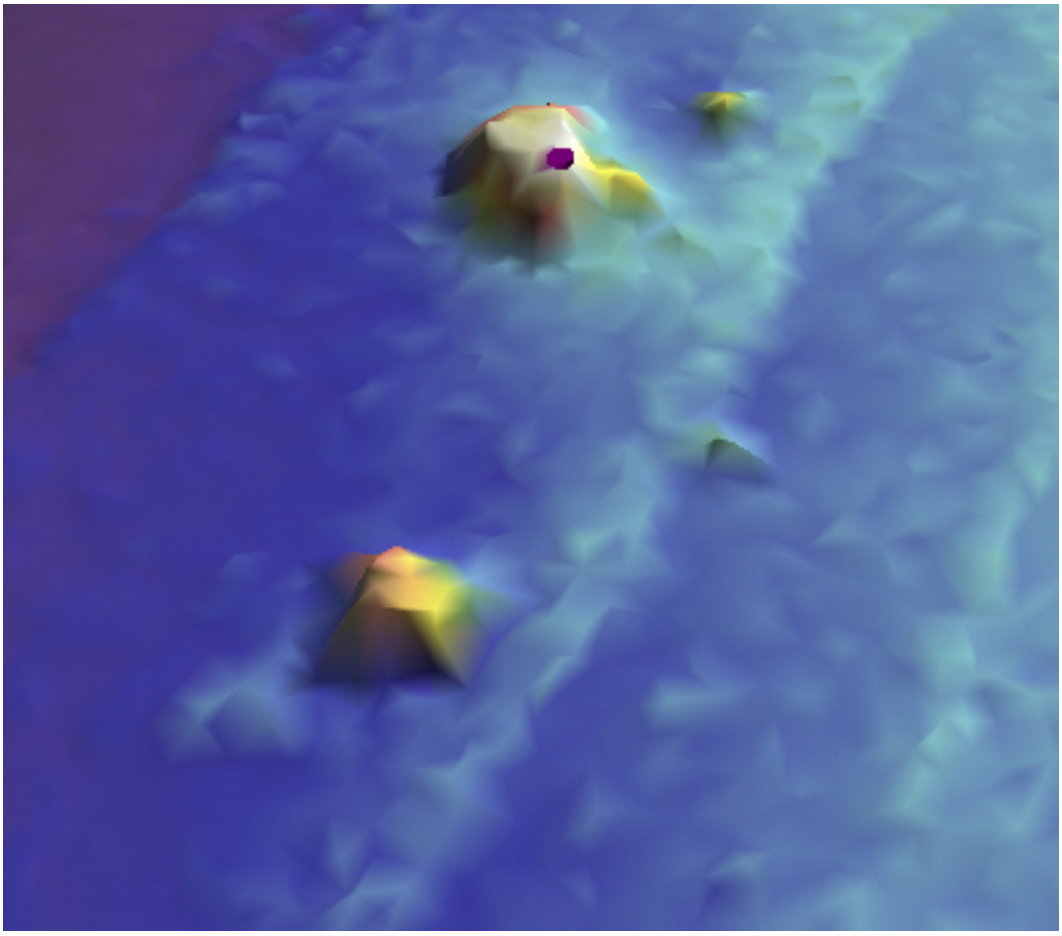


Figure 1.17.1

1.18) 17-ft Rk 1979/5

Survey Summary

Survey Position: 41° 34' 41.908" N, 071° 19' 21.263" W

Least Depth: 5.38 m

Timestamp: 2004-140.12:59:20.233 (05/19/2004)

Survey Line: h11310 / ru01_mb / 2004-140 / 467_1257

Profile/Beam: 1979/5

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-140/467_1257	1979/5	0.00	000.0	Primary
h11310/ru01_sss/2004-211/124_1510	0001	5.41	359.6	Secondary
h11310/ru01_sss/2004-211/123_1515	0001	8.24	015.0	Secondary

Hydrographer Recommendations

Chart as 17 ft Rk

Cartographically-Rounded Depth (Affected Charts):

17ft (13223_1, 13221_1, 13221_2, 13218_1)

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

5.4m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.382 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

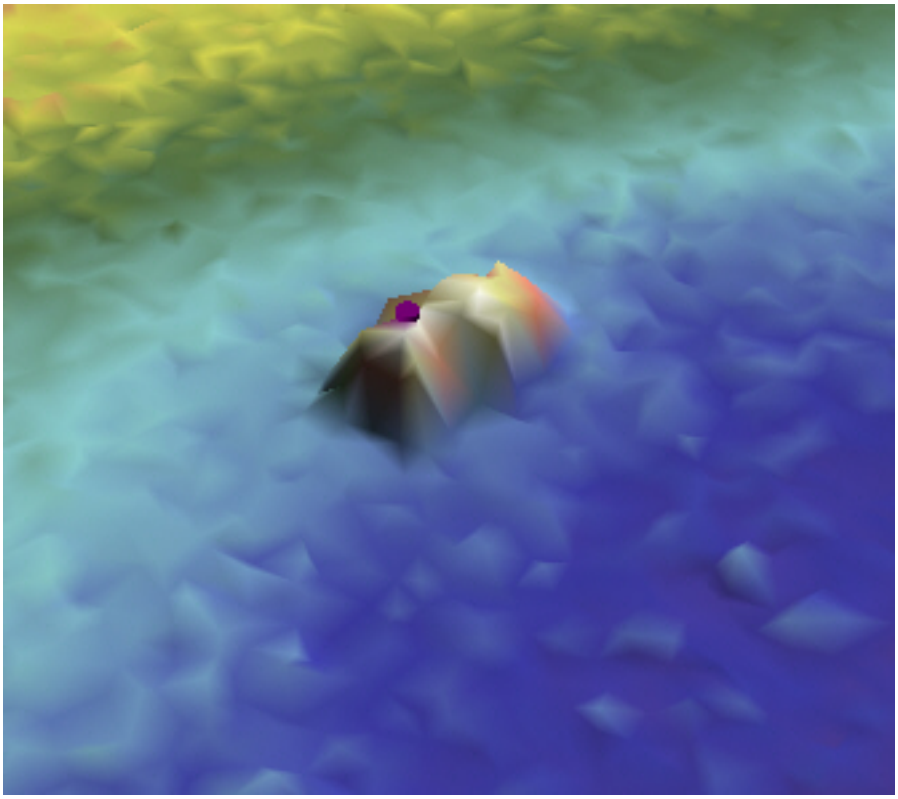


Figure 1.18.1

1.19) 18-ft Rk 3490/76

Survey Summary

Survey Position: 41° 32' 03.162" N, 071° 23' 30.726" W

Least Depth: 5.50 m

Timestamp: 2004-191.12:51:53.139 (07/09/2004)

Survey Line: h11310 / ru01_mb / 2004-191 / 430_1248

Profile/Beam: 3490/76

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 20 ft Sounding.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-191/430_1248	3490/76	0.00	000.0	Primary
h11310/ru01_sss/2004-209/114_1354	0004	4.08	235.8	Secondary
ChartGPs - Digitized	19	12.97	013.7	Secondary (grouped)
h11310/ru01_sss/2004-210/121_2117	0001	16.12	000.0	Secondary
h11310/ru01_mb/2004-191/428_1304	3702/23	30.32	257.3	Secondary

Hydrographer Recommendations

Change charted 20 ft sounding to 18 ft Rk.

Cartographically-Rounded Depth (Affected Charts):

18ft (13223_1, 13221_1, 13221_2, 13218_1)

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

5.5m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 20 ft Sounding.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.504 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete charted 20-ft sounding; chart dangerous rock, least depth 18-ft in Latitude 41° 32' 03.162"N, Longitude 071° 23' 30.726"W.

Feature Images

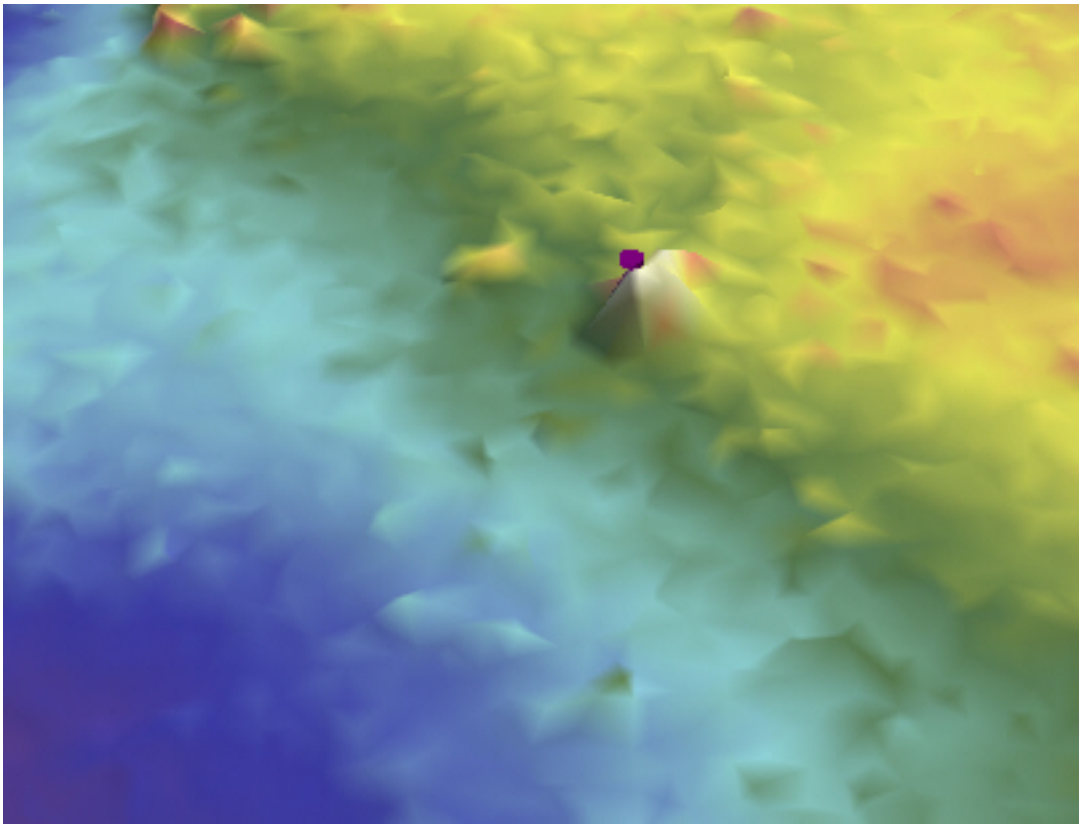


Figure 1.19.1

1.20) 13-ft Rk 637/72

Survey Summary

Survey Position: 41° 32' 55.510" N, 071° 23' 25.176" W

Least Depth: 4.01 m

Timestamp: 2004-181.16:02:22.609 (06/29/2004)

Survey Line: h11310 / ru01_mb / 2004-181 / 451_1601

Profile/Beam: 637/72

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-181/451_1601	637/72	0.00	000.0	Primary
h11310/ru01_sss/2004-209/106_2106	0002	8.70	226.5	Secondary
h11310/ru01_mb/2004-181/451_1601	786/12	23.97	220.8	Secondary (grouped)
h11310/ru01_mb/2004-181/451_1601	786/12	23.97	220.8	Secondary
h11310/ru01_sss/2004-210/117_2057	0002	25.45	229.5	Secondary
h11310/ru01_mb/2004-181/453_1557	267/74	49.35	082.2	Secondary
h11310/ru01_mb/2004-181/453_1557	267/74	49.35	082.2	Secondary
h11310/ru00_sss/2004-113/196_2157	0003	59.00	085.3	Secondary (grouped)

Hydrographer Recommendations

Chart as 13 ft Rk.

Cartographically-Rounded Depth (Affected Charts):

13ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ¼fm (12300_1, 13006_1, 13003_1)

4.0m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.006 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

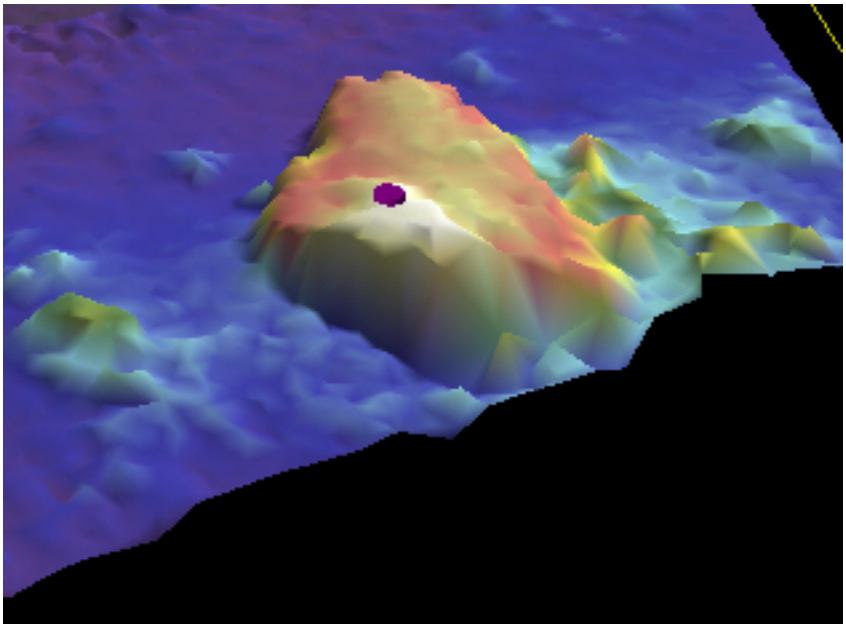


Figure 1.20.1

1.21) 12-ft Rk 1862/24

Survey Summary

Survey Position: 41° 33' 50.970" N, 071° 22' 52.307" W

Least Depth: 3.83 m

Timestamp: 2004-180.19:51:13.108 (06/28/2004)

Survey Line: h11310 / ru01_mb / 2004-180 / 472_1949

Profile/Beam: 1862/24

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-180/472_1949	1862/24	0.00	000.0	Primary
h11310/ru01_sss/2004-210/115_2046	0001	7.32	049.3	Secondary

Hydrographer Recommendations

Chart as 12 ft Rk

Cartographically-Rounded Depth (Affected Charts):

12ft (13223_1, 13221_1, 13221_2, 13218_1)

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

3.8m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.828 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

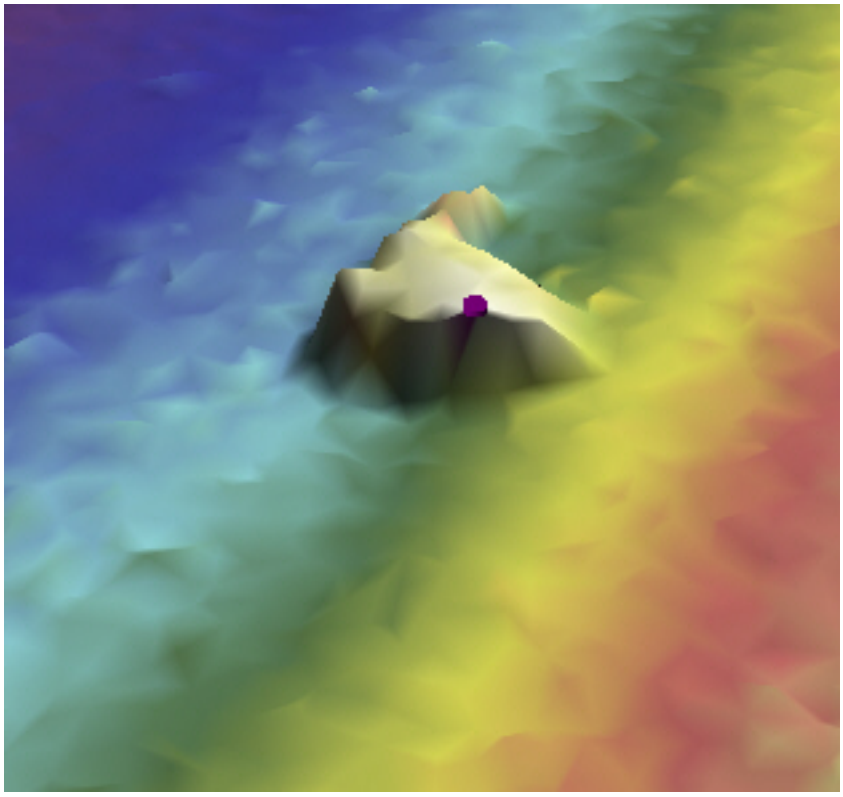


Figure 1.21.1

1.22) 9-ft Rk 2129/1

Survey Summary

Survey Position: 41° 34' 36.478" N, 071° 24' 30.321" W

Least Depth: 2.86 m

Timestamp: 2004-180.14:56:39.108 (06/28/2004)

Survey Line: h11310 / ru01_mb / 2004-180 / 305_1454

Profile/Beam: 2129/1

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 9ft rky 21m west of current sounding.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-180/305_1454	2129/1	0.00	000.0	Primary
h11310/ru01_sss/2004-209/115_2003	0005	18.33	176.9	Secondary (grouped)
h11310/ru01_mb/2004-180/304_1500	3279/64	19.66	153.7	Secondary (grouped)
h11310/ru01_mb/2004-180/304_1500	3279/64	19.66	153.7	Secondary
ChartGPs - Digitized	3	21.38	078.2	Secondary (grouped)
h11310/ru01_sss/2004-210/109_1938	0004	32.95	168.7	Secondary (grouped)

Hydrographer Recommendations

Update chart with current position of 9ft rky.

Cartographically-Rounded Depth (Affected Charts):

9ft (13223_1, 13221_1, 13221_2, 13218_1)

1 ½fm (12300_1, 13006_1, 13003_1)

2.8m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 9ft rky 21m west of current sounding.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 2.862 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete 9-ft sounding in the vicinity of Brig Ledge; chart dangerous submerged rock, least depth 9-ft in Latitude 41° 34' 36.478"N, Longitude 071° 24' 30.321"W.

Feature Images

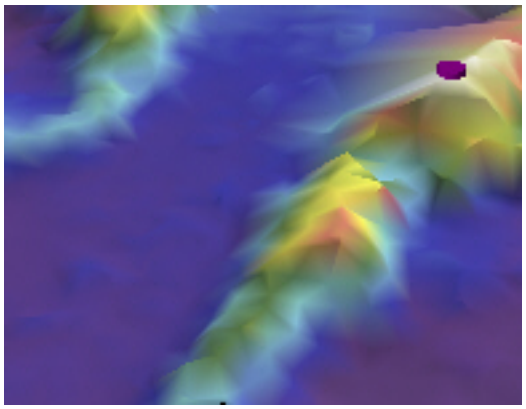


Figure 1.22.1

1.23) 9-ft Rk 569/35

Survey Summary

Survey Position: 41° 34' 09.924" N, 071° 24' 40.982" W

Least Depth: 2.71 m

Timestamp: 2004-192.12:25:38.375 (07/10/2004)

Survey Line: h11310 / ru01_mb / 2004-192 / 311_1225

Profile/Beam: 569/35

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 9ft sounding 25m WNW of current 9ft sounding

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-192/311_1225	569/35	0.00	000.0	Primary
h11310/ru01_sss/2004-209/118_1927	0001	4.67	055.1	Secondary (grouped)
ChartGPs - Digitized	5	24.75	116.2	Secondary (grouped)

Hydrographer Recommendations

Change charted location of 9ft sounding to current position

Cartographically-Rounded Depth (Affected Charts):

9ft (13223_1, 13221_1, 13221_2, 13218_1)

1 ½fm (12300_1, 13006_1, 13003_1)

2.7m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 9ft sounding 25m WNW of current 9ft sounding

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 2.709 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete 9-ft sounding located at General Rock; chart dangerous submerged rock, least depth 9-ft in Latitude 41° 34' 09.924"N, Longitude 071° 24' 40.982" W.

Feature Images

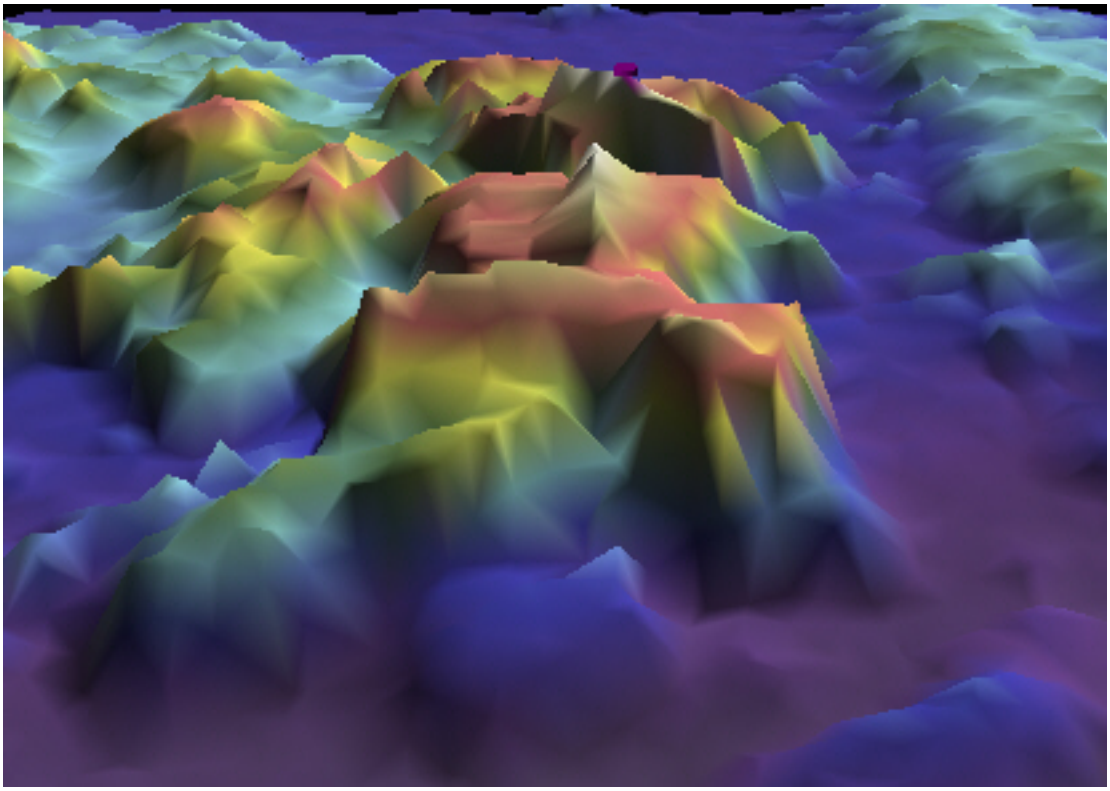


Figure 1.23.1

1.24) 21-ft sounding 210/2

Survey Summary

Survey Position: 41° 33' 21.030" N, 071° 24' 54.598" W

Least Depth: 6.52 m

Timestamp: 2004-197.16:20:41.131 (07/15/2004)

Survey Line: h11310 / ru01_mb / 2004-197 / 348_1620

Profile/Beam: 210/2

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-197/348_1620	210/2	0.00	000.0	Primary
h11310/ru01_sss/2004-210/106_1912	0004	1.68	062.9	Secondary
h11310/ru01_sss/2004-209/133_1750	0003	2.47	292.4	Secondary
h11310/ru01_sss/2004-209/129_1743	0001	11.69	298.7	Secondary

Hydrographer Recommendations

Chart as 21 ft Rks

Cartographically-Rounded Depth (Affected Charts):

21ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ½fm (12300_1, 13006_1, 13003_1)

6.5m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 6.518 m

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. This feature resides in a rocky area. Chart rock as a 21-ft sounding.

Feature Images

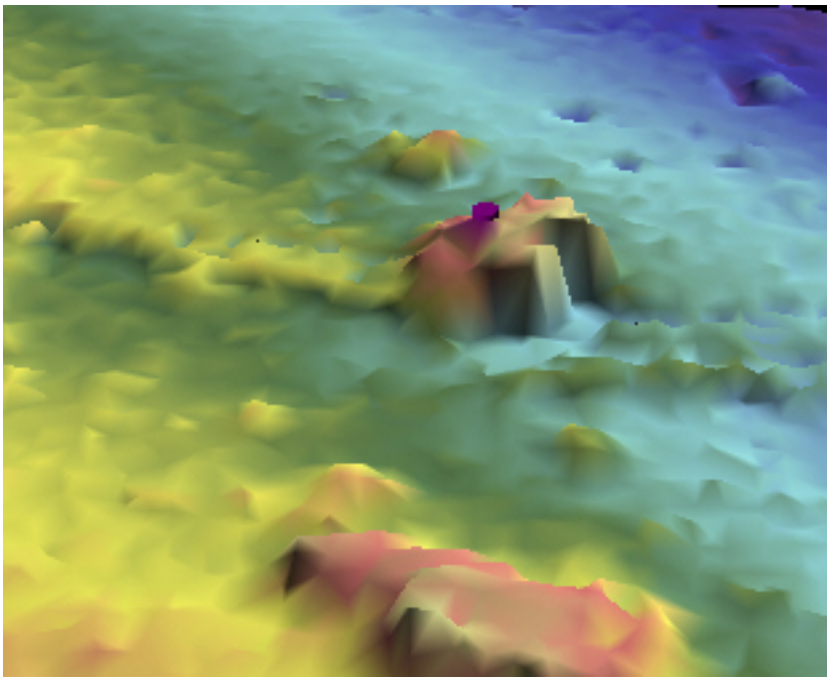


Figure 1.24.1

1.25) 20-ft Rk 10064/220

Survey Summary

Survey Position: 41° 32' 55.458" N, 071° 24' 44.607" W

Least Depth: 6.12 m

Timestamp: 2004-208.14:40:32.221 (07/26/2004)

Survey Line: h11310 / ru00_mb / 2004-208 / 642_1431

Profile/Beam: 10064/220

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-208/642_1431	10064/220	0.00	000.0	Primary
h11310/ru01_sss/2004-209/148_1647	0004	3.67	239.5	Secondary

Hydrographer Recommendations

Chart as 20 ft Rk

Cartographically-Rounded Depth (Affected Charts):

20ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ¼fm (12300_1, 13006_1, 13003_1)

6.1m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 6.119 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart a dangerous rock with least depth 20 feet. Chart area as "rky."

Feature Images

Figure 1.25.1

1.26) 16-ft Rk 3753/34

Survey Summary

Survey Position: 41° 32' 47.352" N, 071° 24' 50.391" W

Least Depth: 5.07 m

Timestamp: 2004-205.16:02:57.318 (07/23/2004)

Survey Line: h11310 / ru01_mb / 2004-205 / 651_1559

Profile/Beam: 3753/34

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-205/651_1559	3753/34	0.00	000.0	Primary
h11310/ru01_sss/2004-209/135_1712	0003	5.25	002.0	Secondary

Hydrographer Recommendations

Chart as 16 ft Rk

Cartographically-Rounded Depth (Affected Charts):

16ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ¾fm (12300_1, 13006_1, 13003_1)

5.0m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.065 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

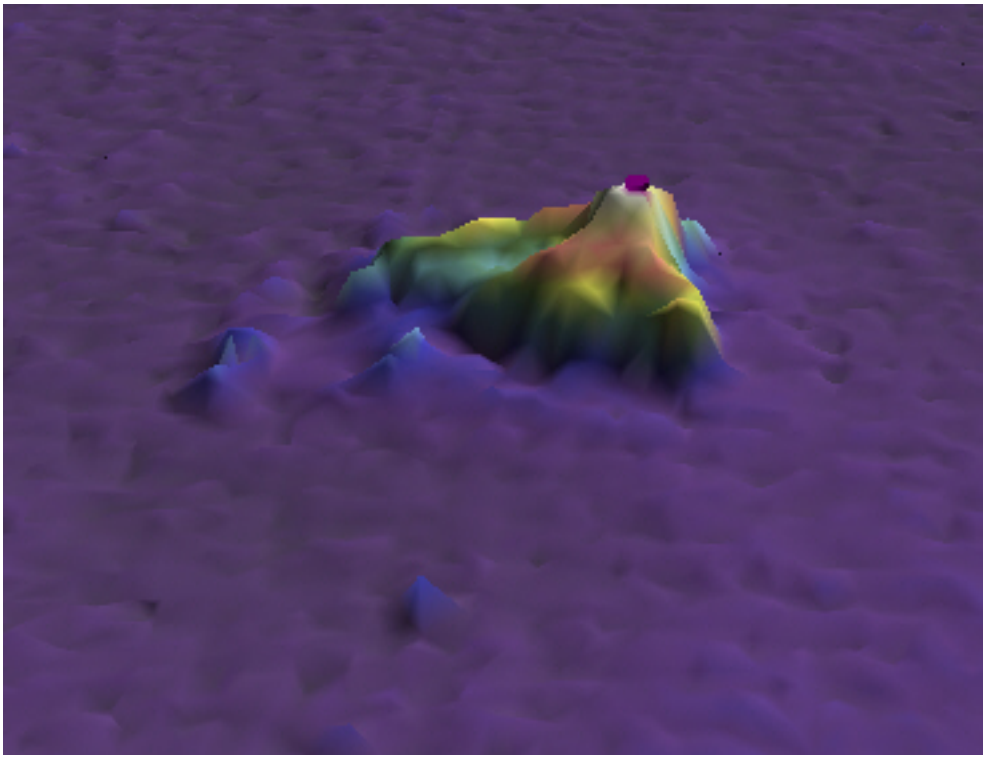


Figure 1.26.1

1.27) 15-ft Rk 4847/8

Survey Summary

Survey Position: 41° 33' 11.130" N, 071° 24' 52.881" W

Least Depth: 4.64 m

Timestamp: 2004-197.16:54:40.016 (07/15/2004)

Survey Line: h11310 / ru01_mb / 2004-197 / 378_1650

Profile/Beam: 4847/8

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-197/378_1650	4847/8	0.00	000.0	Primary
h11310/ru01_sss/2004-209/134_1723	0003	0.90	160.1	Secondary

Hydrographer Recommendations

Chart as 15 ft Rk

Cartographically-Rounded Depth (Affected Charts):

15ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ½fm (12300_1, 13006_1, 13003_1)

4.6m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.640 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

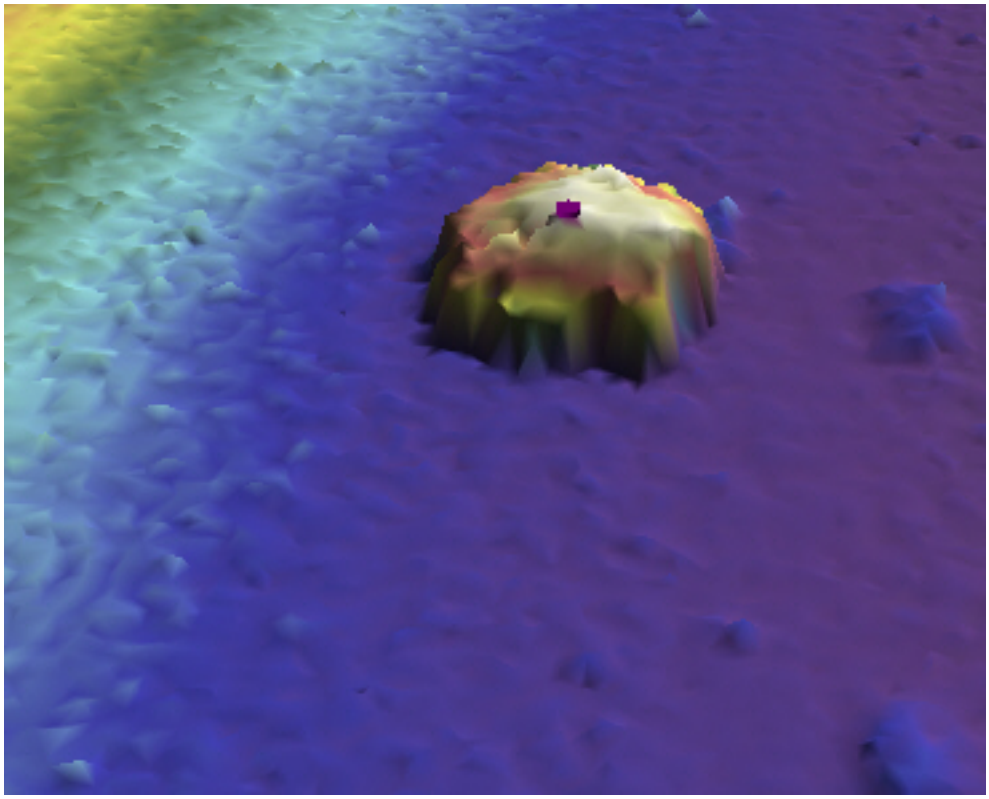


Figure 1.27.1

1.28) 14-ft Rk 422/28

Survey Summary

Survey Position: 41° 33' 44.453" N, 071° 24' 39.564" W

Least Depth: 4.40 m

Timestamp: 2004-197.13:41:52.536 (07/15/2004)

Survey Line: h11310 / ru01_mb / 2004-197 / 555_1341

Profile/Beam: 422/28

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 16 ft

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-197/555_1341	422/28	0.00	000.0	Primary
h11310/ru01_sss/2004-209/127_1816	0001	5.65	311.2	Secondary (grouped)
ChartGPs - Digitized	4	9.14	200.1	Secondary (grouped)

Hydrographer Recommendations

Replace 16 ft sounding with 14 ft Rk

Cartographically-Rounded Depth (Affected Charts):

14ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ¼fm (12300_1, 13006_1, 13003_1)

4.4m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 16 ft

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.396 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete charted 16-ft sounding; chart 14-ft dangerous rock in Latitude 41° 33' 44.452" N, Longitude 071°24'39.564" W.

Feature Images

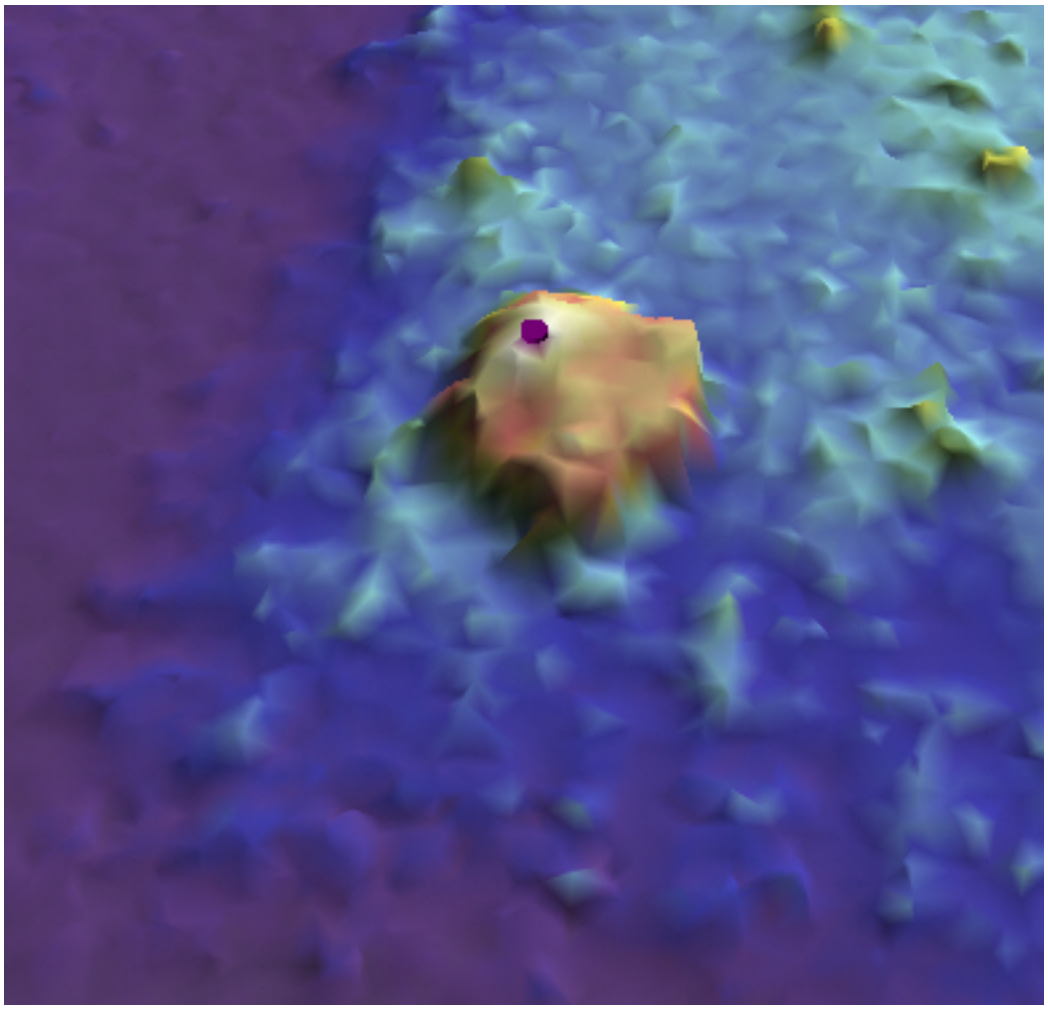


Figure 1.28.1

1.29) 11-ft Rk 1940/80

Survey Summary

Survey Position: 41° 34' 18.219" N, 071° 24' 39.316" W

Least Depth: 3.46 m

Timestamp: 2004-192.12:31:29.750 (07/10/2004)

Survey Line: h11310 / ru01_mb / 2004-192 / 312_1229

Profile/Beam: 1940/80

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-192/312_1229	1940/80	0.00	000.0	Primary
h11310/ru01_sss/2004-209/115_2003	0002	17.16	182.7	Secondary

Hydrographer Recommendations

Chart as 11 ft Rky

Cartographically-Rounded Depth (Affected Charts):

11ft (13223_1, 13221_1, 13221_2, 13218_1)

1 ¾fm (12300_1, 13006_1, 13003_1)

3.4m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.463 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Recommend charting 11-ft rock at the surveyed location in Latitude 41°34'18.219"N, Longitude 071°24'39.316"W.

Feature Images

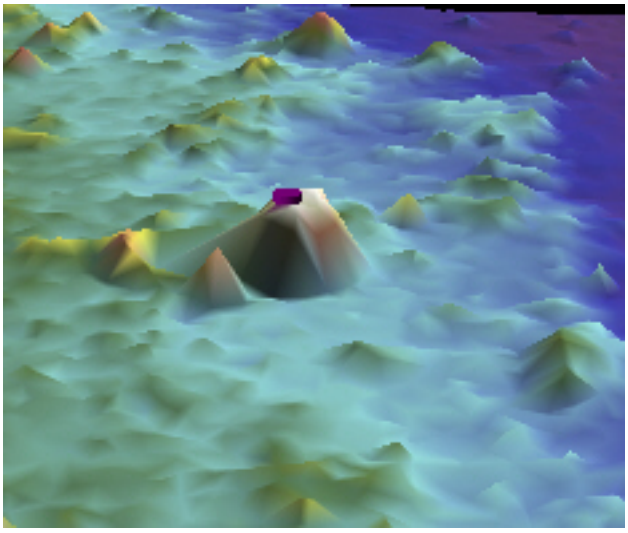


Figure 1.29.1

1.30) 28-ft Rk102/74

Survey Summary

Survey Position: 41° 31' 41.232" N, 071° 23' 35.980" W

Least Depth: 8.55 m

Timestamp: 2004-181.19:10:36.916 (06/29/2004)

Survey Line: h11310 / ru01_mb / 2004-181 / 563_1910

Profile/Beam: 102/74

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-181/563_1910	102/74	0.00	000.0	Primary
h11310/ru01_sss/2004-209/113_1340	0007	3.11	321.0	Secondary

Hydrographer Recommendations

Chart as 28 ft Rky

Cartographically-Rounded Depth (Affected Charts):

28ft (13223_1, 13221_1, 13221_2, 13218_1)

4 ½fm (12300_1, 13006_1, 13003_1)

8.5m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 8.555 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Recommend charting 28-ft rock at the surveyed location in Latitude 41°31'41.232"N, Longitude 071°23'35.980"W. Add chart notation of "rky" within the common area.

Feature Images

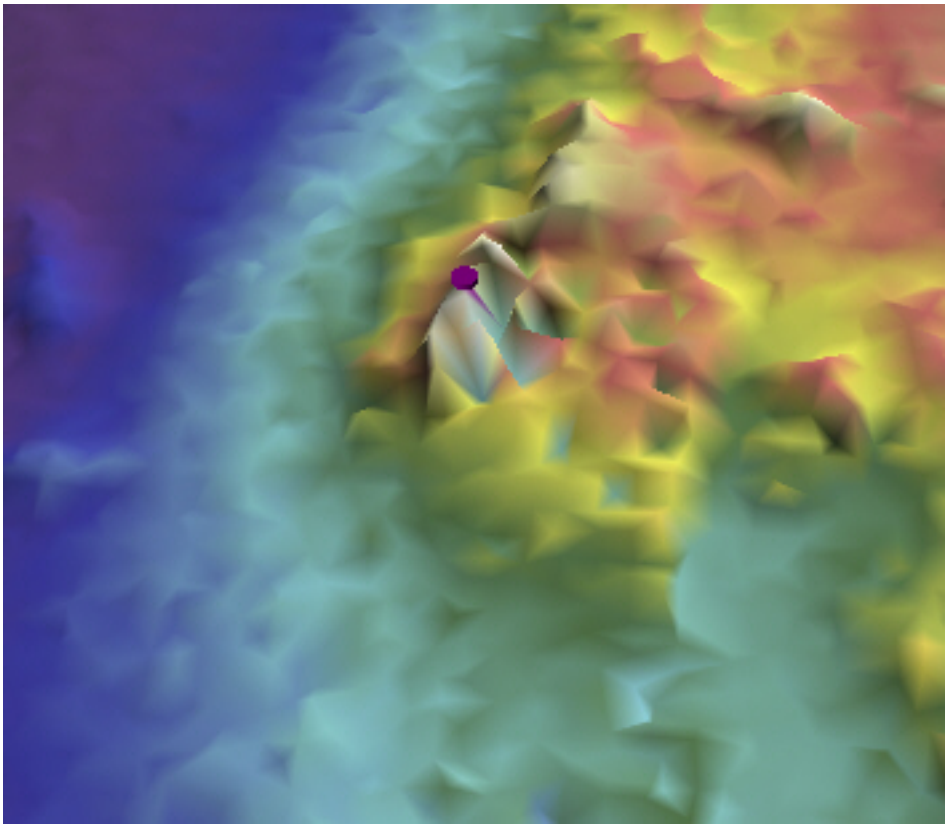


Figure 1.30.1

1.31) 15-ft Rk 3594/6

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 32' 06.463" N, 071° 23' 35.107" W

Least Depth: 4.54 m

Timestamp: 2004-181.19:03:21.302 (06/29/2004)

Survey Line: h11310 / ru01_mb / 2004-181 / 564_1859

Profile/Beam: 3594/6

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Submitted as DToN

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-181/564_1859	3594/6	0.00	000.0	Primary
h11310/ru01_sss/2004-209/112_1328	0011	11.89	024.1	Secondary
h11310/ru01_sss/2004-209/112_1314	0003	14.04	038.9	Secondary

Hydrographer Recommendations

Chart as 15 ft Rk with Danger Circle.

Cartographically-Rounded Depth (Affected Charts):

15ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ½fm (12300_1, 13006_1, 13003_1)

4.5m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Submitted as DToN

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.535 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. This rock was submitted as a DTON by the field party on February 13, 2005. This rock has been applied to chart 13223, 38th edition, April 2005. Retain this rock as charted.

Feature Images

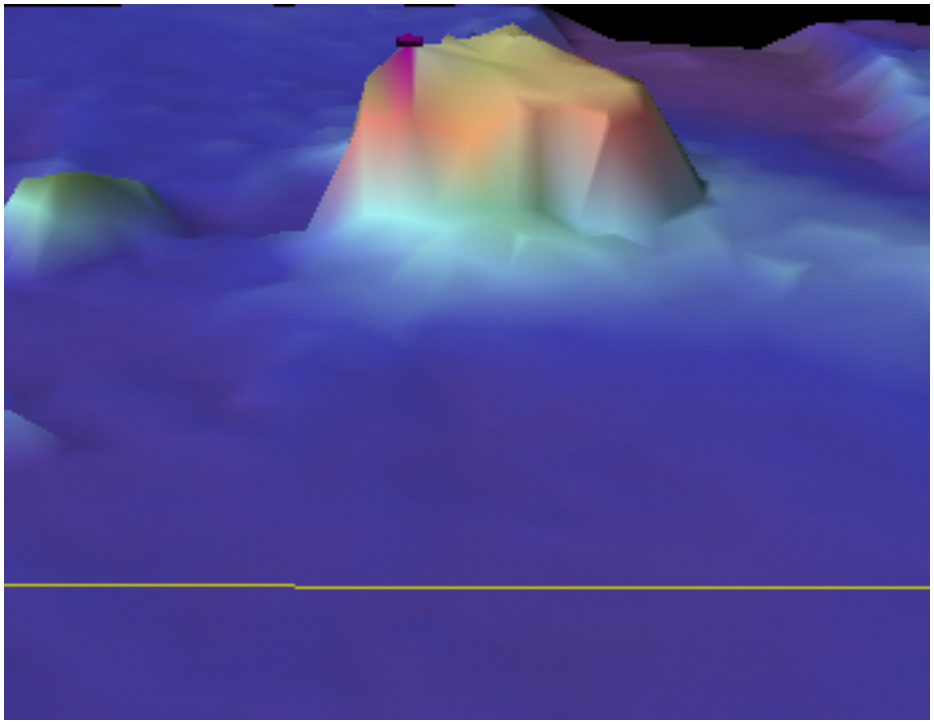


Figure 1.31.1

1.32) 27-ft Rk 4288/66

Survey Summary

Survey Position: 41° 32' 01.278" N, 071° 23' 35.981" W

Least Depth: 8.29 m

Timestamp: 2004-181.19:04:13.197 (06/29/2004)

Survey Line: h11310 / ru01_mb / 2004-181 / 564_1859

Profile/Beam: 4288/66

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-181/564_1859	4288/66	0.00	000.0	Primary
h11310/ru01_sss/2004-209/112_1328	0008	7.77	010.0	Secondary

Hydrographer Recommendations

Chart as 27 ft - general area as Rky

Cartographically-Rounded Depth (Affected Charts):

27ft (13223_1, 13221_1, 13221_2, 13218_1)

4 ½fm (12300_1, 13006_1, 13003_1)

8.3m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 8.286 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a 27 foot rock in 41°32'01.278" N, 71°23'35.981" W.

Feature Images

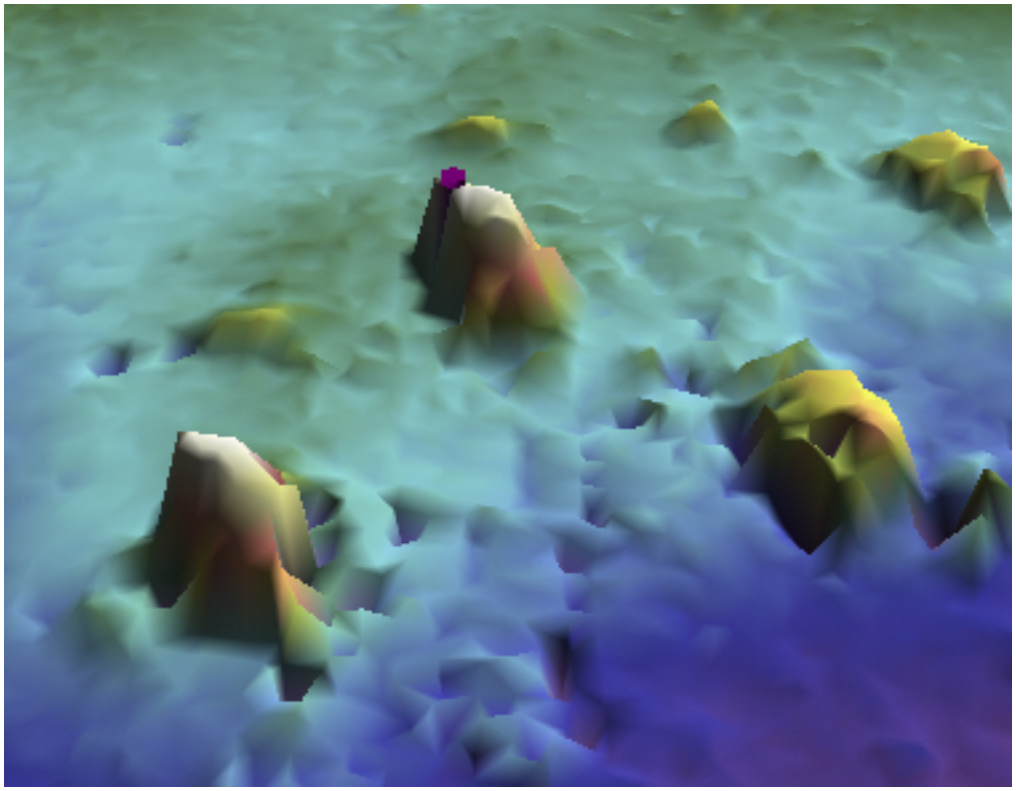


Figure 1.32.1

1.33) 16-ft Rk 2148/26

Survey Summary

Survey Position: 41° 32' 46.008" N, 071° 23' 30.355" W

Least Depth: 4.87 m

Timestamp: 2004-181.16:37:05.047 (06/29/2004)

Survey Line: h11310 / ru01_mb / 2004-181 / 446_1635

Profile/Beam: 2148/26

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 21 ft sounding.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-181/446_1635	2148/26	0.00	000.0	Primary
h11310/ru00_sss/2004-113/196_2157	0001	6.57	149.2	Secondary
ChartGPs - Digitized	16	8.46	324.5	Secondary (grouped)
h11310/ru01_sss/2004-209/108_2058	0002	12.96	042.2	Secondary

Hydrographer Recommendations

Replace charted 21 ft with 16 ft Rk

Cartographically-Rounded Depth (Affected Charts):

16ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ½fm (12300_1, 13006_1, 13003_1)

4.8m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 21 ft sounding.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.869 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous submerged rock , with least depth of 16-ft in Latitude 41° 32' 46.008"N, Longitude 071° 23' 30.355" W.

Feature Images

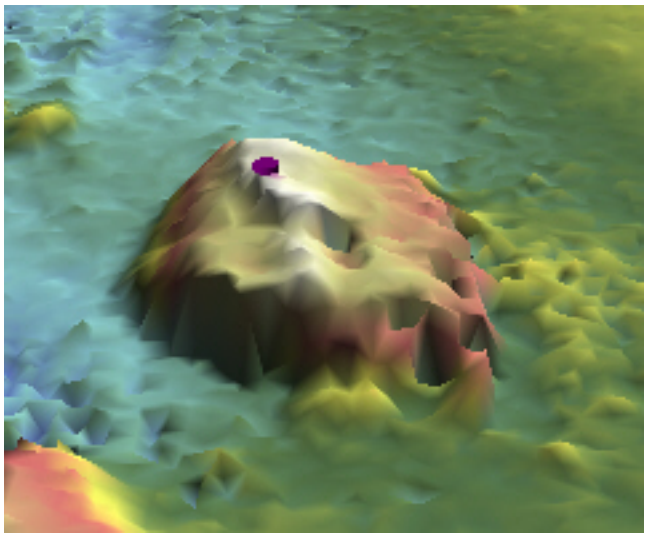


Figure 1.33.1

1.34) 15-ft Rk 283/67

Survey Summary

Survey Position: 41° 32' 58.849" N, 071° 23' 26.267" W

Least Depth: 4.62 m

Timestamp: 2004-181.14:16:08.577 (06/29/2004)

Survey Line: h11310 / ru01_mb / 2004-181 / 530_1415

Profile/Beam: 283/67

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Close to charted 18 ft sounding.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-181/530_1415	283/67	0.00	000.0	Primary
h11310/ru00_sss/2004-113/196_2157	0012	9.67	116.6	Secondary
ChartGPs - Digitized	17	55.03	224.6	Secondary (grouped)

Hydrographer Recommendations

Replace charted 18 ft with 15 ft Rky

Cartographically-Rounded Depth (Affected Charts):

15ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ½fm (12300_1, 13006_1, 13003_1)

4.6m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Close to charted 18 ft sounding.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.623 m

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Delete 18-ft sounding located in Latitude 41°33'00.17" N, Longitude 071°23'24.76" W and chart current survey depths within the common area. Chart a 15-ft dangerous submerged rock in Latitude 41° 32' 58.849" N, Longitude 071° 23' 26.267" W.

Feature Images

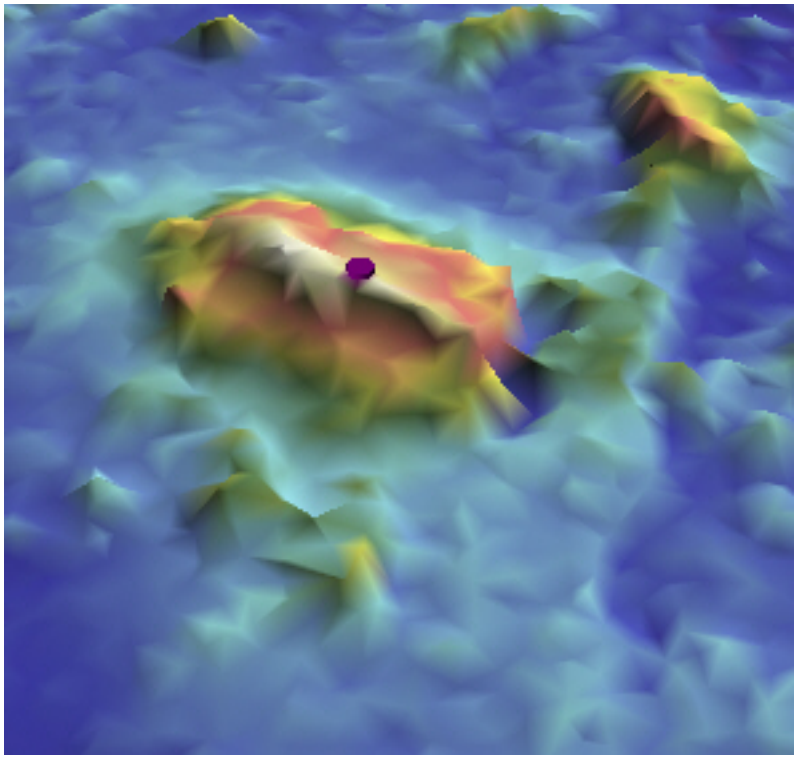


Figure 1.34.1

1.35) 25-ft Rk 7538/11

Survey Summary

Survey Position: 41° 33' 50.733" N, 071° 23' 12.957" W

Least Depth: 7.83 m

Timestamp: 2004-203.14:00:19.278 (07/21/2004)

Survey Line: h11310 / ru01_mb / 2004-203 / 772_1352

Profile/Beam: 7538/11

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-203/772_1352	7538/11	0.00	000.0	Primary
h11310/ru00_sss/2004-113/208_2028	0001	7.14	034.8	Secondary (grouped)
h11310/ru00_sss/2004-113/196_2157	0009	11.99	037.4	Secondary

Hydrographer Recommendations

Chart as 25 ft Rky

Cartographically-Rounded Depth (Affected Charts):

25ft (13223_1, 13221_1, 13221_2, 13218_1)

4 ¼fm (12300_1, 13006_1, 13003_1)

7.8m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 7.828 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart a dangerous rock with least depth 25 feet located at the surveyed location in Latitude 41°33'50.733"N, Longitude 071°23'12.957"W.

Feature Images

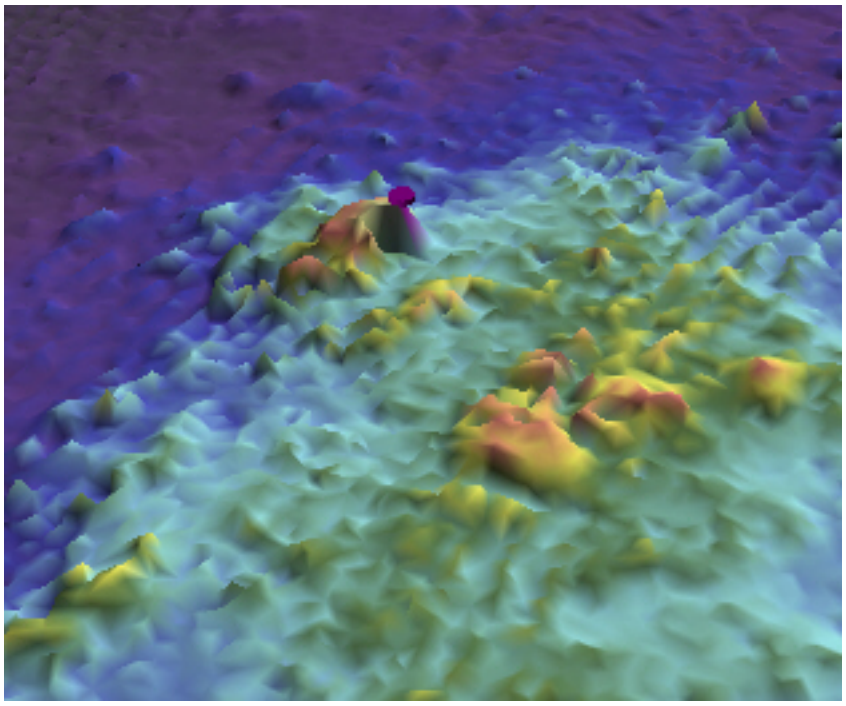


Figure 1.35.1

1.36) 21-ft Rk 490/43

Survey Summary

Survey Position: 41° 33' 40.752" N, 071° 23' 12.547" W

Least Depth: 6.39 m

Timestamp: 2004-203.12:14:36.715 (07/21/2004)

Survey Line: h11310 / ru01_mb / 2004-203 / 763_1213

Profile/Beam: 490/43

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Several soundings in vicinity of charted 26 ft.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-203/763_1213	490/43	0.00	000.0	Primary
h11310/ru01_sss/2004-209/106_2106	0011	3.75	218.3	Secondary
h11310/ru00_sss/2004-113/206_2051	0002	4.84	032.3	Secondary
h11310/ru01_mb/2004-203/764_1224	9068/1	25.63	190.1	Secondary (grouped)
h11310/ru01_mb/2004-203/764_1224	9068/1	25.63	190.1	Secondary
h11310/ru01_sss/2004-209/102_2117	0002	28.91	191.2	Secondary (grouped)
ChartGPs - Digitized	18	35.77	302.7	Secondary (grouped)
h11310/ru01_sss/2004-209/102_2117	0001	39.28	339.8	Secondary (grouped)
h11310/ru00_sss/2004-113/206_2051	0003	43.56	350.4	Secondary (grouped)
h11310/ru00_sss/2004-113/206_2051	0001	44.14	186.3	Secondary (grouped)
h11310/ru01_mb/2004-180/471_1955	708/63	44.60	347.6	Secondary (grouped)
h11310/ru01_mb/2004-180/471_1955	708/63	44.60	347.6	Secondary
h11310/ru01_mb/2004-203/764_1224	8966/39	49.48	187.7	Secondary (grouped)
h11310/ru01_mb/2004-203/764_1224	8966/39	49.48	187.7	Secondary

Hydrographer Recommendations

Chart as 21 ft Rky

Cartographically-Rounded Depth (Affected Charts):

21ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ½fm (12300_1, 13006_1, 13003_1)

6.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - Side Scan contact and 100% Multibeam Coverage. Several soundings in vicinity of charted 26 ft.
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 6.394 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification.. Chart dangerous submerged rock, with a least depth of 21-ft in Latitude 41° 33' 40.752" N, Longitude 071° 23' 12.547" W.

Feature Images

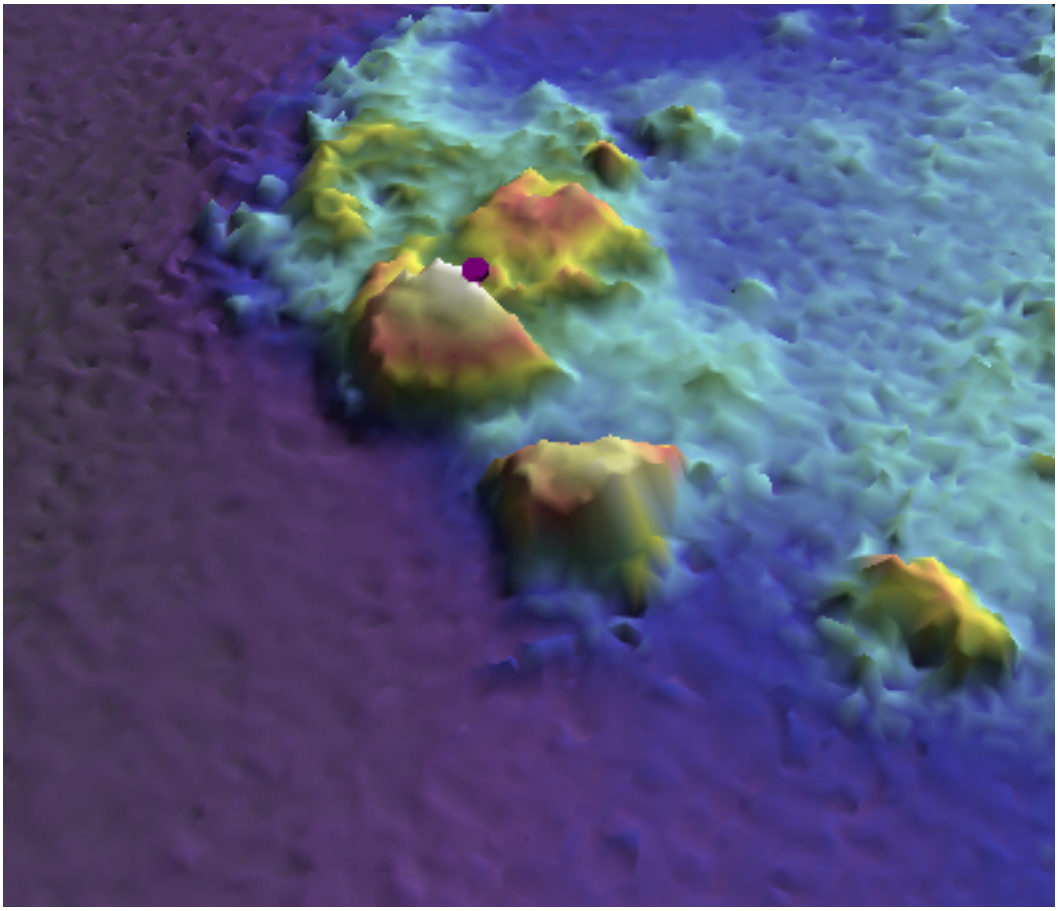


Figure 1.36.1

1.37) 36-ft Wk 321/41

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 34' 32.063" N, 071° 19' 00.767" W

Least Depth: 11.07 m

Timestamp: 2004-120.13:02:08.324 (04/29/2004)

Survey Line: h11310 / ru00_mb / 2004-120 / 800_1301

Profile/Beam: 321/41

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Submitted as DtoN

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-120/800_1301	321/41	0.00	000.0	Primary
h11310/ru00_mb/2004-117/001_1849	248/164	3.49	351.8	Secondary
h11310/ru00_sss/2004-117/192_1809	0001	10.02	185.1	Secondary
h11310/ru00_sss/2004-117/181_1516	0001	19.29	063.3	Secondary

Hydrographer Recommendations

As Charted.

Cartographically-Rounded Depth (Affected Charts):

36ft (13223_1, 13221_1, 13221_2, 13218_1)

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

11.0m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

HEIGHT - 11.08 m

INFORM - Submitted as DtoN

STATUS - 1:permanent

TECSOU - 4:found by diver

VALSOU - 11.075 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. This wreck was submitted as a DTON by the field party on April 26th, 2004. This wreck is shown on chart 13223, 38th Edition, April 2005, and has been applied to the continual maintenance raster dated August 29th, 2006. Retain as charted.

Feature Images

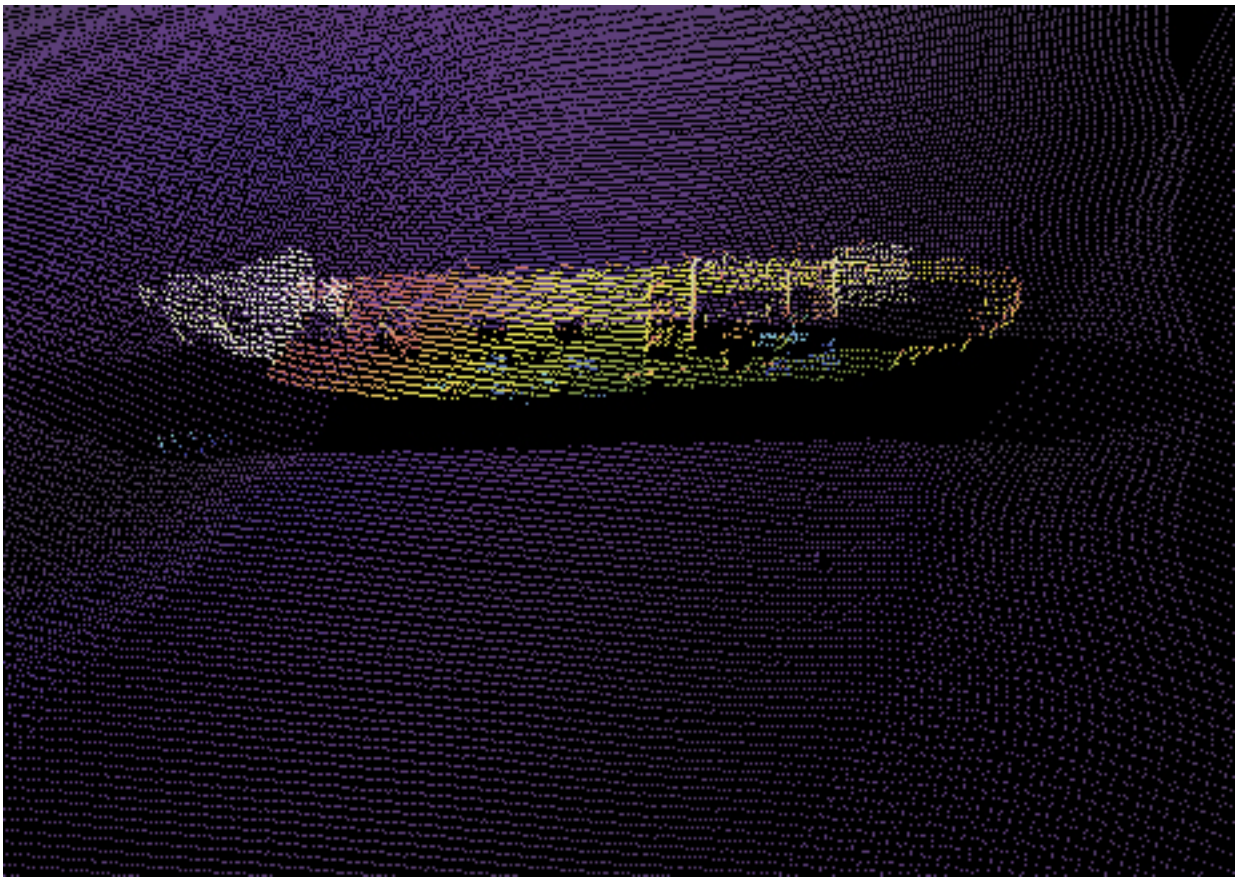


Figure 1.37.1

1.38) 28-ft Rk 319/127

Survey Summary

Survey Position: 41° 34' 22.001" N, 071° 19' 27.014" W

Least Depth: 8.72 m

Timestamp: 2004-140.13:13:39.384 (05/19/2004)

Survey Line: h11310 / ru00_mb / 2004-140 / 350_1313

Profile/Beam: 319/127

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Charted 28ft rky is 27m east of true location

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-140/350_1313	319/127	0.00	000.0	Primary
h11310/ru00_sss/2004-117/190_1706	0001	9.96	091.5	Secondary
ChartGPs - Digitized	6	26.68	263.4	Secondary (grouped)

Hydrographer Recommendations

Chart as 28 ft rky.

Cartographically-Rounded Depth (Affected Charts):

28ft (13223_1, 13221_1, 13221_2, 13218_1)

4 ¾fm (12300_1, 13006_1, 13003_1)

8.7m (5161_1)

S-57 Data

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

Attributes: INFORM - Charted 28ft rky is 27m east of true location

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 8.720 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete the charted 28 foot sounding. Chart a dangerous rock with least depth 28-ft in Latitude 41° 34' 22.001" N, Longitude 071° 19' 27.014" W.

Feature Images

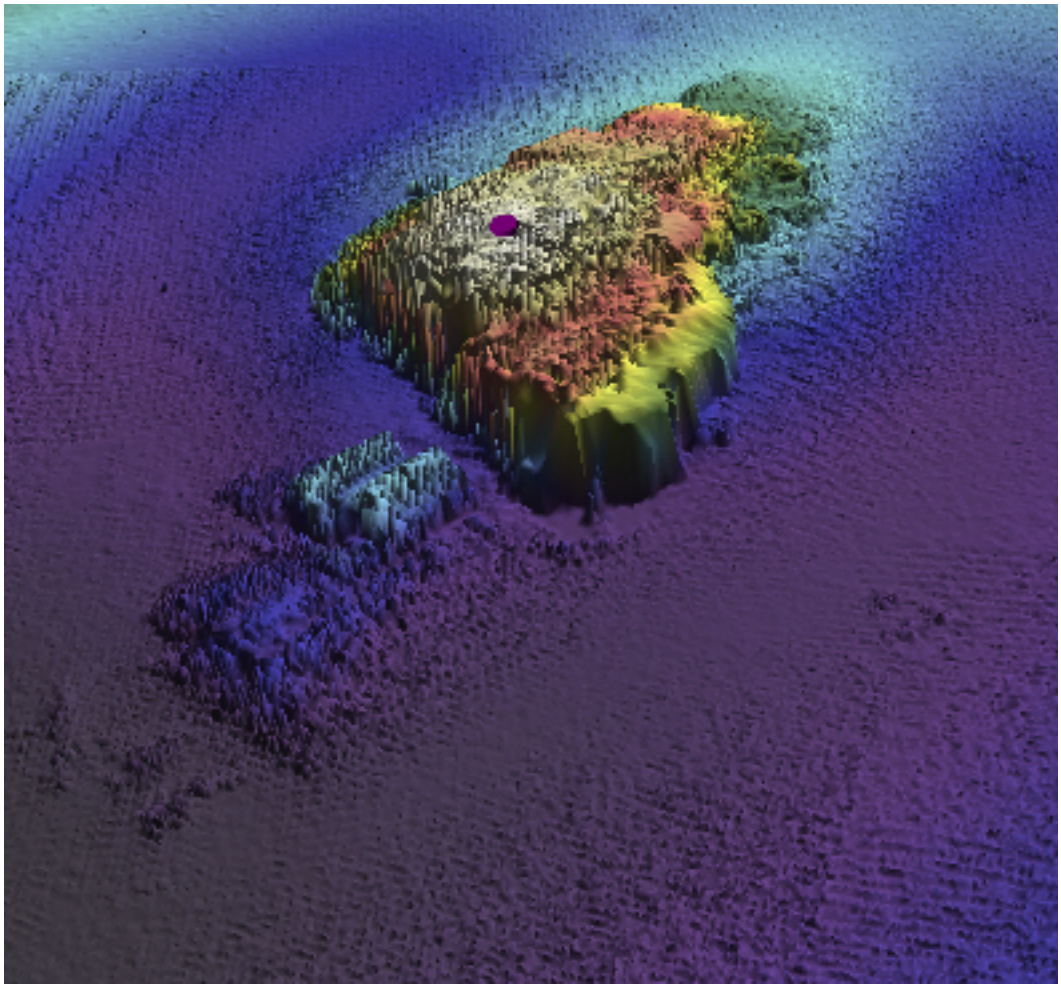


Figure 1.38.1

1.39) 34-ft Sounding 392/115

Survey Summary

Survey Position: 41° 34' 41.517" N, 071° 19' 06.678" W

Least Depth: 10.32 m

Timestamp: 2004-140.17:11:56.602 (05/19/2004)

Survey Line: h11310 / ru00_mb / 2004-140 / 373_1711

Profile/Beam: 392/115

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 37ft sounding

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-140/373_1711	392/115	0.00	000.0	Primary
h11310/ru00_sss/2004-209/954_1740	0001	12.38	239.5	Secondary (grouped)
ChartGPs - Digitized	8	13.57	116.6	Secondary (grouped)
h11310/ru01_sss/2004-208/120_2120	0007	24.24	202.5	Secondary (grouped)

Hydrographer Recommendations

Replace 37ft charted sounding with 34ft sounding.

Cartographically-Rounded Depth (Affected Charts):

34ft (13223_1, 13221_1, 13221_2, 13218_1)

5 ½fm (12300_1, 13006_1, 13003_1)

10.3m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 37ft sounding

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 10.317 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarificatin. Chart 34-ft sounding and add "subm rky ledge" notation in Latitude 41° 34' 41.517" N, Longitude 071° 19' 06.678" W.

Feature Images

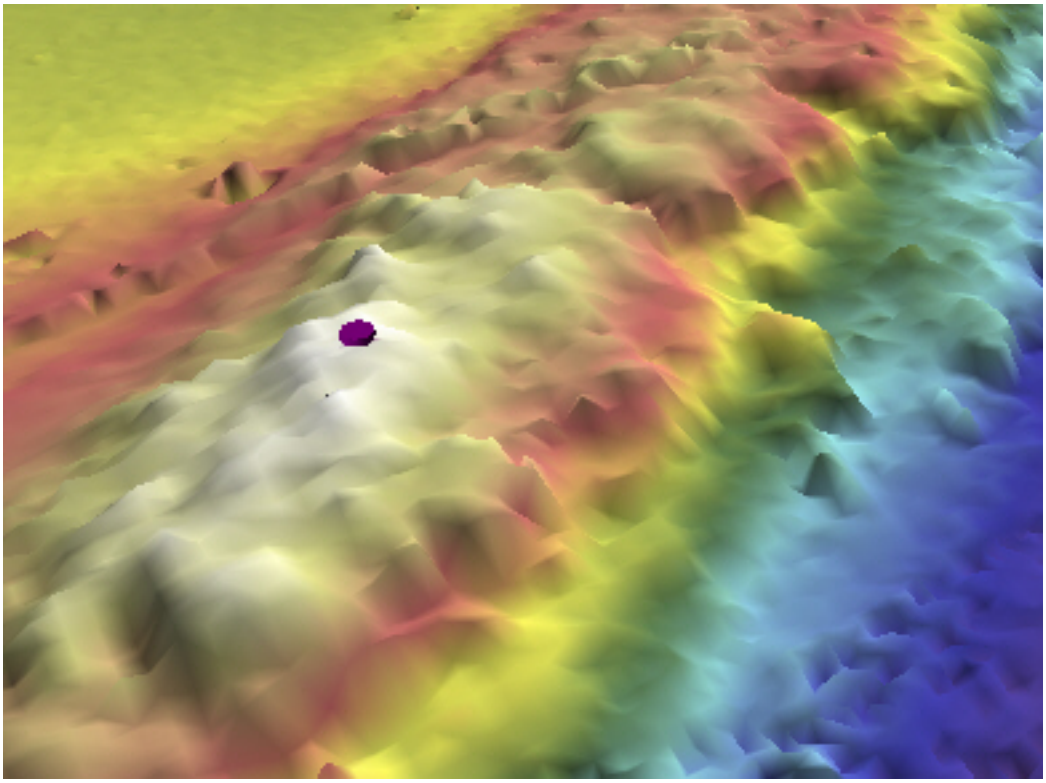


Figure 1.39.1

1.40) 45-ft Obstn 1152/75

Survey Summary

Survey Position: 41° 34' 41.200" N, 071° 17' 38.560" W

Least Depth: 13.73 m

Timestamp: 2004-141.17:40:06.467 (05/20/2004)

Survey Line: h11310 / ru00_mb / 2004-141 / 413_1738

Profile/Beam: 1152/75

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Manmade steel object. See Dive Report for further detail.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-141/413_1738	1152/75	0.00	000.0	Primary
h11310/ru01_sss/2004-140/110_1824	0001	26.88	006.6	Secondary (grouped)

Hydrographer Recommendations

Chart as 45 ft Obstr

Cartographically-Rounded Depth (Affected Charts):

45ft (13223_1, 13221_1, 13221_2, 13218_1)

7 ½fm (12300_1, 13006_1, 13003_1)

13.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Manmade steel object. See Dive Report for further detail.

NATCON - 7:metal

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 4:found by diver

VALSOU - 13.735 m

WATLEV - 3:always under water/submerged

Office Notes

Concu. Chart a dangerous obstruction with least depth 45 feet.

Feature Images

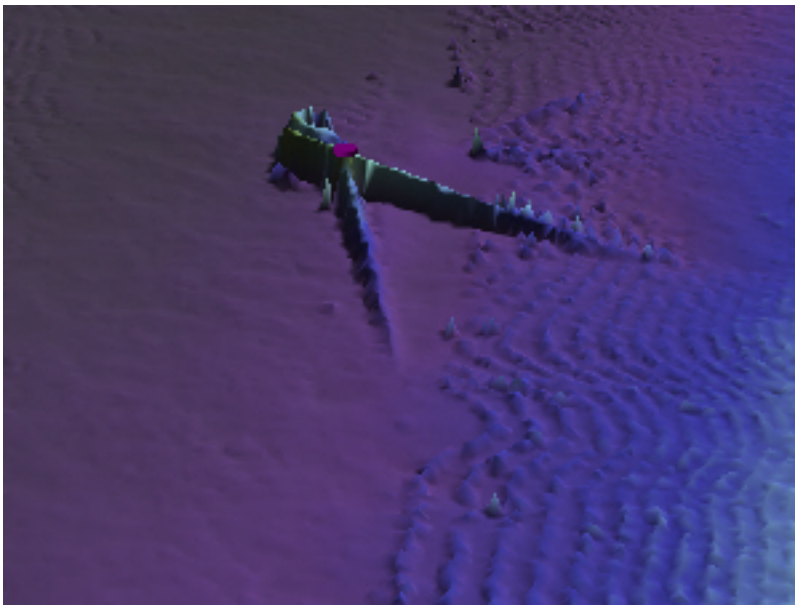


Figure 1.40.1

1.41) 23-ft Rk 1864/39

Survey Summary

Survey Position: 41° 34' 20.814" N, 071° 18' 21.652" W

Least Depth: 7.23 m

Timestamp: 2004-127.12:53:49.894 (05/06/2004)

Survey Line: h11310 / ru01_mb / 2004-127 / 790_1251

Profile/Beam: 1864/39

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Charted 24ft sounding

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-127/790_1251	1864/39	0.00	000.0	Primary
h11310/ru01_sss/2004-177/158_1315	0001	3.95	168.0	Secondary (grouped)
ChartGPs - Digitized	9	19.97	048.3	Secondary (grouped)
.svp	18	26.41	017.6	Secondary (grouped)

Hydrographer Recommendations

Replace 24ft sounding with 23ft Rk

Cartographically-Rounded Depth (Affected Charts):

23ft (13223_1, 13221_1, 13221_2, 13218_1)

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

7.2m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Charted 24ft sounding

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 7.231 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart dangerous submerged rock with a least depth of 23-ft in Latitude 41° 34' 20.814" N, Longitude 071° 18' 21.652" W.

Feature Images

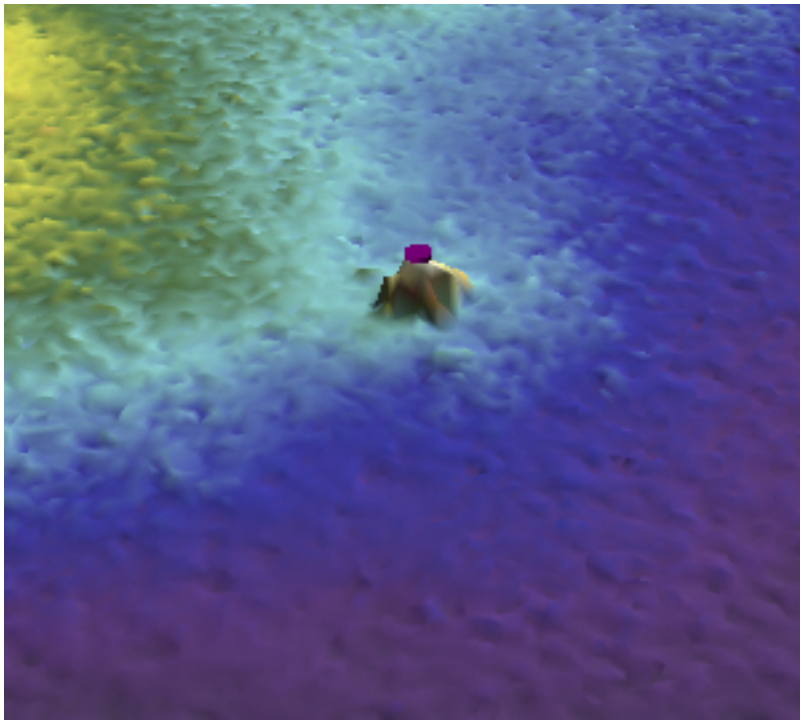


Figure 1.41.1

1.42) 13-ft Rk 2674/57

Survey Summary

Survey Position: 41° 35' 30.063" N, 071° 17' 16.902" W

Least Depth: 3.96 m

Timestamp: 2004-141.12:25:21.548 (05/20/2004)

Survey Line: h11310 / ru01_mb / 2004-141 / 491_1222

Profile/Beam: 2674/57

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-141/491_1222	2674/57	0.00	000.0	Primary
h11310/ru01_sss/2004-208/175_1902	0001	6.55	029.1	Secondary

Hydrographer Recommendations

Chart as 13 ft Rk

Cartographically-Rounded Depth (Affected Charts):

13ft (13223_1, 13221_1, 13221_2, 13218_1)

2fm (13006_1, 13003_1)

3.9m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.958 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

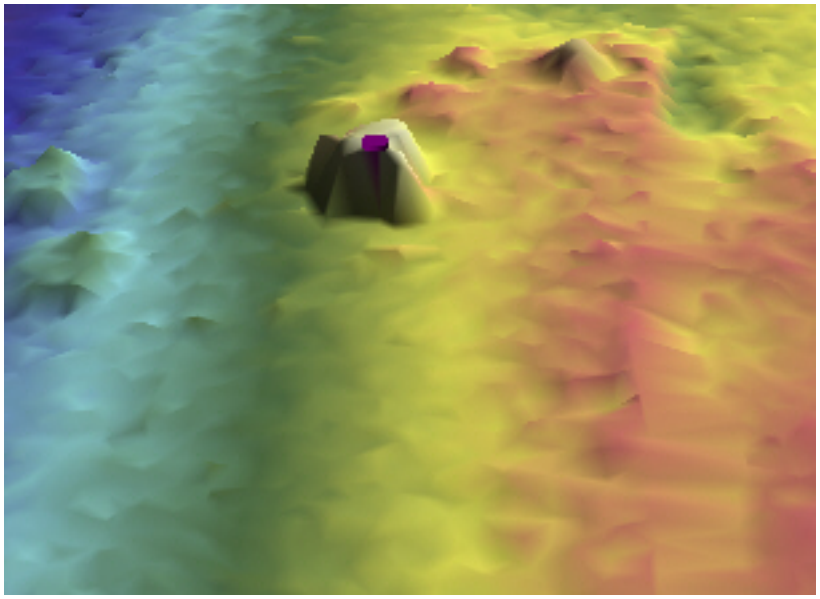


Figure 1.42.1

1.43) 30-ft Rk 695/74

Survey Summary

Survey Position: 41° 34' 27.958" N, 071° 17' 35.252" W

Least Depth: 9.16 m

Timestamp: 2004-138.18:51:49.461 (05/17/2004)

Survey Line: h11310 / ru01_mb / 2004-138 / 563_1850

Profile/Beam: 695/74

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Appears to be a couple rocks where a net possibly got hung, showing a cable resting on the bottom.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-138/563_1850	695/74	0.00	000.0	Primary
h11310/ru01_sss/2004-208/164_1706	0001	7.42	071.5	Secondary

Hydrographer Recommendations

Chart as 30 ft Rk.

Cartographically-Rounded Depth (Affected Charts):

30ft (13223_1, 13221_1, 13221_2, 13218_1)

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

9.1m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage. Appears to be a couple rocks where a net possibly got hung, showing a cable resting on the bottom.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 9.164 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

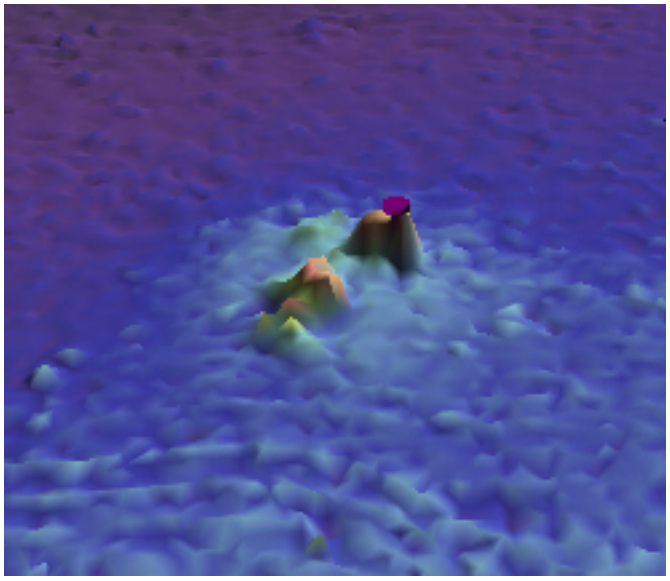


Figure 1.43.1

1.44) 17-ft Rk 1822/2

Survey Summary

Survey Position: 41° 34' 22.919" N, 071° 22' 32.275" W

Least Depth: 5.33 m

Timestamp: 2004-180.18:25:46.131 (06/28/2004)

Survey Line: h11310 / ru01_mb / 2004-180 / 488_1823

Profile/Beam: 1822/2

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-180/488_1823	1822/2	0.00	000.0	Primary
h11310/ru01_sss/2004-209/100_2027	0001	8.46	059.2	Secondary

Hydrographer Recommendations

Chart as 17 ft Rk

Cartographically-Rounded Depth (Affected Charts):

17ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ¾fm (12300_1, 13006_1, 13003_1)

5.3m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.332 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

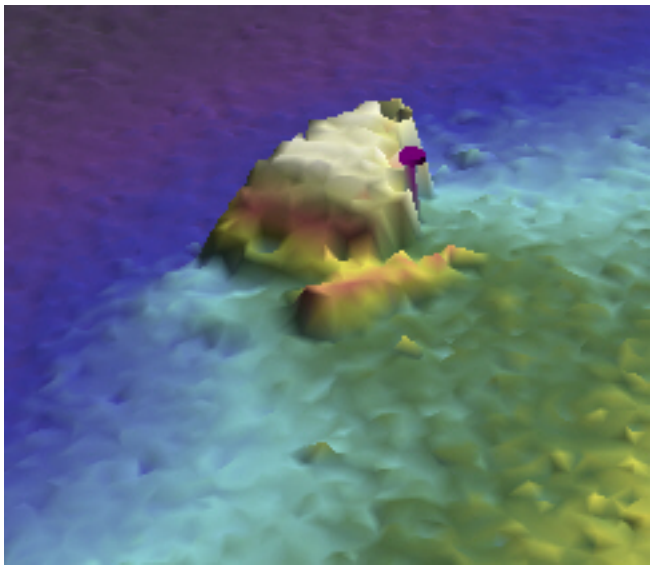


Figure 1.44.1

1.45) 13-ft Rk 3899/67

Survey Summary

Survey Position: 41° 34' 12.927" N, 071° 22' 40.060" W

Least Depth: 4.20 m

Timestamp: 2004-180.18:42:19.360 (06/28/2004)

Survey Line: h11310 / ru01_mb / 2004-180 / 486_1838

Profile/Beam: 3899/67

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-180/486_1838	3899/67	0.00	000.0	Primary
h11310/ru01_sss/2004-209/100_2027	0003	7.01	059.1	Secondary

Hydrographer Recommendations

Chart as 13 ft Rk

Cartographically-Rounded Depth (Affected Charts):

14ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ¼fm (12300_1, 13006_1, 13003_1)

4.2m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.195 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

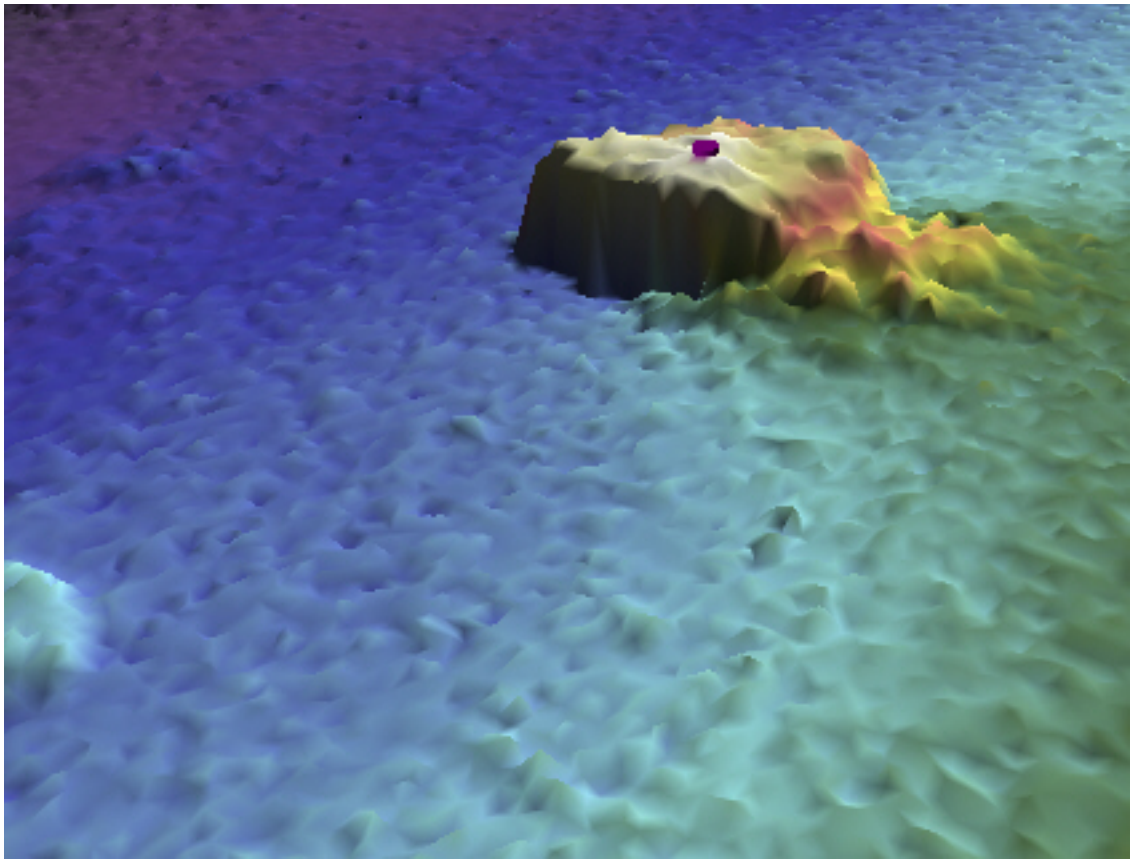


Figure 1.45.1

1.46) 14-ft Rk 487/72

Survey Summary

Survey Position: 41° 34' 06.273" N, 071° 22' 45.351" W

Least Depth: 4.42 m

Timestamp: 2004-180.18:48:50.943 (06/28/2004)

Survey Line: h11310 / ru01_mb / 2004-180 / 485_1848

Profile/Beam: 487/72

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-180/485_1848	487/72	0.00	000.0	Primary
h11310/ru01_sss/2004-209/100_2027	0004	4.60	081.7	Secondary

Hydrographer Recommendations

Chart as 14 ft Rks

Cartographically-Rounded Depth (Affected Charts):

14ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ¼fm (12300_1, 13006_1, 13003_1)

4.4m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 4.416 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

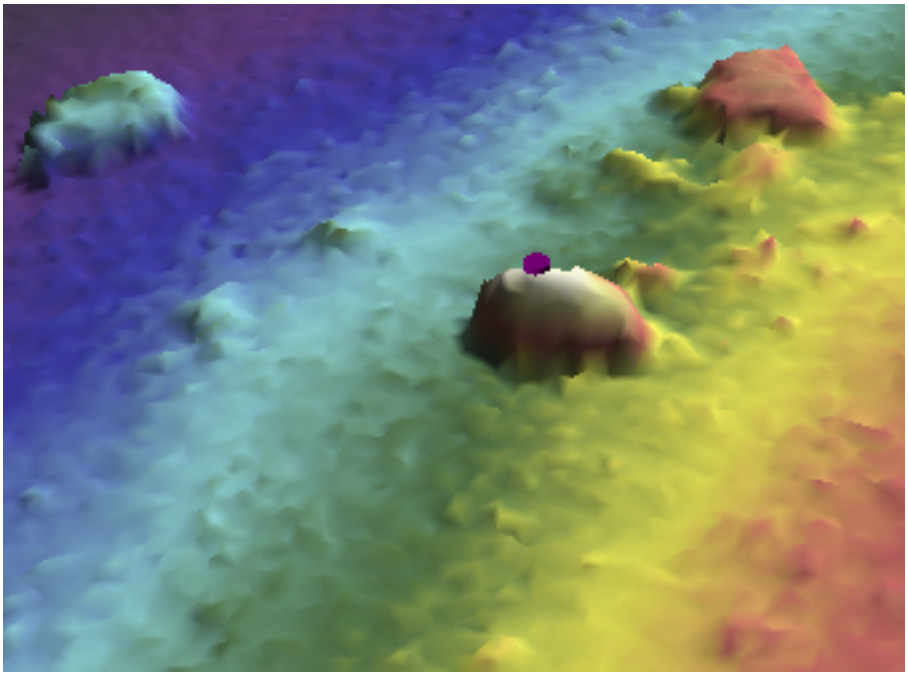


Figure 1.46.1

1.47) 22-ft Rk 2517/69

Survey Summary

Survey Position: 41° 33' 25.070" N, 071° 23' 15.756" W

Least Depth: 6.80 m

Timestamp: 2004-180.20:16:16.026 (06/28/2004)

Survey Line: h11310 / ru01_mb / 2004-180 / 469_2012

Profile/Beam: 2517/69

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-180/469_2012	2517/69	0.00	000.0	Primary
h11310/ru01_sss/2004-209/106_2106	0006	2.98	205.4	Secondary

Hydrographer Recommendations

Chart as 22 ft Rk

Cartographically-Rounded Depth (Affected Charts):

22ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ¾fm (12300_1, 13006_1, 13003_1)

6.8m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 6.803 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

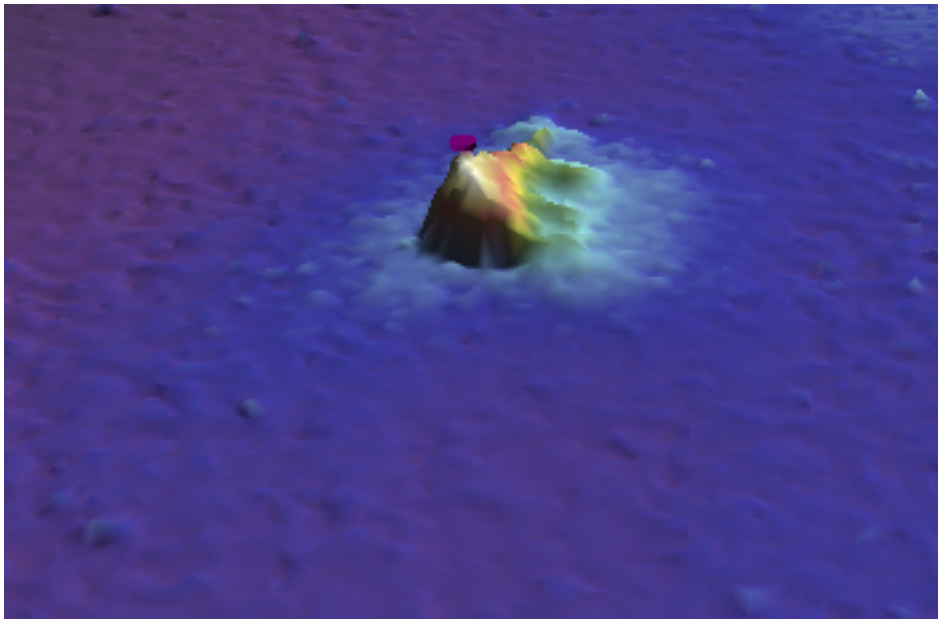


Figure 1.47.1

1.48) 27-ft Rk 443/5

Survey Summary

Survey Position: 41° 32' 39.106" N, 071° 23' 34.770" W

Least Depth: 8.30 m

Timestamp: 2004-202.13:37:22.791 (07/20/2004)

Survey Line: h11310 / ru00_mb / 2004-202 / 695_1337

Profile/Beam: 443/5

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-202/695_1337	443/5	0.00	000.0	Primary
h11310/ru01_sss/2004-209/108_2058	0003	15.03	340.3	Secondary

Hydrographer Recommendations

Chart as 27 ft Rk

Cartographically-Rounded Depth (Affected Charts):

27ft (13223_1, 13221_1, 13221_2, 13218_1)

4 ½fm (12300_1, 13006_1, 13003_1)

8.3m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 8.298 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

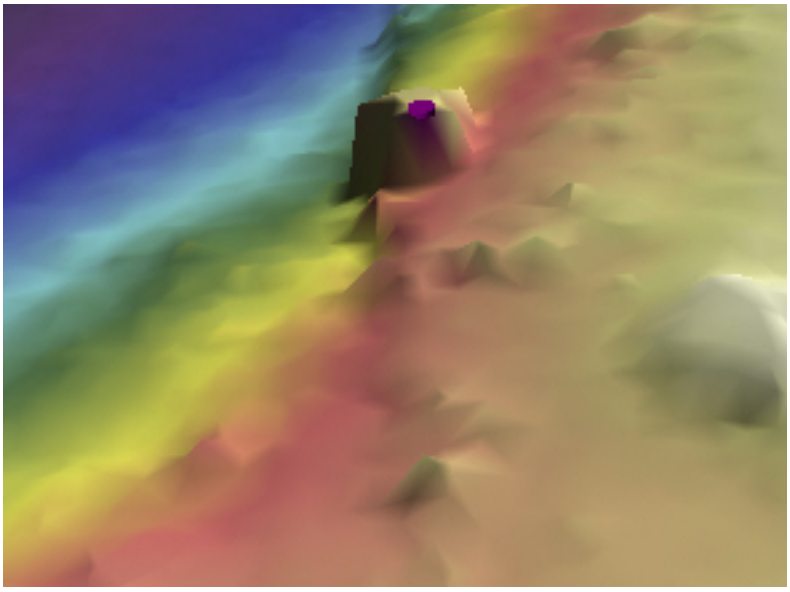


Figure 1.48.1

1.49) 19-ft Rk 3828/1

Survey Summary

Survey Position: 41° 32' 34.801" N, 071° 23' 35.738" W

Least Depth: 5.87 m

Timestamp: 2004-181.16:56:09.485 (06/29/2004)

Survey Line: h11310 / ru01_mb / 2004-181 / 434_1653

Profile/Beam: 3828/1

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-181/434_1653	3828/1	0.00	000.0	Primary
h11310/ru01_sss/2004-209/111_1421	0009	4.41	124.3	Secondary

Hydrographer Recommendations

Chart as 19 ft Rks

Cartographically-Rounded Depth (Affected Charts):

19ft (13223_1, 13221_1, 13221_2, 13218_1)

3 ¼fm (12300_1, 13006_1, 13003_1)

5.8m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.868 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

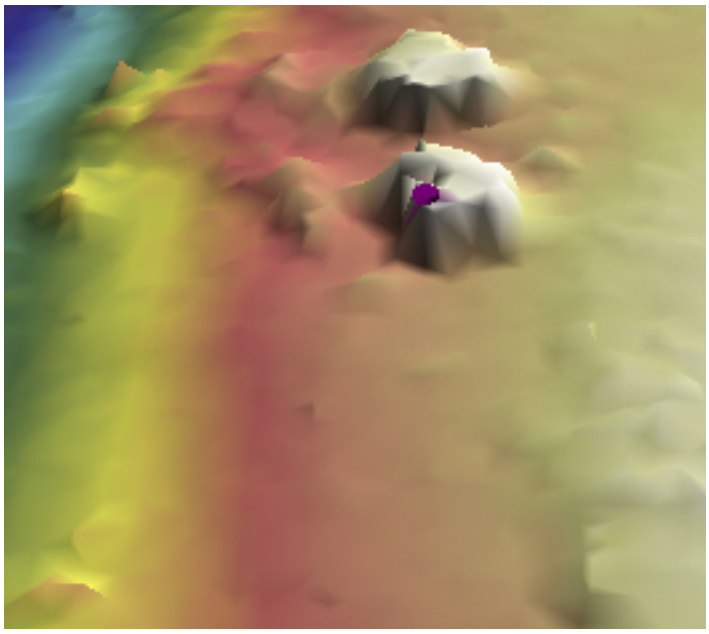


Figure 1.49.1

1.50) 17-ft Rk 4075/70

Survey Summary

Survey Position: 41° 32' 53.258" N, 071° 23' 28.239" W

Least Depth: 5.40 m

Timestamp: 2004-181.16:43:53.219 (06/29/2004)

Survey Line: h11310 / ru01_mb / 2004-181 / 445_1640

Profile/Beam: 4075/70

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-181/445_1640	4075/70	0.00	000.0	Primary
h11310/ru01_sss/2004-210/118_2058	0001	10.95	295.2	Secondary

Hydrographer Recommendations

Chart as 17 ft Rky

Cartographically-Rounded Depth (Affected Charts):

17ft (13223_1, 13221_1, 13221_2, 13218_1)

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

5.4m (5161_1)

S-57 Data

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

Attributes: INFORM - Side Scan contact and 100% Multibeam Coverage.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.403 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart a rock with least depth 17 feet in Latitude 41°32'53.258"N, Longitude 071°23'28.239"W. Add notation "rky" within the common area of SBDARE polygon.

1.51) 31-ft Obstn 1782/80

Survey Summary

Survey Position: 41° 31' 32.712" N, 071° 23' 47.115" W

Least Depth: 9.41 m

Timestamp: 2004-204.17:05:09.511 (07/22/2004)

Survey Line: h11310 / ru01_mb / 2004-204 / 358_1700

Profile/Beam: 1782/80

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Side Scan contact and 100% Multibeam Coverage. Thin shadow and weak MB hit shows a pipe or piling.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-204/358_1700	1782/80	0.00	000.0	Primary
h11310/ru01_mb/2004-204/357_1709	817/7	1.89	163.9	Secondary
h11310/ru01_mb/2004-204/357_1709	817/7	1.89	163.9	Secondary
h11310/ru01_sss/2004-209/149_1524	0001	2.27	172.2	Secondary
h11310/ru00_sss/2004-113/190_1928	0001	5.31	189.8	Secondary

Hydrographer Recommendations

Chart as 31 ft Obstr

Cartographically-Rounded Depth (Affected Charts):

31ft (13223_1, 13221_1, 13221_2, 13218_1)

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

9.4m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: CATOBS - 1:snag / stump

QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

VALSOU - 9.409 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a dangerous obstruction with least depth 31 feet at the present survey position.

Feature Images

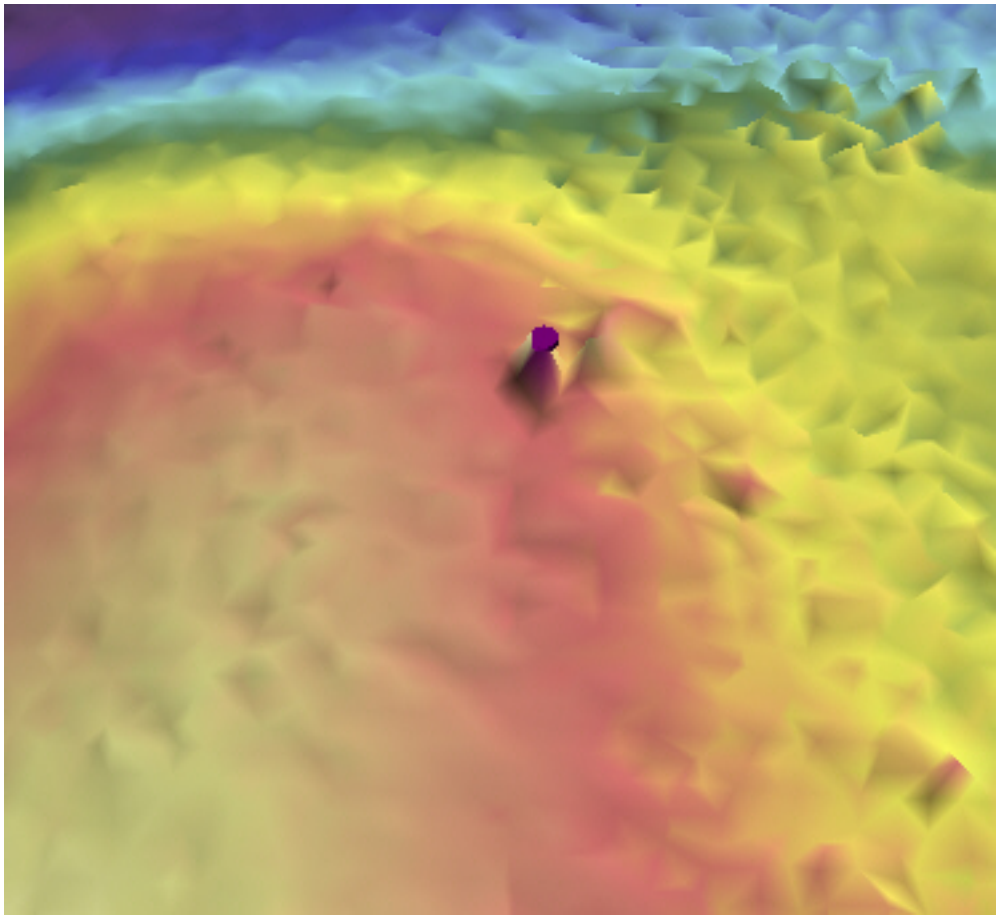


Figure 1.51.1

1.52) 16-ft Rk 2295/67

Survey Summary

Survey Position: 41° 32' 09.758" N, 071° 23' 29.338" W

Least Depth: 4.97 m

Timestamp: 2004-191.13:06:19.641 (07/09/2004)

Survey Line: h11310 / ru01_mb / 2004-191 / 428_1304

Profile/Beam: 2295/67

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is a rock imaged by RESON 8125 MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-191/428_1304	2295/67	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

16ft (13223_1, 13221_1, 13221_2, 13218_1)

2 ¾fm (12300_1, 13006_1, 13003_1)

4.9m (5161_1)

S-57 Data

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

Attributes: VALSOU - 4.974 m

WATLEV - 3:always under water/submerged

Office Notes

Chart a dangerous rock with least depth 16 feet in 41°32'09.758" N, 71°23'29.338" W.

Feature Images

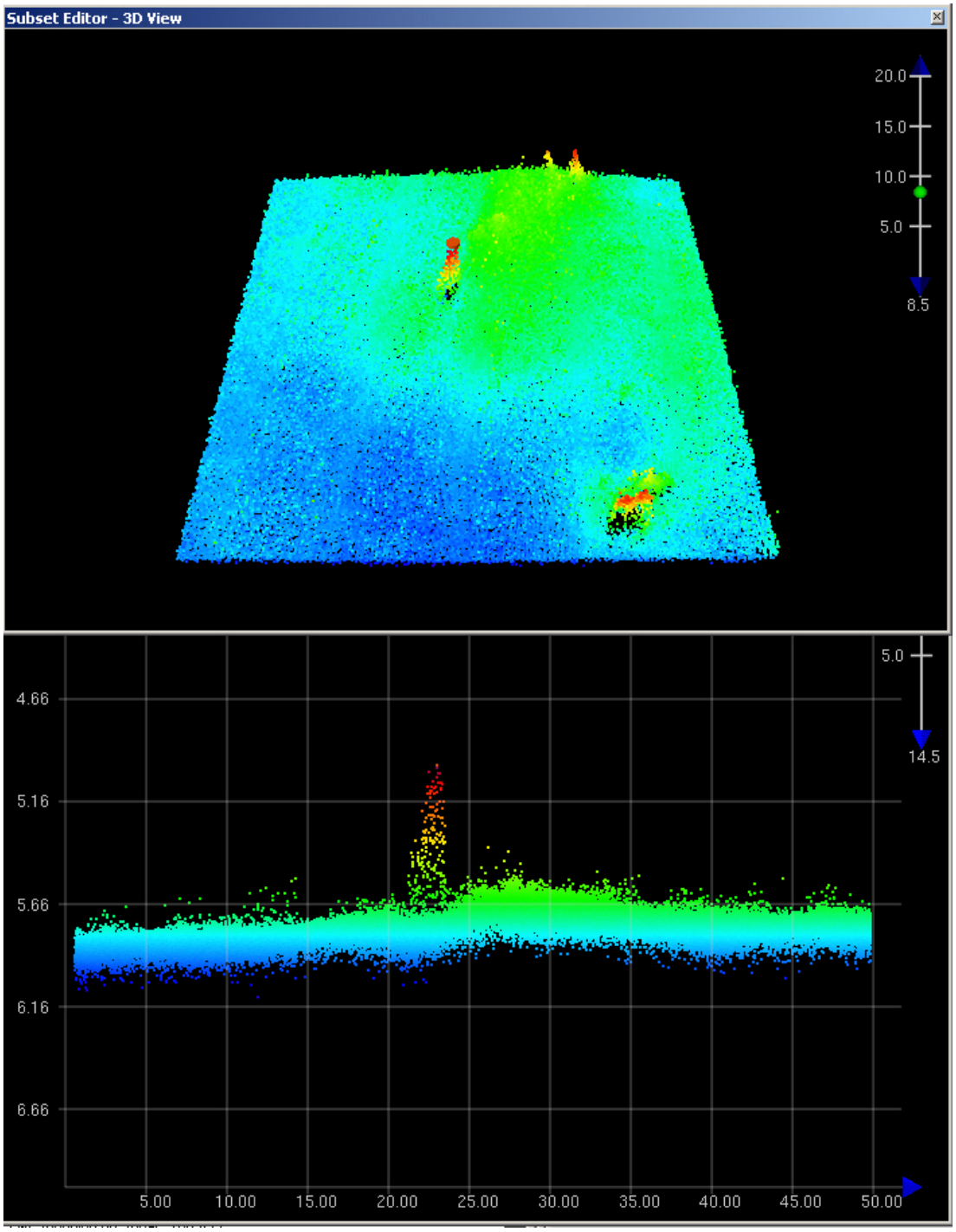


Figure 1.52.1

1.53) 1-ft Sounding 1802/1

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 34' 47.685" N, 071° 17' 49.003" W

Least Depth: 0.49 m

Timestamp: 2004-142.14:05:00.804 (05/21/2004)

Survey Line: h11310 / ru01_mb / 2004-142 / 625_1403

Profile/Beam: 1802/1

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is a shoal. Soundings were generated by RESON 8125 MBES and corrected to MLLW using approved water levels and final tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru01_mb/2004-142/625_1403	1802/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

1ft (13223_1, 13221_1, 13221_2, 13218_1)

0 ¼fm (12300_1, 13006_1, 13003_1)

.5m (5161_1)

S-57 Data

[None]

Office Notes

Chart a shoal, least depth 1 foot, at the present surveyed position in Latitude 41°34'47.707" N, Longitude 071°17'49.015" W. Chart present survey soundings in common areas.

This shoal has been applied to the continual maintenance raster dated August 29th, 2006.

1.54) 59-ft Sounding on Shoal 1865/27

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 34' 29.326" N, 071° 18' 49.909" W

Least Depth: 18.05 m

Timestamp: 2004-145.14:12:13.150 (05/24/2004)

Survey Line: h11310 / ru00_mb / 2004-145 / 006_1409

Profile/Beam: 1865/27

Charts Affected: 13223_1, 13221_1, 13221_2, 13218_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is a shoal. Although the currently charted depth is 102 feet, the surveyed depths within a 200m radius range from 59 feet to 80 feet. This item was not addressed by the field unit. Depths were acquired with RESON 8125 multibeam echosounder and corrected to MLLW using approved water levels with verified tide zoning.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11310/ru00_mb/2004-145/006_1409	1865/27	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

59ft (13223_1, 13221_1, 13221_2, 13218_1)

9 ¾fm (12300_1, 13006_1, 13003_1)

18.0m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: TECSOU - 3:found by multi-beam

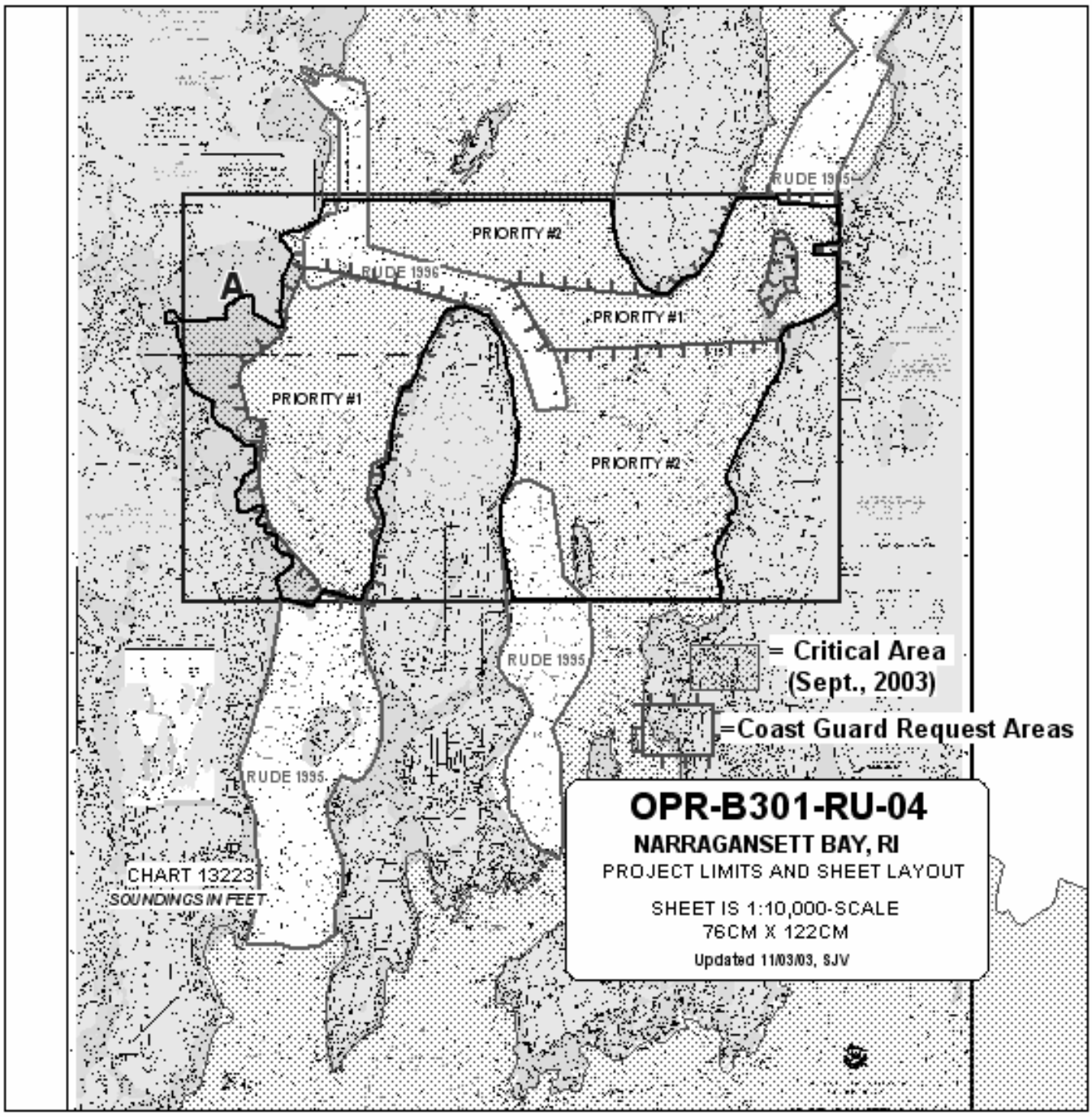
Office Notes

Chart shoal with least depth 59 feet located in Latitude 41°34'29.306"N, Longitude 071°18'49.676"W. This Danger to Navigation was submitted on June 12th, 2006.

This shoal has been applied to the continual maintenace raster dated August 29th, 2006. Chart present survey soundings in common areas.

APPENDIX III

Progress Sketch



Project	Sheet_Letter	H_num	HQ_Est_SNM	CumlPeroComp Pre	CumlPeroCompCu	SNM_CompCurh	Cum SNMcom
OPR-B301-F	A	H11310	16	40	100	4	10

Project	Month	LNM_Hydrc	LNM_MB	SV_Casts	Bottom_Samp	AWOIS_Items	Tide_Guage_Inst	DAS	DTime_equip_H	DTime_Weather_H	D_Time_other_H
OPR-B30	April	90.50	54.70	9.0(	0.00	0.00	0.0(	7.0(	0.0(	0.0(	0.0(
OPR-B30	May	10.70	258.90	21.0(	0.00	0.00	0.0(	11.0(	0.0(	24.0(	0.0(
OPR-B30	June	6.10	17.60	5.0(	0.00	0.00	0.0(	2.0(	0.0(	0.0(	0.0(
OPR-B30	July	72.37	477.12	28.0(	14.00	0.00	0.0(	13.0(	0.0(	0.0(	0.0(

Final Progress Sketch OPR-B301-RU-04

APPENDIX IV

Tides and Water Levels

November 25, 2004

MEMORANDUM FOR: Chief, Requirements and Development Division, N/OPS1

FROM: LT Todd A. Haupt, NOAA, NOAA Ship RUDE

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final zoning in MapInfo and .MIX format
3. Six Minute Water Level data (Co-ops web site)

Transmit data to:

NOAA/NOS/Atlantic Hydrographic Branch
N/CS33, Building #2
439 West York Street
Norfolk, VA 23510
ATTN: Chief AHB

These data are required for the processing of the following hydrographic survey:

Project No.:	OPR-B301-RU
Registry No.:	H11310
State:	Rhode Island
Locality:	Narragansett Bay
Sublocality:	West Passage

Attachments containing:
1) an Abstract of Times of Hydrography,
2) digital MID MIF files of the track lines from pydro on CD/diskette

cc: N/CS33

Year_DOY	Min Time	Max Time
2004_110	17:29:11	19:16:29
2004_111	15:26:00	21:48:43
2004_113	17:28:00	17:51:38
2004_117	18:16:00	18:16:00
2004_120	12:38:00	17:42:16
2004_121	15:43:00	16:23:52
2004_124	14:13:00	14:13:00
2004_126	12:35:00	19:13:52
2004_127	12:34:00	19:29:04
2004_128	12:05:10	17:32:15
2004_135	12:11:24	15:22:39
2004_138	16:30:00	19:30:34
2004_139	16:47:00	18:42:57
2004_140	12:30:00	19:28:44
2004_141	12:18:29	20:59:04
2004_142	12:34:00	15:48:44
2004_145	12:22:23	19:29:03
2004_148	14:32:00	19:10:18
2004_174	13:03:00	16:17:37
2004_180	12:39:00	20:45:51
2004_181	12:32:00	19:16:16
2004_184	12:49:27	17:07:15
2004_191	12:23:00	16:04:46
2004_192	12:07:00	16:17:00
2004_195	11:30:00	19:10:00
2004_197	12:29:00	20:04:21
2004_202	11:37:00	20:49:12
2004_203	11:05:00	21:14:09
2004_204	16:45:00	21:02:27
2004_205	11:14:00	17:07:44
2004_208	12:43:00	20:60:00
2004_209	12:52:00	16:31:42
2004_210	16:50:00	17:57:02
2004_211	13:51:50	15:25:24

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : June 15, 2005

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B301-RU-2004
HYDROGRAPHIC SHEET: H11310

LOCALITY: Narragansett Bay, Rhode Island
TIME PERIOD: April 19 - July 29, 2004

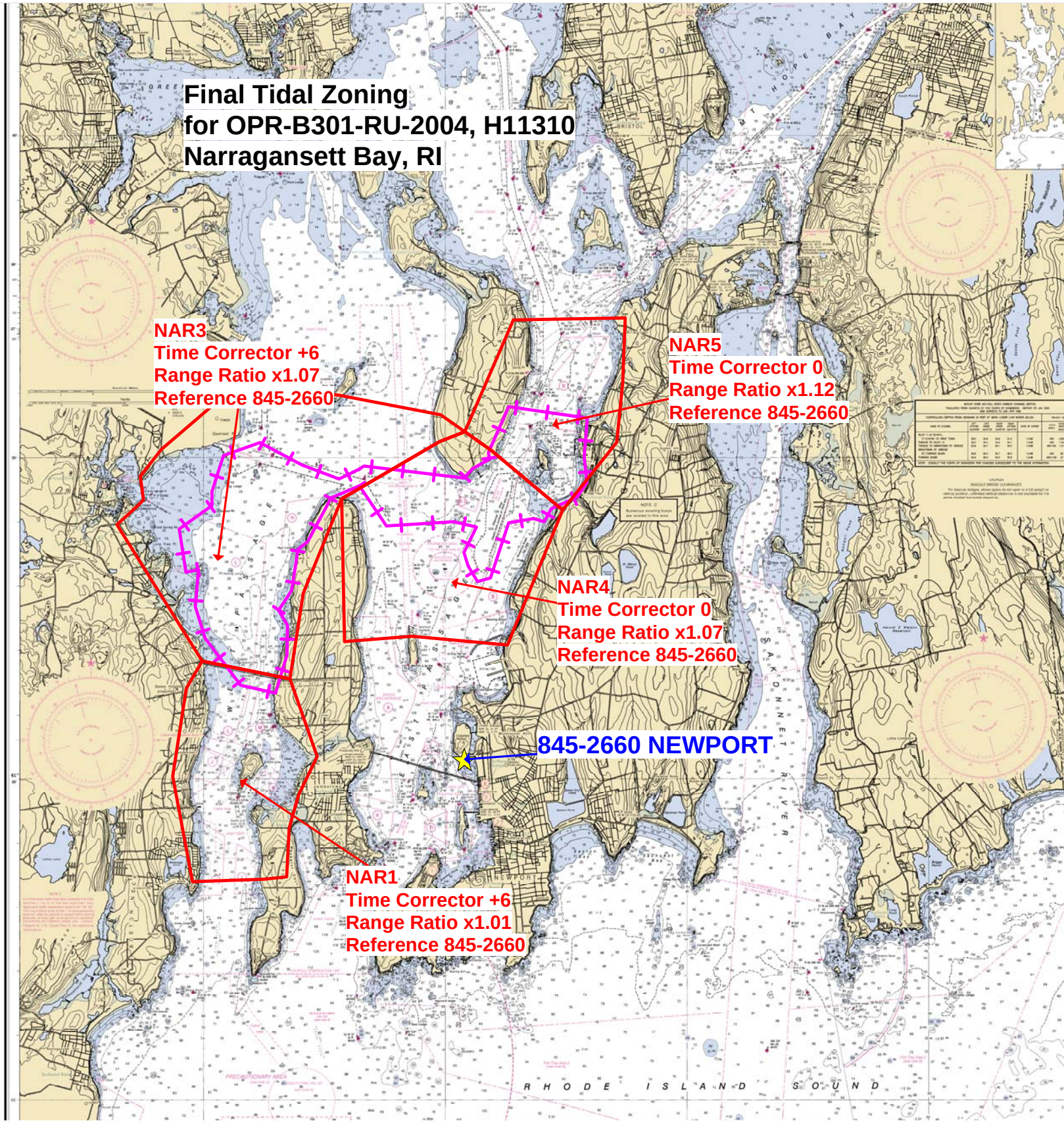
TIDE STATION USED: 845-2660 Newport, Rhode Island
Lat. 41 30.3'N Long. 71 19.6' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.099 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: NAR1, NAR3, NAR4, & NAR5

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 1983-2001 National Tidal Datum Epoch (NTDE).

_____
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION


Final Tidal Zoning
for OPR-B301-RU-2004, H11310
Narragansett Bay, RI
NAR3
Time Corrector +6
Range Ratio x1.07
Reference 845-2660
NAR5
Time Corrector 0
Range Ratio x1.12
Reference 845-2660
NAR4
Time Corrector 0
Range Ratio x1.07
Reference 845-2660
845-2660 NEWPORT
NAR1
Time Corrector +6
Range Ratio x1.01
Reference 845-2660
NARRAGANSETT BAY
RHODE ISLAND SOUND

APPENDIX V

Supplemental Survey Records and Correspondence

Data Structure of Digital Data Submission in PYDRO v4.9.2 and MapInfo v6.5

The digital PSS submitted with this descriptive report may be found in the folder labeled PSS with the filename, H11310.pss. The PSS is divided into the following trees:

Resolved

All items in this tree are classified as Primary – Report or Non-report, and Secondary. These are all the items that were labeled as contacts through SIPS and multibeam developments. ***Concur.***

DR_Charted

Items included here are charted features that were investigated for either confirmation or disproval. ***Concur.***

DR_Uncharted

Items in this category meet either of these criteria: A least depth inconsistent with charted soundings, or an uncharted significant contact. ***Concur.***

Bottom Samples

Fourteen bottom samples were taken on sheet H11310 and reside here. Remarks show the bottom description and Recommendations express "Update charts as accordingly." A generated PDF file, bottom_samples.pdf may be found in …Descriptive Report\Appendices\Appendix V. The Oceanographic Log Sheet is included in Separates VI. ***Concur.***

SVP

Sixty-five velocity casts were taken as part of H11310 and may be found here. Remarks show the velocity table for the particular cast and Recommendations shows the extended depth used. A generated PDF file, H11310_SVP.pdf may be found in …Descriptive Report\Separates\Separates III. ***Concur. SVP Data filed with original field records.***

DR_DToN

One Danger-to-Navigation item is included here along with remarks and recommendation. For a detailed analysis, please refer to Appendix I. ***Concur with***

clarification. Two Dangers to Navigation were identified by the field party and described in Appendix I.

DPs

Twenty-six detached positions were taken in conjunction with survey H11310. A generated PDF file, DPs.pdf maybe be found in …Descriptive Report\Appendices\Appendix V. ***Concur.***

All **MapInfo** files may be found in the sub-folder "MapInfo Files" under the folder, "Descriptive Report." There are three folders inside "MapInfo Files" which hold independent and autonomous MapInfo workspaces. These sub-folders are:

Soundings

Sounding plot used to inspect crossline soundings as they compare with mainscheme soundings. Plot was also used for visual inspection of soundings compared to charted soundings. The workspace filename is "B301_Soundings.WOR."

Side Scan Coverage

Mosaic of 100% side scan data used to inspect for total coverage of the survey area. The workspace is named, "B301_SSSCoverage.WOR."

Multibeam Coverage

The required 5-meter grid of 100% multibeam coverage resides here. The workspace is named, "B301_MBCoverage.WOR."

Crossline Comparison

Four crosslines were selected for analysis. They were analyzed utilizing MapInfo's Vertical Mapper and Grid Manager and all grids and files pertaining to this are here.

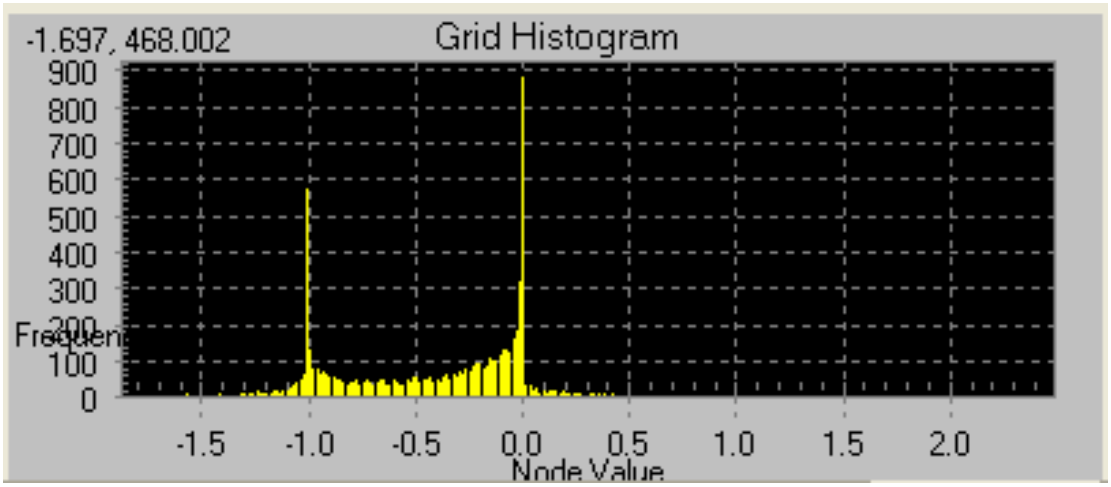
Histograms of differences begin on the next page.

CROSSLINE HISTOGRAMS

The results of the crossline comparisons are the following:

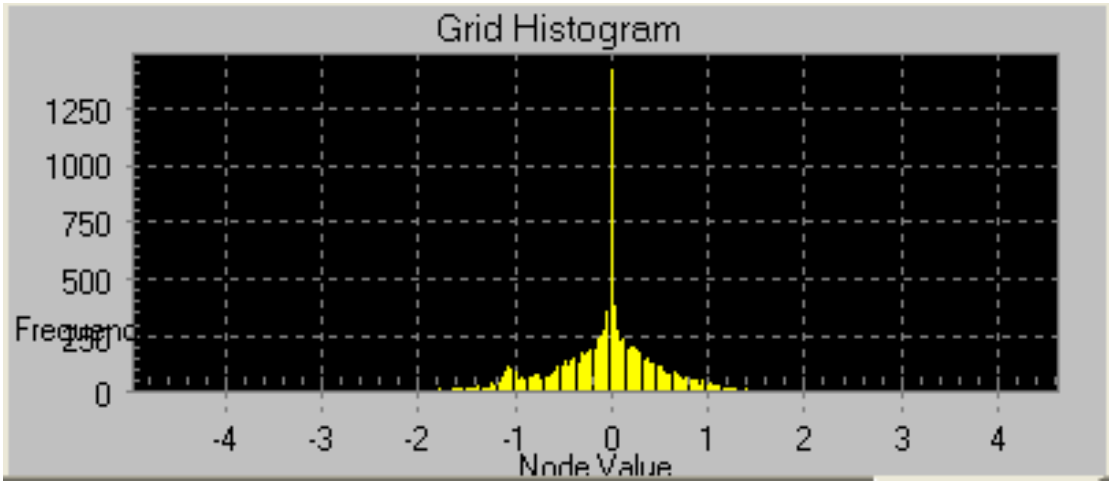
W_002_1459

This crossline is in the west passage and is run by RUDE over RUDE mainscheme lines and Launch 1419 mainscheme lines near the edges.



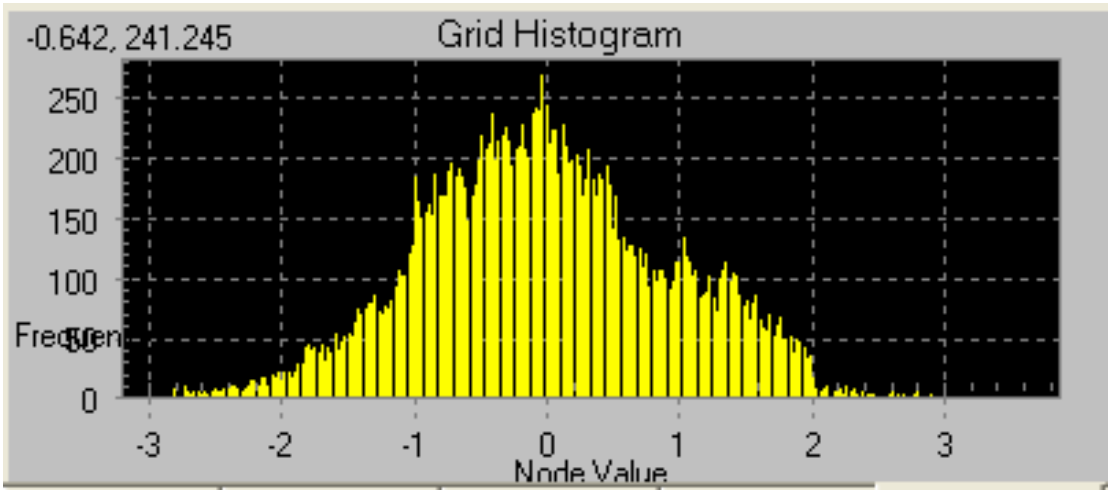
W_010_1846

This crossline is in the west passage and is run by RUDE over RUDE mainscheme lines and Launch 1419 mainscheme lines near the edges.



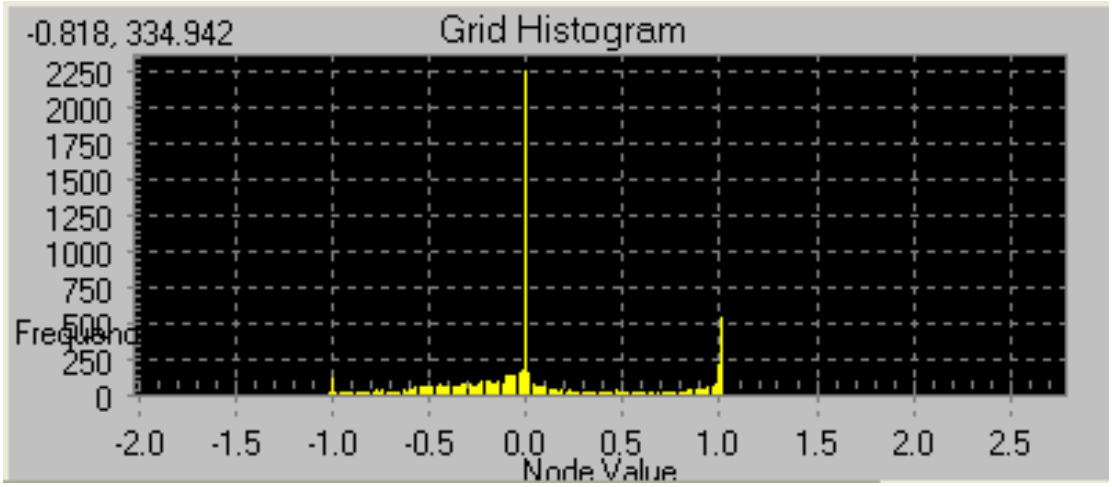
E_011_1633

This crossline is in the east passage and is run by RUDE over RUDE mainscheme lines and Launch 1419 mainscheme lines interspersed.



E_023_1421

This crossline is in the east passage and is run by Launch 1419 over 1419 mainscheme lines and RUDE mainscheme lines interspersed.



The following correspondence was received by Atlantic Hydrographic Branch during office processing of Survey H11310:

1. Danger to Navigation, West Passage Shoal

Subject: Danger to navigation
Date: Tue, 16 May 2006 09:51:56 -0400
From: Bill Ohno <Bill.Ohno@noaa.gov>

To whom it may concern:

Chart letter 563/06 and DD 7467 have been processed by NDB and put in PBC's box. This involves a shoal sounding in the West Passage of Narragansett Bay.

Affected charts:
13223 (KAPP 2134)
13221 (KAPP 2137)
US5RI22M

Originated by Atlantic Hydrographic Branch.

Reference: H-11310

2. Danger to Navigation, East Passage Shoal

Subject: Danger to Navigation
Date: Tue, 13 Jun 2006 14:51:04 -0400
From: Douglas Harpine <Douglas.Harpine@noaa.gov>

To whom it may concern

Chart letter 683/06 and DD7563 have been processed by the Nautical Data Branch and put inot Products Branch C's box. This involves a shoal area centered around GP 41°34'29.326"N 071°18'49.909"W on the East Passage of Narragansett Bay Rhode Island.

This affects the following charts: 13223 (KAPP 2134)
13221 (KAPP 2137)

It also affects ENC Cell US5RI22M.
This was reported by the Atlantic Hydrographic Branch.
REFERENCES: H-11310
OPR-B301-RU

Douglas C. Harpine

AHB Supplemental Correspondence
EMAIL Documentation

Subject: Re: H11310 Pier-Pile Hazard
Date: Fri, 28 Sep 2007 20:14:16 -0400
From: Matt Wingate <matt.wingate@noaa.gov>
To: gene_parker <Castle.E.Parker@noaa.gov>

Hi Gene,

I passed word on to the state of RI concerning the submerged piling soon after you sent me the info. Since I have not heard word, I'll send a reminder message on Monday to see what they want to do. My gut says that they (state of RI) will not want to spend the money to remove the piling since the pier is not used. The Navy originally owned the pier (WWII and after) but reverted to RI sometime later.

Regards,
Matt

gene_parker wrote:
> Good Day Matt,
> Have you received any response to the original inquiry and notification of
> hazard. AHB is getting ready to submit this survey to Marine Chart Division
> and wonder if any response has be noted. I'm inclined to include the feature
> and proceed with recommending that it get charted, but don't want to if the
> owner of the pier could salvage the pile and have the hazard removed. If
> not, we could apply this feature to the chart and it will probably remain
> charted for for a long time.
>
> Please reply if you have any new information.
>
> Regards, Gene
>
> Matt Wingate wrote:
>
>
>> Hi Gene,
>>
>> I received your e-mail and did some initial checking in regards to the
>> dangerous pile protruding from the T-dock on the southern tip of
>> Prudence Island, RI. Nothing substantial to report (yet) other than
>> reading quite a bit of info regarding the island. Only a few comments
>> here and there in regards to the T-dock. I've sent out a few inquiries
>> and are awaiting replies. I'll keep you posted with any progress.
>>
>> Best Regards,
>> Matt
>>
>> gene_parker wrote:
>>
>>> Good Day,

>>>
>>> During the final stages of RUDE survey H11310 nautical chart update
>>> product review, AHB located a submerged pile that should have been
>>> addressed earlier in the survey processing. I am sending this
>>> information to you as Northeast Regional Navigation Manager so that you
>>> may contact the owner or responsible party of pier. The responsible
>>> party should investigate and remove the submerged pile in order to
>>> provide a safer mooring facility.
>>>
>>> Please reference the attached PDF file which details the submerged pile
>>> feature. It is my intent to notify you of this feature so that it may
>>> be addressed without having to submit the feature as a Danger to
>>> Navigation. The removal of submerged pile would be more advantageous as
>>> opposed to submitting as a DtoN, applied to the chart, then go through
>>> the chart removal process once the pier owners have removed the
>>> submerged pile. AHB feels that the NSD Nav Manager could assist with
>>> resolving this feature by providing the pier owners with the information
>>> and recommendation for removal.
>>>
>>> Please review the attached document and contact me if further
>>> information is required.
>>>
>>>
>>> Regards,
>>> Gene Parker
>>>

--
Matthew J. Wingate, LT, NOAA
Office of Coast Survey
c/o National Marine Fisheries Service
Narragansett Laboratory
28 Tarzwell Drive
Narragansett, Rhode Island 02882
phone (401) 782-3252
fax   (401) 782-3292

Matthew Wingate, LT, NOAA <matt.wingate@noaa.gov>
Navigation Manager, Northeast Region
NMFS Narragansett Laboratory
Office of Coast Survey

Matthew Wingate, LT, NOAA
Navigation Manager, Northeast Region <matt.wingate@noaa.gov>
NMFS Narragansett Laboratory
Office of Coast Survey
28 Tarzwell Drive Work: (401) 782-3252
Narragansett Fax: (401) 782-3292
RI
02882
Office (401) 782-3252, Fax (401) 782-3292
Additional Information:
Last Name Wingate, LT, NOAA
First NameMatthew
Version 2.1

AHB Submitted Documentation for Submerged Pile located at Latitude 43°34'41.223"N, Longitude 071°19'16.081"W.
07/30/07
H11310 Charted Pier and associate Hazard (Pile)
AHB to NSD NE Navigation Manager

H11310
Rhode Island
Narragansett Bay
West Passage
Survey dates: April 19, 2004 to July 29, 2004

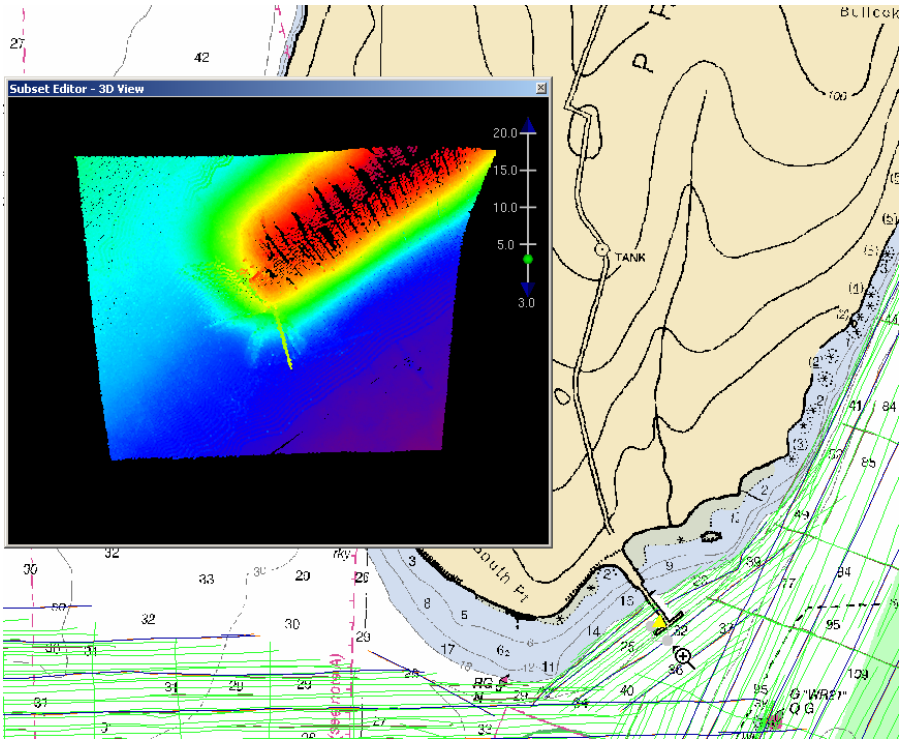
The following feature was located and noted during final processing stages of survey H11310 AHB. H11310 survey is located in Rhode Island, Narragansett Bay. The pile is located in Lat 41-34-41.223N, Long 071-19-16.081W and appears to be lying horizontal within the water column and extending outward or seaward from the pier and seafloor beneath the pier. The hazard extends seaward from the pier facing in a southerly direction and should be considered as a hazard to any vessel mooring alongside the pier.

The item noted is being passed to Navigations Services Division NE Regional Navigation Manager for further investigation and resolution. It would be advantageous for the Nav Manager to contact the pier owners and inform them of this situation. The dangerous pile is located at the southern corner of the west end of the pier and extends seaward in a southerly direction. The attributes of the feature are as follows:

Record	Line	Profile	Beam	Depth (m)		Lat (DMS)	Lon (DMS)
368_1700		2476	163	6.734	1	41-34-41.223N	071-19-16.081W

The hazardous pile was not detailed during field processing and only highlighted during the latter stages of product generation and the product quality assurance review. AHB feels that the Nav Manager should contact pier owner or responsible party and inform them of the hazard. It is in OCS best interest to have the pile removed as opposed to issuing a Danger to Navigation and placing the obstruction on the chart. The most expeditious method is to notify the pier owners for investigation and removal of the hazard.

Any questions related to this hazard should be forwarded to Gene Parker at Atlantic Hydrographic Branch, 439 West York St., Norfolk, VA 23510; 757-441-6413; email: castle.e.parker@noaa.gov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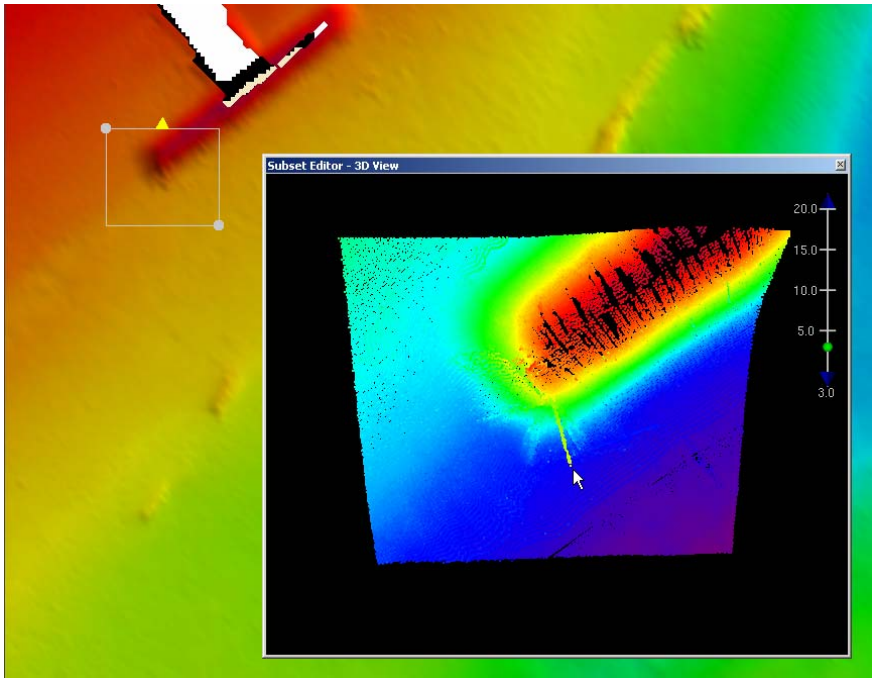
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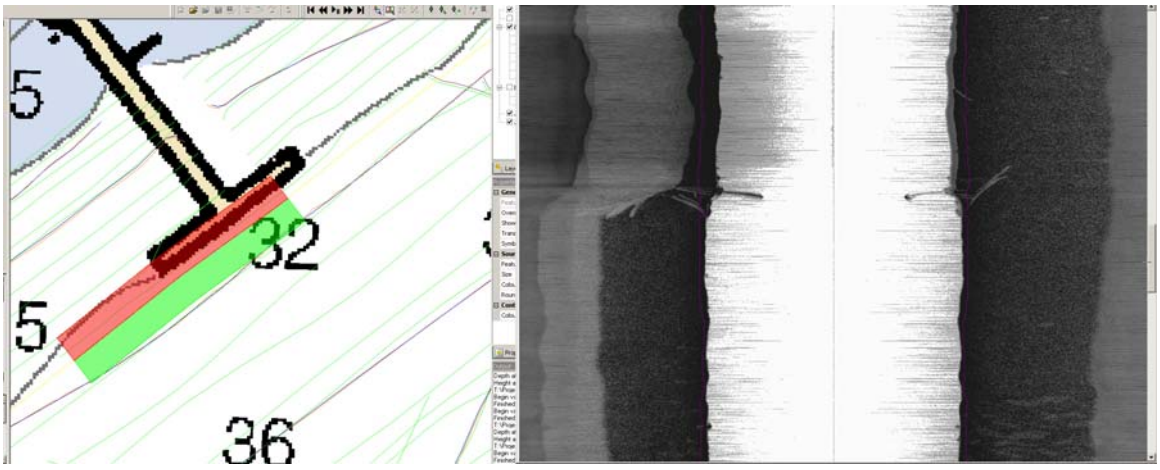
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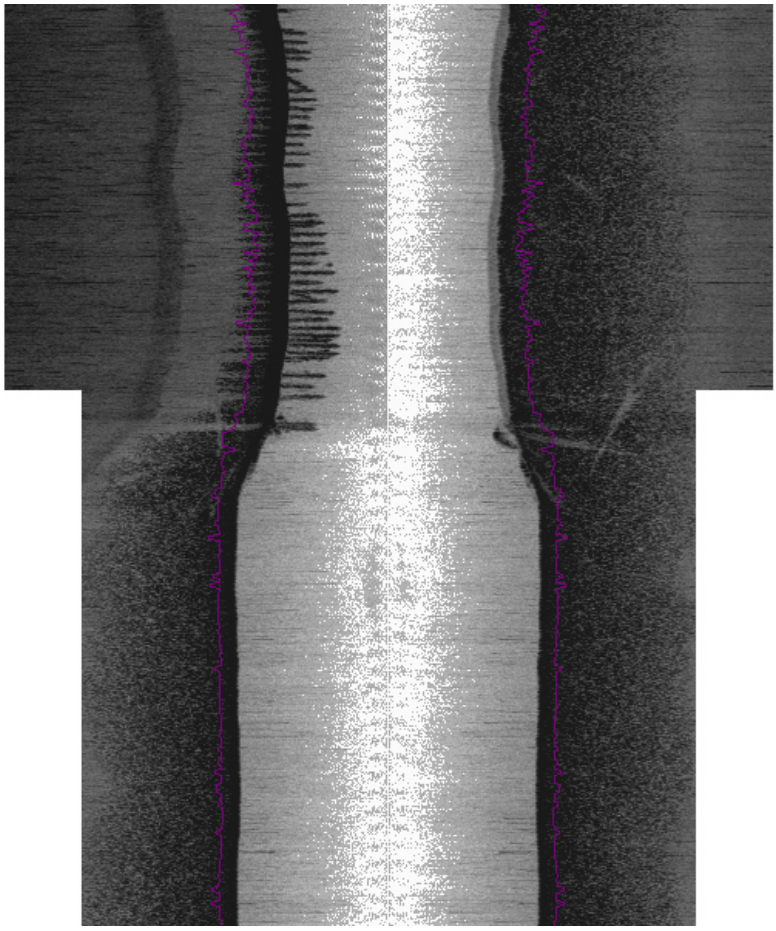

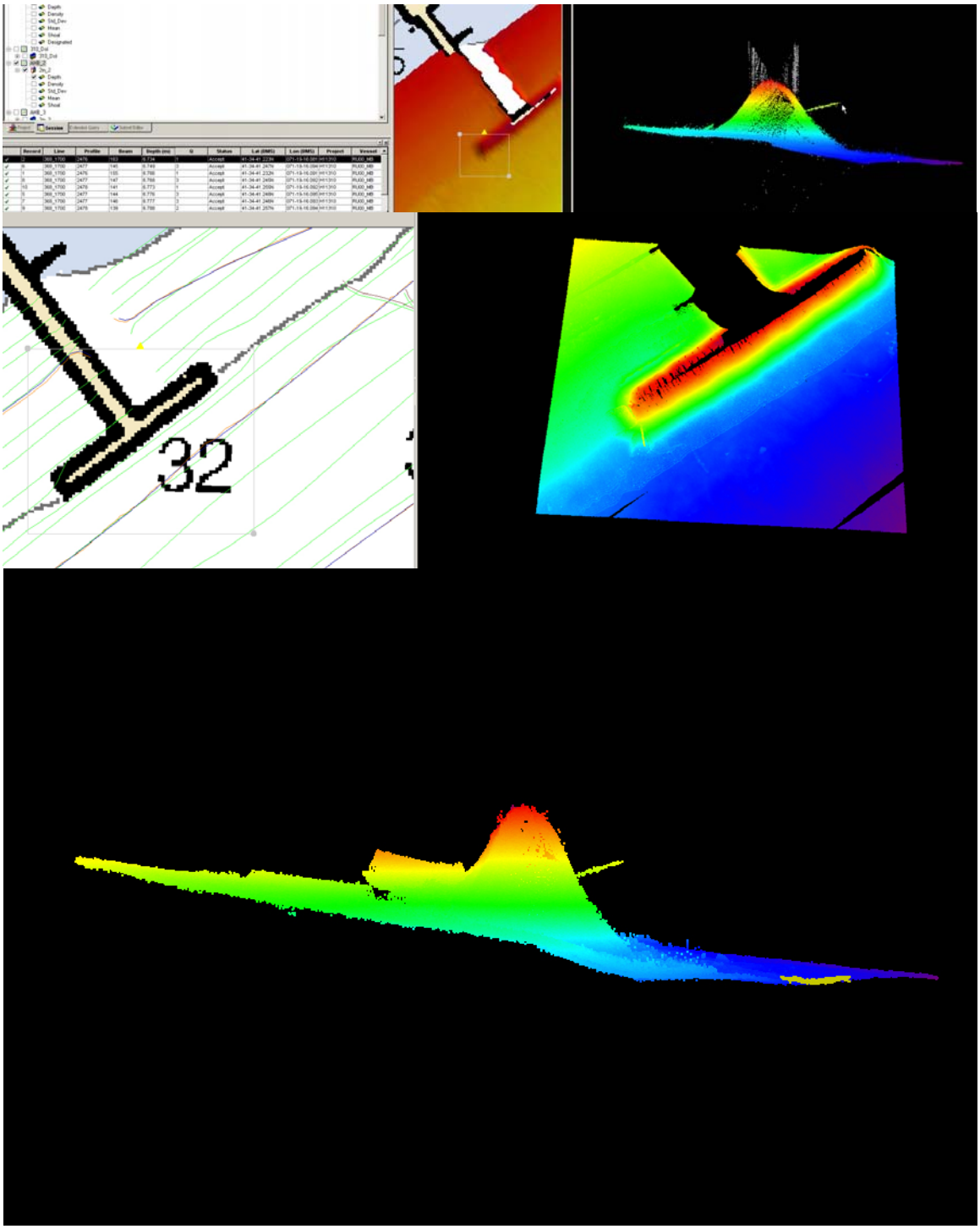
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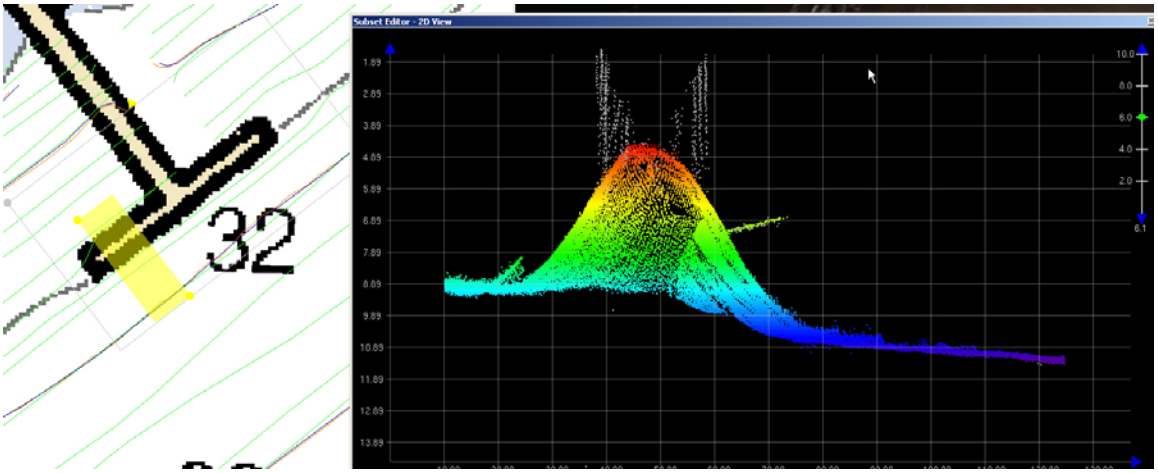
32
Subset Editor - 2D View
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6.1

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H11310 (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

B.1 EQUIPMENT

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

MapInfo, version 8.5
PYDRO, version 6.4.9 HF6
CARIS HIPS/SIPS version 6.0 SP12
CARIS BASE Editor Version 2.0
CARIS HOM ENC Version 3.3 SP1
CARIS GIS version 4.4
DKART Inspector V. 5.1

B.2 PROCESSING

OFFICE REVIEW

The field unit submitted an angle-dependent weighted grid as a product of survey H11310. There were no total propagated error (TPE) values specified in the CARIS HIPS Vessel File (.HVF) for either vessel configuration (RU_00 or RU_01). The angle-dependent grid submitted by the field unit is not adequate for H-Cell production. AHB personnel edited the data in order to produce a clean dataset to be represented as a shoal-biased depth layer of a bathymetry surface model. This shoal-biased depth layer is equivalent to the PYDRO-generated shoal-biased binned data, only in grid format rather than in XYZ format.

During office data cleaning, the officer processor observed that four multibeam bathymetry lines could not be added to the swath-angle grid. These survey lines produced holidays in the surface of not more than 30m in the across-track direction. These areas all have adequate side-scan sonar coverage to meet object detection requirements. The side-scan sonar lines and multibeam echosounder bathymetry lines were examined by the office processor for significant

features and evidence of shoaling. No significant features or evidence of undeveloped or inadequately developed shoals were found. The product of the survey, *H11310_FinalCombined_2m.hns* is adequate for creation of H-Cell products.

H-CELL

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

The product of the survey, *H11310_Combined2m_Final.hns*, is a 2-meter resolution combined angle-dependent grid with swath angle-weighted depth, sounding density, mean depth, standard deviation of mean depth, and shoal-biased depth child layers. A generalized product surface, *H11310_10kgen_200mball_15mdef_for_cntrs.hns*, was created at chart scale for creating curves. This generalized product surface was created at 1:10,000 scale, with a generalization radius of 200m and resolution of 10 meters with horizontal defocusing of 15m. Depth curves were extracted from this surface. Contours were created using standard NOAA depth curves with rounding at a meter-to-(foot plus 0.75). The generalized surface *H11310_10kgen_200mball_15mdef_for_cntrs.hns* should not be used for creation of any other cartographic products for survey H11310. Curves were created for survey review and chart comparison.

Soundings were extracted using the interval of 4mm at 1:10,000 scale from the survey-scale surface *H11310_Combined2m_Final.hns*. The survey scale soundings were extracted from the surface model using CARIS BASE Manager. The survey scale soundings were decimated using the Caris HOM “Sounding Suppression” tool along with manual sounding selection to create the chart scale sounding selection. Areas with soundings that did not represent important seabed trends were supplemented with soundings manually chosen by the office personnel. Soundings were truncated to millimeter precision during HOM processing and export to the metric S-57 exchange file with the default CARIS environmental value of (-1,-1, T). Following export into the metric S-57 exchange set, this environmental value was reset to the NOAA standard charting values (0, 0, N) to convert the metric sounding values to whole feet (NOAA rounding regime).

Bottom samples acquired by the field were entered as

seabed area objects. In addition to field-submitted bottom samples, several rock fields clearly visible in the product surface were used to create seabed area objects. These objects were manually digitized and imported to the CARIS HOM file by the office processor and attributed as “Seabed Area, Rocky.”

C. VERTICAL AND HORIZONTAL CONTROL

Approved water levels with final tide zoning were applied to all data during office processing.

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83), UTM projection zone 19. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements. During CARIS HOM processing the horizontal geodetic datum was translated to Latitude and Longitude (LLDG) World Geodetic System-84 (WGS-84). The S-57 ENC format serves as the exchange file submitted to Marine Chart Division.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

13223 (38th Edition, Apr /05)
Corrected through NM June 2/07
Corrected through LNM May 29/07

13221 (55th Edition, Dec /04)
Corrected through NM Dec. 18/04
Corrected through LNM Dec. 7/04

13218 (39th Edition, Jun /04)
Corrected through NM Jun 12/04
Corrected through LNM May 25/04

ENC Comparison US5RI22M 6th Edition
Update Application 2007-01-31 Issue Date 2007-01-31

HYDROGRAPHY

D.1.1 Charted Soundings and Items

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes qualitative chart comparisons in section D.1, and some quantitative chart comparison in section D.2. Attention is drawn to the following features:

Evidence of shoaling was located to the north and east of Dyer Island, in the vicinity of 041° 35' 16.91" N, 71° 18' 02.49" W. Shoaling extends 360m to the north of this point. The office processor recommends charting present survey findings. This area is near a charted *"Shoals."* It is recommended to retain the notation as charted.

Evidence of shoaling was located near Carr Point, in the vicinity of 041° 34' 25.357" N, 71° 17' 58.868" W. Surveyed depths are 17-18 feet in a charted 21-foot area. It is recommended to chart survey findings.

Evidence of shoaling was located in the vicinity of 41°34'24.606" N, 71°21'01.381" W. The 30-foot isobath located outside the charted channel has migrated approximately 400m to the south of the presently charted 30 foot contour in the charted cable area. It is recommended to chart survey findings.

A charted **dolphin** , located on Chart #13223 in the vicinity of 41°35’20.090”N, 71°17’ 17.674” W on chart 11323, was validated in both the imagery and bathymetry data. It is recommended to chart the dolphin at the present survey location in 41°35'20.036"N, 071°17'18.780"W. See images on the next page.

Figure 1a: Zoomed in view Google Earth Satellite Imagery of Pier and DOL In the vicinity of 41°35’20.090”N, 71°17’ 17.674” W

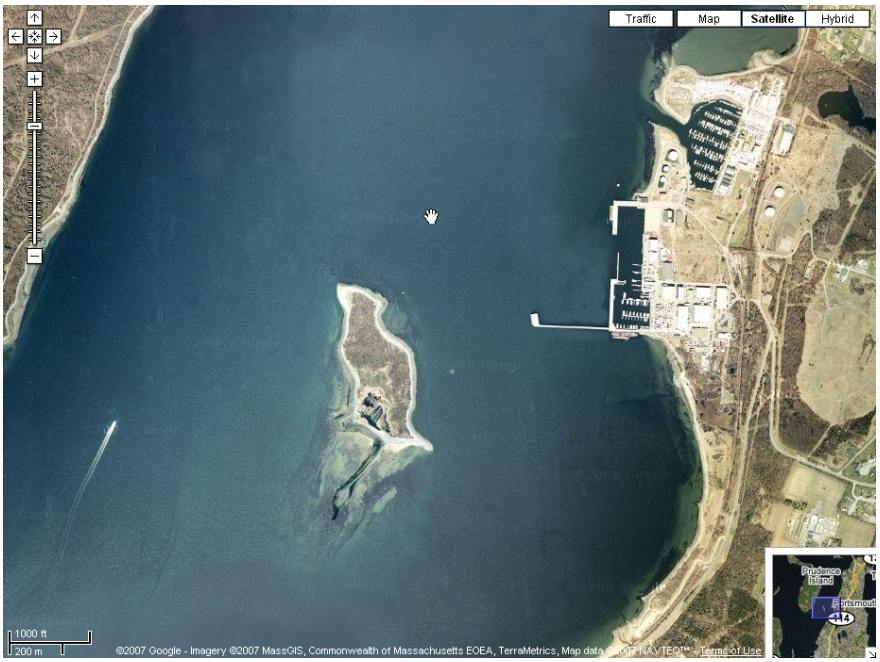

Figure 1b: Zoomed out view Google Earth Satellite Imagery of Pier and DOL In the vicinity of 41°35’20.090”N, 71°17’ 17.674” W for spatial reference

A charted **dolphin** located on Chart #13223 in 41°35′20.665″N, 071°17′17.821″W was not located within the digital data consisting of 100% side scan and multibeam bathymetric coverage. The feature was not identified in either data sources. It is recommended to delete the charted dolphin from the chart.

A charted **dolphin** located on Chart #13221 in the vicinity of 41°35′19.966″N, 071°17′17.620″ was not addressed by the field unit. The submitted digital data coverage consisting of 100% side scan and multibeam bathymetric coverage does not validate the existence of the feature. The Google Earth satellite imagery does not validate the existence of the dolphin. Recommend deleting the DOL from Chart #13221.

A charted **dolphin** located on Chart #13221 located in the vicinity of 41°35′18.955″N, 071°17′17.395″ was not addressed by the field unit. The submitted digital data coverage consisting of 100% side scan and multibeam bathymetric coverage does not validate the existence of the feature. Google Earth satellite imagery also does not validate the existence of the dolphin. Recommend deleting the DOL from Chart #13221.

Evidence of shoaling was found in the vicinity of 41° 34′ 41.200N, 71° 17′ 38.561W. This area is an isolated deep with charted depths of 52 feet at its deepest point. The survey found depths of 51′ over a charted 52′ depth. It is recommended to chart survey findings. This deep is shown in the image below:

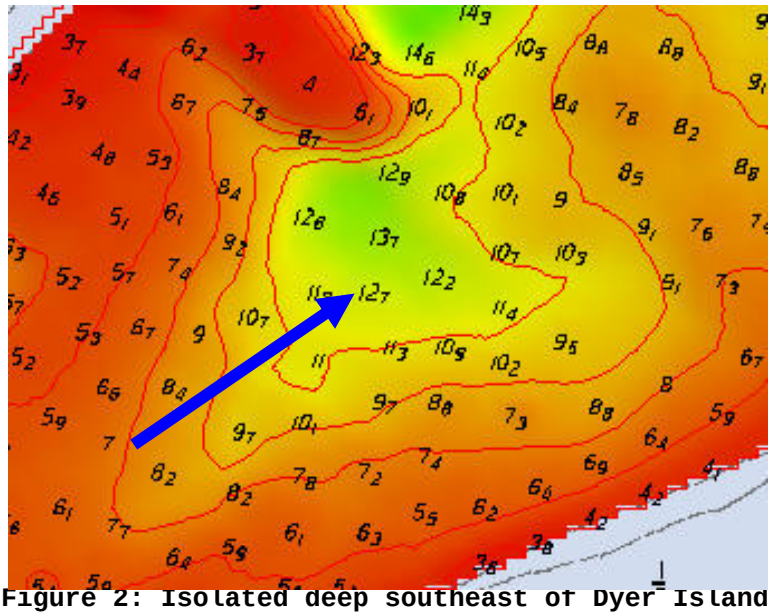

Figure 2: Isolated deep southeast of Dyer Island. Depths in Meters at MLLW.

A charted **Tower** in position 41°31’48.710” N, 71°24’18.76” W was not addressed by the field party. It is recommended to retain the tower as charted.

A charted **16-foot shoal** to the north and east of charted Brig Ledge, in the vicinity of 41°34’43.940 N, 71°24’21.275 W, has a surveyed depth of 20 feet at MLLW. It is recommended to chart current survey soundings.

A charted **10-foot shoal** at position 41°34’45.620 N, 71°23’55.212 W was found to have a surveyed least depth of 13 feet at MLLW. It is recommended to chart current survey soundings.

A charted **pier** located in the vicinity of Latitude 41°34’42.567”N, Longitude 071°19’15.039”W appears to have a 10 to 15 meter discrepancy between the bathymetric data and the charted location of the pier. It is recommended to reference the latest Remote Sensing Division aerial imagery and revise the pier location based upon latest source information. Defer final charting disposition to Marine Chart Division, Nautical Data Branch, Source Data Unit.

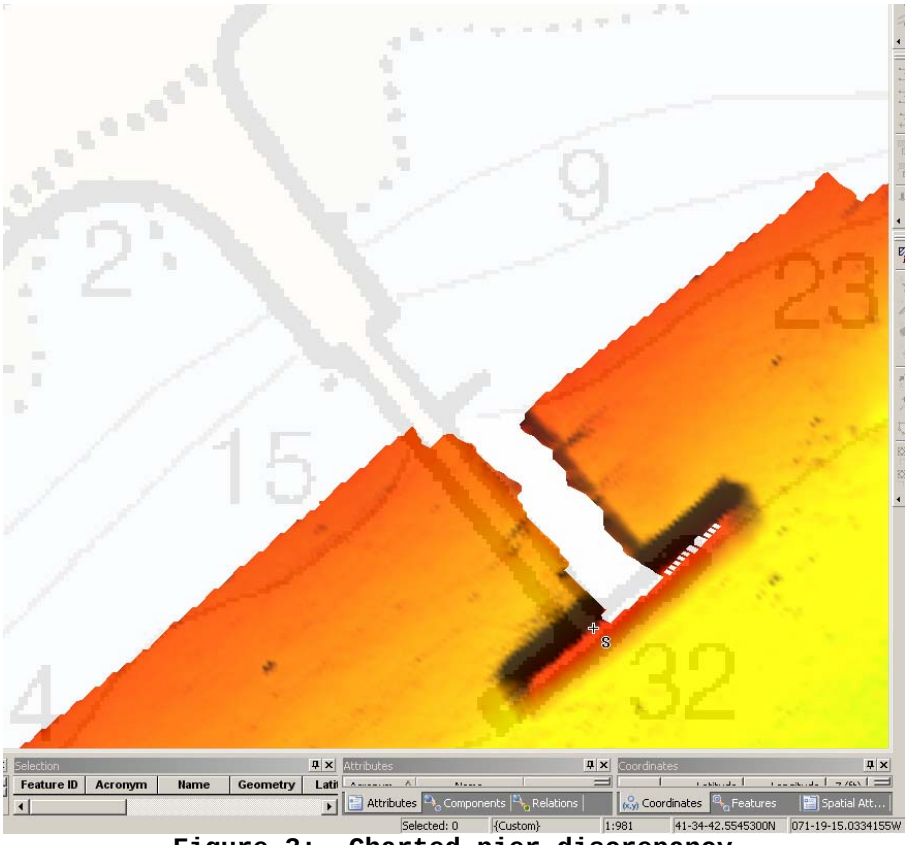

Figure 3: Charted pier discrepancy

During H11310 compilation of the chart scale deliverable, it was determined that several rocks encountered during survey processing and evaluation should not be displayed as an underwater rock (UWTROC). Office personnel felt that these rocks would should be represented in AHB's chart scale BASE Cell file as a soundings. These soundings exist in the real world as benthic rocks, but due to display scale these features are portrayed as soundings. Reference table below.

Depth (M)	Depth (FT)	Latitude N	Longitude W
7.456	24	41°33'45.041"	071°23'10.764"
8.23	27	41°33'45.573"	071°23'14.130"
7.12	23	41°33'47.798"	071°23'13.176"
11.159	36	41°31'46.933"	071°23'38.579"
11.77	38	41°31'58.758"	071°23'39.926"
15.19	50	41°32'01.342"	071°23'43.261"
5.057	16	41°34'06.371"	071°24'41.935"
10.31	34	41°34'41.517"	071°19'06.678"
5.57	18	41°34'37.719"	071°18'21.693"
11.851	39	41°34'35.119"	071°18'26.868"
12.33	40	41°34'53.941"	071°18'57.172"
11.461	37	41°34'39.583"	071°18'25.244"
5.205	17	41°32'46.356"	071°24'53.197"
6.54	21	41°32'59.921"	071°24'44.082"
6.241	20	41°32'56.431"	071°24'42.674"
7.376	24	41°33'03.011"	071°24'44.126"
5.50	18	41°33'17.052"	071°24'52.105"
7.03	23	41°33'17.681"	071°24'29.304"
7.938	26	41°33'09.935"	071°24'22.760"

As noted in the Descriptive Report, the southwestern extension of the East Passage was conducted with 100% multibeam echosounder only. This does not technically meet NOAA object detection requirements. The office processor recommends conducting a Field Examination of this area with side scan sonar to ensure that there are no objects not

detected by the multibeam echosounder in this extension of the survey area.

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

D.2 RESULTS

DANGERS TO NAVIGATION

Two Dangers to Navigation (DTONs) were submitted by the

field party to MCD: East Passage Disposal Area and Fowler Rock. One DTON was submitted on April 28th, 2004 (East Passage) and one was submitted on February 14th, 2005 (Fowler Rock). These DTONs have been applied to the continual maintenance raster updated on April 7, 2006. Both DTONs are discussed in detail in Appendix II of the Descriptive Report.

The following Dangers to Navigation were located by the office processor:

A **shoal** was located at 41°34'47.685" N, 071°17'49.003" W. The corrected depth of 1 foot (0.49m) is located outside the charted 12 foot contour and adjacent to a charted 27 foot depth. The office processor recommends charting present survey findings. This DTON was submitted to the Marine Charting Division on May 15, 2006. Refer to Appendix II of the Descriptive Report for further discussion of this DTON.

A **shoal** was located at 41°34’ 29.344N, 71°18’ 49.987W. This shoal is a seaward extension of the East Passage shoal noted in the Descriptive Report. The surveyed depth of this shoal is 59 feet, 41 feet shoaler than the charted depth. Although the aforementioned Danger to Navigation (East Passage Disposal Area) submitted on April 28th, 2004, alerts the mariner to the presence of a wreck to the outside of the charted Regulated Area (165.122), it does not adequately alert the mariner to the extent of shoaling in the area. It is recommended to chart current survey findings. This DTON was submitted to the Marine Charting Division on June 12th, 2006. Refer to Appendix II of the Descriptive Report for further discussion of this DTON.

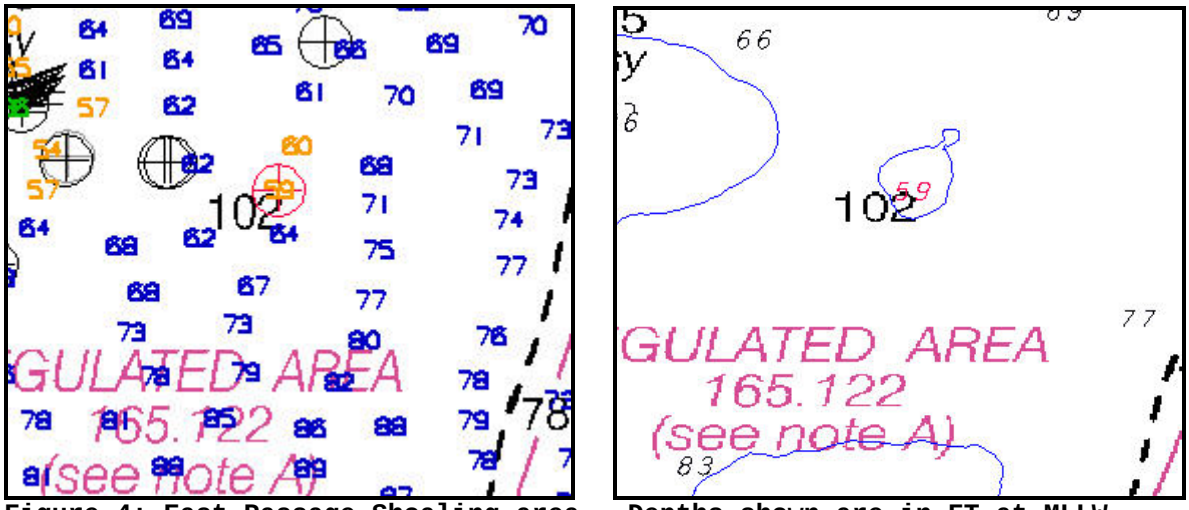

Figure 4: East Passage Shoaling area. Depths shown are in FT at MLLW.

A Danger to Navigation was revealed during AHB survey review. The Navigation Services Division NE Navigation Manager was notified for expedient resolution (salvage) of the feature. The following information below was provided to the NE Navigation Manager. AHB received no positive responses concerning notification to the governing body or owner of the pier concerning this hazard. No other information has been submitted to AHB, thus a Danger to Navigation was submitted to MCD on September 28, 2007. AHB recommends charting a submerged pile with a least depth 22-ft of located at Latitude 43°34’41.223”N, Longitude 071°19’16.081”W. See DtoN Item 22-ft Subm Pile in Appendix 1.

AIDS TO NAVIGATION

Navy maintained buoy W Or “H” was found by the field party to be off its charted station by 230 meters. The charted position is 041° 34' 20.960" N, 71° 20' 35.812" W. The buoy was positioned by the field party at 41°34'21.948" N, 071°20'26.080" W. Defer final charting disposition of Marine Chart Division, Update Services Branch.

Navy maintained buoy W Or “G” was found by the field party to be off its charted station by 180 meters. The charted position is 041° 34' 05.147" N, 71° 21' 08.811" W. The buoy was positioned by the field party at 41°34'07.446" N, 071°21'01.806" W. Defer final charting disposition of Marine Chart Division, Update Services Branch.

SHORELINE

Detached positions were obtained for South Point Pier (in the vicinity of 41°34'44.351" N, 71°19'12.266" W) and for Melville Pier (in the vicinity of 41°35'04.283" N, 71°17'31.934" W). The field party obtained detached positions on the seaward end points of both these piers, but did not provide detached positions of the landward termination or any line data over the length of these piers. There is insufficient information provided for the office processor to include either South Point Pier or Melville Pier in the S-57 H-Cell file. Defer final charting recommendations to Marine Chart Division, Nautical Data Branch, Source Data Unit.

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 present survey is adequate to supersede the charted hydrography within the common area. This is an adequate navigable area survey. Except as noted above, no additional field work is recommended by the office processor.

MISCELLANEOUS

ENC products were created by Atlantic Hydrographic Branch personnel, Norfolk, Virginia, using CARIS HOM v3.3. ENC products and electronic data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

The NOAA H-Cell is an interim product that is not required to meet IHO S-57 specifications. Certain feature objects may have classifications that do not meet S-57 rules, especially in the case of bottom samples.

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 charts were used for compilation of the present survey:

13223	**38th Edition,**	**April 2005**	**1:20,000 Scale**
		Corrected through NM June 2/07	
		Corrected through LNM May 29/07	
13221	**55th Edition,**	**Dec. 2004**	**1:40,000 Scale**
		Corrected through NM Dec. 18/04	
		Corrected through LNM Dec. 7/04	

ENC US5RI22M 6th Edition Update Application 2007-01-31 Issue Date 2007-01-31

APPROVAL SHEET
H11310

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

Helen Stewart
Atlantic Hydrographic Branch, Norfolk, Virginia
2007.09.07 14:38:06 -04'00'

_____ Date: _____

Helen Stewart
Physical Scientist
Atlantic Hydrographic Branch

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

Castle Eugene Parker
2007.09.19 08:36:16 -04'00'

_____ Date: _____

Castle Eugene Parker
Physical Scientist
Atlantic Hydrographic Branch

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: Shepard Smith
I am approving this document
2007.10.01 13:04:54 -04'00'

_____ Date: _____

Shepard Smith
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Rachel Soraruf

Digitally signed by Rachel Soraruf
DN: cn=Rachel Soraruf, c=US, o=NOAA/NOS/OCS/HSD, ou=Operations Branch, email=Rachel.Sorasuf@noaa.gov
Date: 2007.10.29 11:27:28 -04'00'