

H11709

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey: **Navigable Area**

Registry Number: **H11709**

LOCALITY

State: **New York – New Jersey**

General Locality: **New York Harbor and Approaches, NY+NJ**

Sub-locality: **2 NM Northeast of Sandy Hook**

2007

CHIEF OF PARTY
CDR P. Tod Schattgen
NOAA

LIBRARY & ARCHIVES

DATE

HYDROGRAPHIC TITLE SHEET

H11709

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

State: **New York – New Jersey**

General Locality: **New York Harbor and Approaches, NY+NJ**

Sub-Locality: **2 NM Northeast of Sandy Hook**

Scale: 1:10,000 Date of Survey: 06/29/07 to 09/27/07

Instructions Dated: 12 June 2007 Project Number: OPR-B310-TJ-07

Vessel: **NOAA Ship THOMAS JEFFERSON**

Chief of Party: CDR P. Tod Schattgen, NOAA

Surveyed by: **THOMAS JEFFERSON Personnel**

Soundings by: Reson 8101 and 8125 echosounders.

Graphic record scaled by: N/A

Graphic record checked by: N/A

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

Verification by: **Atlantic Hydrographic Branch Personnel**

Soundings in: **Meters at MLLW feet**

Remarks:
1) All Times are in UTC.
2) This is a Navigable Area Hydrographic Survey.
3) Projection is NAD83 UTM Zone 18.

Descriptive Report to Accompany Hydrographic Survey

Project OPR-B310-TJ-07
 H11709
New York Harbor and Approaches, NY+NJ
 2 NM Northeast of Sandy Hook
 Scale 1:10,000
 June 29th – September 27th 2007
NOAA Ship THOMAS JEFFERSON

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-B310-TJ-07, dated 12 June 2007. The survey area is as follows:

<u>Northern Limit</u>	<u>Southern Limit</u>	<u>Western Limit</u>	<u>Eastern Limit</u>
40° 31' 45.0" N	40° 27' 35.0" N	74° 03' 36.0" W	73° 53' 41.0" W

Data acquisition was conducted from June 29, 2007 to September 27, 2007. The purpose of the project is to provide accurate depths and object detection in New York Harbor and its approaches; and to support safe and efficient marine transportation in this region. Most of the survey data in the project area is pre-1982 and parts of the project area have not been surveyed since 1927. Containerized cargo volumes in the Port of New York and New Jersey rose 7.6% in 2005 to a record high and 5,322 ships called on the Port in 2005. The dollar value of the cargo moving through the port on those ships exceeded \$132 billion in 2005.

Statistics:

Single Beam Only	N/A
Multibeam Only	456.5 lnm
Side Scan Sonar Only	N/A
Side Scan / Multibeam	903.3 lnm
Crosslines	90.7 lnm
Multibeam Developments	302.9 lnm
Side Scan Developments	N/A
Shoreline Investigation	N/A
Number bottom samples collected	N/A
Number AWOIS items investigated	34

*Bottom Samples are not "N/A". The value entered should be 0 since bottom samples were assigned in the letter of instructions.
 AWOIS items addressed in the feature report are 32.*

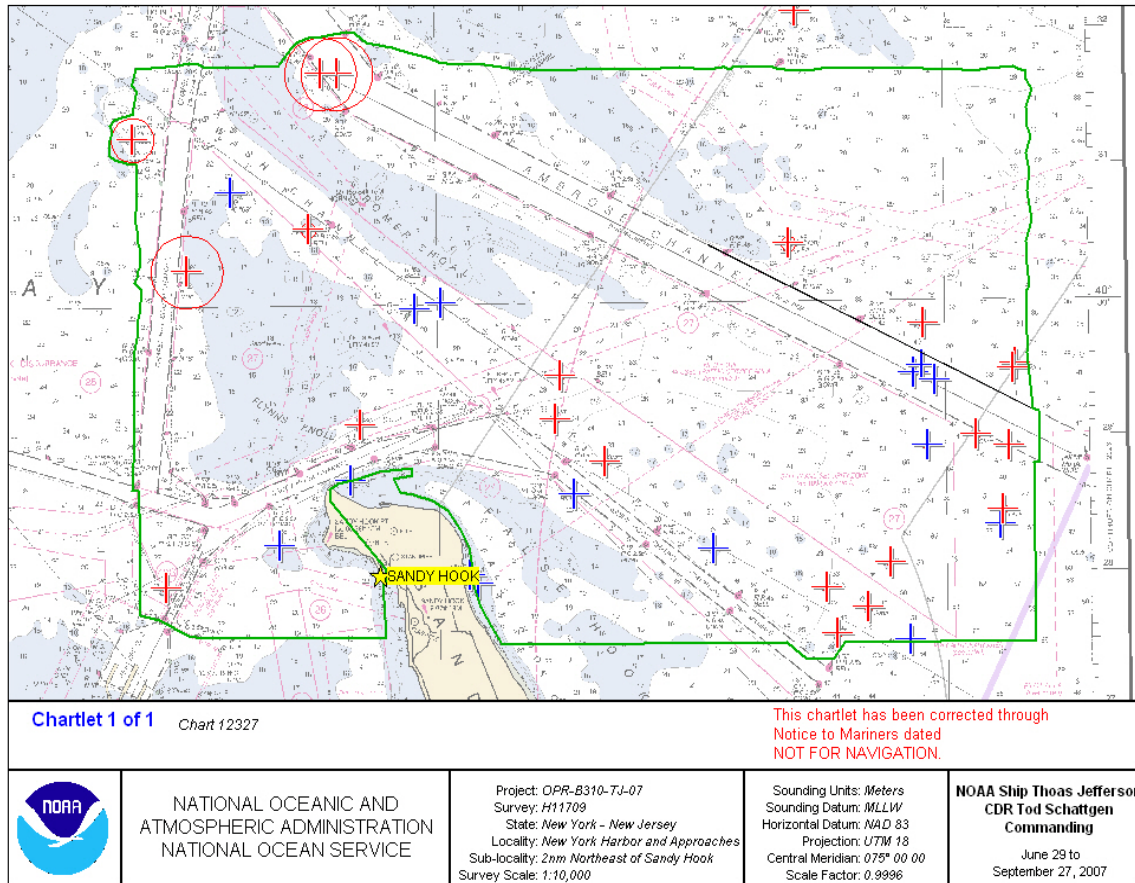


Figure 1. Survey Limits

B. DATA ACQUISITION AND PROCESSING

Refer to the THOMAS JEFFERSON Fall Data Acquisition and Processing Report (DAPR) for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR are included in this descriptive report.

2007 Fall DAPR is included with the data.

B 1. EQUIPMENT AND VESSELS

Data were acquired by Hydrographic Survey Launches 3101 and 3102 (3101 and 3102, respectively). Launch 3101 acquired multibeam echosounder (MBES) soundings, and sound velocity profiles. Launch 3102 acquired side-scan sonar (SSS) imagery, MBES soundings, and sound velocity profiles. Vessel configurations, equipment operation and data acquisition and

processing were consistent with specifications described in the DAPR. No other changes were observed. **OK**

B 2. QUALITY CONTROL

B 2.1. System Certification and Calibration

Refer to the DAPR and Hydrographic Systems Readiness Report (HSRR) for a complete description of system integration and initial calibration results for equipment and sensors used for this survey. **HSRR is included with the data.**

B.2.2 Sounding Coverage

As per the Letter Instructions, this survey was conducted using a combination of object detection (OD) MBES and skunk stripe MBES. AWOIS investigations were acquired using object detection MBES. All MBES grids were monitored and created using CUBE with shallow parameters. Concurrent with MBES coverage, 200% SSS was also acquired in addition to 300% SSS at discrete locations. All were monitored by coverage mosaics, each with 1m resolution. See B.2.5 Systematic Errors for additional information on coverage. **Concur**

B 2.3 Crosslines

MBES crosslines totaling 90.7 lineal nautical miles (7.0 % of mainscheme MBES) were acquired during the course of the survey to assess hydrography in both development and skunk stripe areas. Crosslines were acquired with 3101 and 3102 to provide a good comparison of soundings for each vessel. A CARIS QC report was performed to test whether this survey meets IHO Order I specifications. The vast majority of QC results fell within IHO Order I, however a small number of QC tests did not; this correlates with and may be attributed to poor outer beams of the Reson 8101 MBES. The CARIS QC report is contained in Separate V.

Reson 8101 data was of questionable quality, ie very noisy with intermittent interference / “blowouts.”

B 2.4 Junctions and Prior Surveys

The following contemporary surveys junction with H11709:

Registry #	Scale	Date	Field Party	Junction	side
H11601	10,000	2006	THOMAS JEFFERSON		South

Soundings from the northern edge of H11709 were compared with the southern edge of H11601. H11709 bathymetry was predominantly 1-2 feet deeper than that of H11601 and appears to be the result of migrating sand waves.

This will be verified during H11601 compilation. The east side of this survey junctions with the 2008 survey H11916. Comparison was adequate.

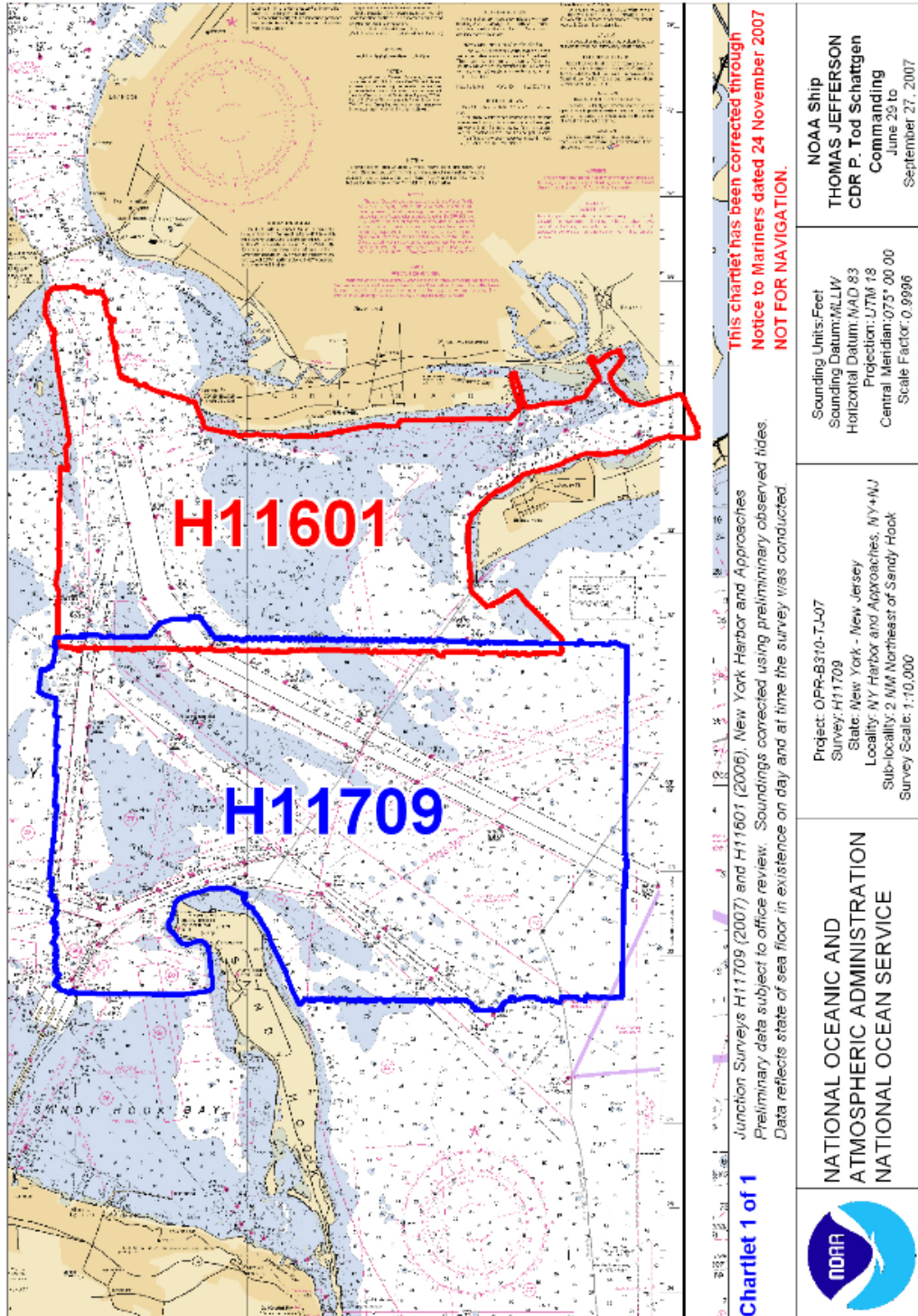


Figure 2. Junctioning Surveys H11709 and H11601

B 2.5 Systematic Errors

- 1) **Side Scan Sonar Coverage.** At the beginning of the survey, some thermocline-induced refraction error as well as unexpected shoaling was observed in acquired SSS data. In many cases, the outside edges of SSS imagery were obscured and not useful for effective OD (even with 200% coverage). To maintain OD standards in these areas, either additional 300% SSS or OD MBES was acquired. In areas where the entire SSS data swath was poor, the applicable SSS imagery was rejected and reacquired either with OD MBES or SSS holiday coverage (Figure 3).

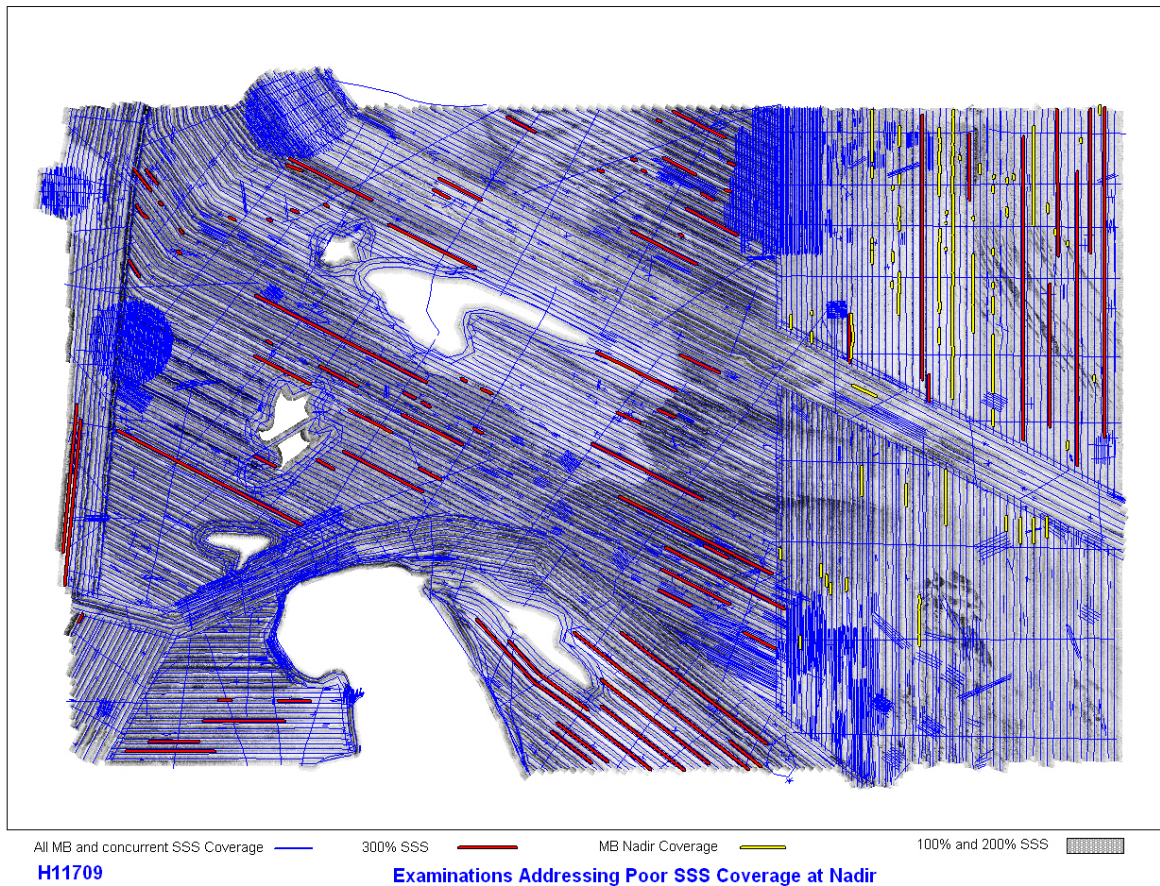


Figure 3. 100% and 200% SSS mosaic. After examination of 200% SSS coverage, either areas of poor SSS imagery were reacquired with SSS holiday coverage, or questionable OD areas were covered with 300% SSS (red highlighted lines) or OD MBES (yellow highlighted lines). Mainscheme, holiday, and crosslines are highlighted in blue.

Concur. Several lines needed towfish recomputation and cleaning of both attitude and navigation. This was done by AHB.

- 2) Digibar Issue. Digibar Pro 98130 failed on 5 August 2007. The ship's spare Digibar Pro probe (98032) was installed on 3101. As the spare probe was acquired during the field season, no valid calibration existed. To ensure data integrity of this probe, a comparison was performed using a SeaCat SBE19+ CTD (4487) and SeaCat SBE19 CTD (285). Results can be found in Separates II. On 8 August, a newly calibrated Digibar Pro probe (98129) was installed on 3101. **OK**
- 3) Dynamic Precise Timing Latency. A periodic roll timing artifact was observed in data acquired with the Reson 8125 MBES. The errors seen, although within IHO Order I specifications, were chronic and corrected for using Roll Time corrections in the Caris HVF. Refer to the DAPR for further information on this artifact. **OK**
- 4) Sonar Differences. Depth differences between Reson 8101 and Reson 8125 MBES data were observed and are most likely related to differences in operating frequency and inherent properties of the sonar systems. Differences between the two systems generally remain within IHO Order I specifications. **Concur. An in-depth check of surfaces was performed by AHB and data was rejected as necessary.**

B.3. CORRECTIONS TO ECHO SOUNDING

HDSC sounding data were reduced to mean lower-low water (MLLW) using approved (verified) water levels from the primary station at Sandy Hook (8531680) and secondary station at Bergen Point (8519483), adjusted for tidal constituents and residuals provided by CO-OPS as specified in the Letter Instructions and illustrated in Figure 4.

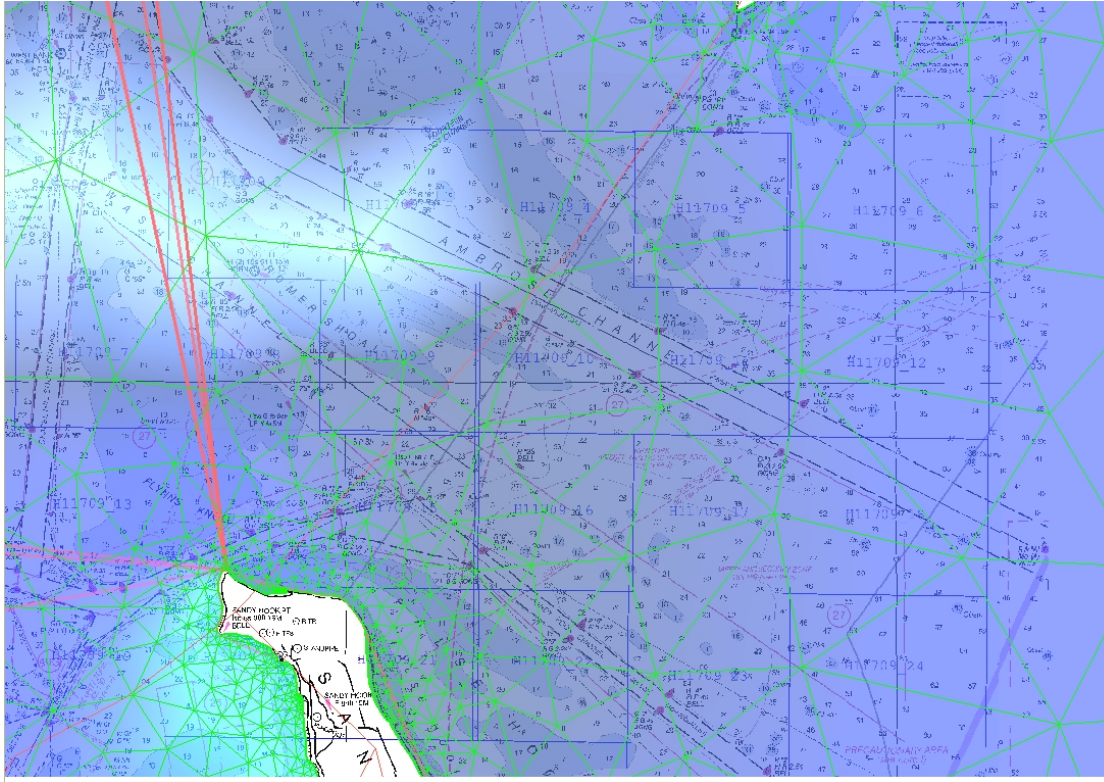


Figure 4. Final TCARI grid for OPR-B310-TJ-07.

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

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

Concur.

B. 4. DATA PROCESSING

B 4.1 Total Propagated Error

For the 2007 field season, Total Propagated Error (TPE) parameters for sound speed and tides are calculated separately for each project. Project-specific parameters for OPR-B310-TJ-07, Survey H11709 are as follows:

Table 2: TPE Parameters

Vessel	Tide Values		Sound Speed Values	
	Measured	Zoning	Measured	Surface
3101	0	0	2.88 *	0.2
3102	0	0	3.68 *	0.0

* **Note:** Per HSTD 2007-2 (Section 2) TPE parameters for measured sound speed were calculated using a weighted average of CTD cast periodicity combined with HSTP-prescribed values (also in HSTD 2007-2). Full detail of these calculations may be found in Separates II (H11709_SVPTimes.xls) and Appendix 5 (H11709 Sound Velocity and TPE.doc). **Concur.**

These values were calculated for all MBES data immediately following CARIS Merge.

B 4.2 BASE Surfaces and Mosaics

The following table describes all BASE Surfaces and Mosaics submitted as part of Survey H11709. Twenty-four 1m resolution field sheets were created for the final combined surface over all data and investigations. Also, twenty-nine 50cm field sheets were created for proof of object detection coverage over the 32 AWOIS investigation areas. The 50cm surfaces were not incorporated into the final combined surface.

<i>Name of Fieldsheet</i>	<i>Resolution</i>	<i>Type</i>	<i>Purpose</i>
H11709_MB	5 m	Cube Finalized Combined	Final for PSS
H11709_1	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_2	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_3	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_4	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_5	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_6	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_7	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_8	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_9	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_10	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_11	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_12	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_13	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_14	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_15	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_16	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_17	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_18	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_19	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_20	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_21	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_22	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_23	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_24	1 m	Cube, Shallow Parameter	Mainscheme QC
H11709_AW1_2	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW3	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW4	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW5	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW6	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.

H11709_AW7_8	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW9	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW10	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW11	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW12	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW13	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW14	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW15	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW16	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW17	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW18	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW19	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW20	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW21	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW22	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW23	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW24	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW25	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW26	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW27_28	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW29	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW30	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW31	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_AW32	50cm	Cube, Shallow Parameter	AWOIS Item Detection Cov.
H11709_SSS	1m	Mosaic	100% SSS COV.
H11709_SSS	1m	Mosaic	200% SSS COV.
H11709_SSS	1m	Mosaic	300% SSS Nadir COV
H11709_contact	N/A	Background Contact Position	MB Feature QC

This survey was processed using the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm. The CUBE configuration was set to “Shallow” for this entire survey. Refer to the DAPR, 2007 Field Procedures Manual, and CARIS HIPS/SIPS 6.1 manual for further discussion of CUBE processing. *Concur.*

C. VERTICAL AND HORIZONTAL CONTROL

A complete description of vertical and horizontal control for survey H11709 can be found in the OPR-B310-TJ-07 Horizontal and Vertical Control Report submitted as an appendix to the DAPR. A summary of horizontal and vertical control for this survey follows. *The HVCR is included with the data.*

C 1.1 Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83), UTM Zone 18N. Differential GPS (DGPS) was the sole method of positioning. Differential

corrections from U.S. Coast Guard beacons at Sandy Hook (286 kHz), and Moriches (293 kHz), were used during this survey. No horizontal control stations were established by the field party for this survey. *Concur.*

C 1.2 Vertical Control

The vertical datum for this project is MLLW. The operating National Water Level Observation Network (NWLON) stations at Sandy Hook, NJ (8531680) and Bergen Point (8519483) serve as datum control for H11709. Note that this differs from the original project instructions which prescribed using The Battery (8518750) in lieu of Bergen Point. The request for delivery of final approved (verified) tides for this survey was forwarded to N/OPS1 on September 30, 2007 in accordance with the FPM and project letter instructions. Approved (verified) water levels were downloaded from CO-OPS on October 23, 2007, and applied to all sounding data with final TCARI constituents and residuals, per section B.3. *Concur.*

D. RESULTS AND RECOMMENDATIONS

D.1 Chart Comparison

Survey H11709 was compared to the following charts below. Chart comparisons were performed in CARIS and Pydro using survey-scale excessed soundings, and in MapInfo using survey-scale and chart-scale excessed soundings exported from Pydro.

D.1.1. Chart 12401 9th Ed. July 2007 1:15,000

On Chart 12401, the tabulated depths for Terminal Channel is 45 feet from 2007 surveys, the Coast Pilot describes it as 35 feet. The Tabulated depths, part A for the Turning Basin is described as, maintained at 45 feet from 2007 surveys and has a charted text as 45 feet DEC 2002. The Coast Pilot describes it as 35 feet. ENC US5NY18M charts shows depths (converted from meters) as ranging from 35 to 45 feet from the turning basin to the piers with a 35 ft sounding in the east half. See Appendix 1 DtoN Reports, H11709_Special_Report2.pdf and the Coast Pilot Report. ***Concur. Final soundings show 44-ft depths in Terminal Channel. An email has been sent to the Northeast Navigation Manager concerning the areas in question.***

There is an extensive system of private buoy's 400 meters east of Gunnison Beach running North and South for approximately 1200 meters. These are describing a warning area to the only nude beach on the east coast sponsored by the National Park Service. The name Gunnison Beach should be placed on the chart. ***Concur. Buoys were incorporated into the features file.***

The hydrographer recommends that new shoreline be acquired around Sandy Hook. A preliminary 18 ft curve was submitted to MCD via AHB request on 11 January 2008. ***Concur.***

Noticeable migrations of the 18 foot curve into deeper water were observed at the Southeast Spit of East Bank, south of Flynn's Knoll, north of the Naval Station Earle turning basin, and around False Hook and False Hook Channel. Additionally, the migration of the 18 foot curve was observed in the north end of a charted fish trap area southwest of the Sandy Hook Coast Guard Station. No migration was observed to be greater than 230 meters. ***Concur.***

D.1.2. 12402 10th Ed. May 2006 1:15,000

This survey has identified more rocks than are currently charted in the area between Ambrose Channel and Rockaway Point, approximately 1 nm south of the R "2" buoy. ***Uncharted rocks were carried through to the final feature file to be used at MCD's discretion. It is noted that the current chart edition shows the rocks as depths and not as items.***

D.1.3. 12327 39th Ed.; November 2004, 1:80,000

On chart 12327 a 38 ft dangerous rock is located approximately 300 meters north of Sandy Hook Channel entrance buoy R "2" (40°27'26.8"N, 073°56'06.8"W). The least depth of the rock is actually located approximately 180 m west of the charted danger circle (40°27'27.8"N, 073°56'08.0"W). ***Concur.***

D.1.4. 12326 50th Ed May 2006 1:80,000.

There is a charted depth of 35 ft on chart 12326 at 40-29-26.78 N, 073-54-33.62 W. Surveyed soundings corresponding to 38 feet (+/- 0.5 ft) and the correlating depth on chart 12327.

The Sandy Hook Range Lights are not listed on this chart. Ambrose Channel is listed as having a 46 ft depth, but the controlling depths range from 39.9 to 45.9 feet. All other items appear to be charted appropriately at this scale. *Concur.*

D.1.5. Other Charts

At the scale depicted the following raster charts had no observed discrepancies.

5161 13th Ed. October 2003 1:1,058,400

12300 46th Ed July 2007 1:400,000

12324 32nd ED March 3 2006 1:40000 (rotated chart)

13003 49th Ed April 2007 1:1,200,000

13006 34th Ed. May 2007 1:675,000

145000, 27th Ed 0/1/2002, 1:5000000

D.1.6. ENC US5NY1BM

This ENC was compiled from paper chart 12327 (New York Harbor); no differences between ENC US5NY1BM and chart 12327 were observed. Discrepancies between this survey and ENC US5NY1BM are generally the same as those found in Section D.1.3. All survey features are reported in Appendix II. *Concur.*

D.1.7. US5NY18M

This ENC was compiled from paper chart 12401 (New York Lower Bay - Southern Part); no differences between ENC US5NY18M and chart 12401 were observed. Discrepancies between this survey and ENC US5NY18M are generally the same as those found Section D.1.1. All survey features are reported in Appendix II. *Concur.*

D.1.8. ENC US5NY19M

This ENC was compiled from paper chart 12402 (New York Lower Bay); no differences between ENC US5NY19M and chart 12402 were observed. Discrepancies between this survey and ENC US5NY19M are generally the same as those found in Section D.1.2. All survey features are reported in Appendix II. *Concur.*

D.2 Additional Results

D.2.1 Automated Wreck and Obstruction Information Service (AWOIS) Items

A total of 34 AWOIS items were located within the modified limits of H11709 and investigated during this survey. AWOIS items were investigated with 200% SSS and OD MBES over the entire search radius. All AWOIS items are described in detail in Appendix II of this report.

32 AWOIS items were investigated.

D.2.4 Shoreline

No shoreline was acquired during survey H11709. The hydrographer recommends updated shoreline be acquired around Sandy Hook due to observed visible and bathymetric migration of its northern edge. *Concur.*

D.2.5 Charted Features

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

D.2.6 Charted Pipelines and Cables

Several charted pipelines and cables transect the survey area. The lines are occasionally visible in SSS imagery or the bathymetry. It appears that there may have been some underwater work that has left scours and mounds in the vicinity of the pipelines or cables. The Hydrographer has no recommendation on these pipelines and cables. *Concur.*

D.2.7 Bridges, Ferry Routes, and Overhead Cables

There were no bridges or overhead cable crossings in the limits of the survey. There are two ferry routes that cross this survey. SeaStreak Passenger Ferry Service operates routes between Atlantic Highlands, Highlands and to Pier 11 Wall Street and East 35 Street. A specific route was not available. See Appendices\5_Supplemental_Survey_Records_Correspondence\SeaStreak Passenger Ferry Service.pdf *Concur.*

D 3. Dangers to Navigation and Shoals

D 3.1 Dangers to Navigation

A total of 19 dangers to navigation were found and reported to the NOAA's Office of Coast Survey, Marine Chart Division (MCD) for verification and final submission to the 1st Coast Guard District. A copy of each Danger to Navigation Report is included in Appendix I, and a copy of each DTON email to MCD is located in Appendix V of this Descriptive Report. MCD has acknowledged all DTONs. *Concur.*

D 3.2 Shoals

Shoaling is occurring around Sandy Hook, False Hook and False Hook Channel. There is 2-6 foot shoaling near the southwest corner of the Sandy Hook Coast Guard Pier which may begin to encroach the south side of the same pier. The largest boat at the station is a 47 ft motor lifeboat with a 4.5 ft draft. *Concur.*

D.4 Aids to Navigation

There are 70 charted Aids to Navigation (ATON) within the revised limits of H11709. Some Aids were inaccessible and not investigated. Discrepancies with ATONS are addressed in detail in the Feature Report (Appendix II) and the Pydro PSS. *Coast Guard - maintained AtoNs are not included in the final package.*

D.5 Coast Pilot Information

Recommendations for changes or addenda to the Coast Pilot can be found in the OPR-B310-TJ-07 project reports and/or Appendix V. *OK*

D.6 Miscellaneous

Bottom Samples

Due to time constraints, no bottom samples were taken for this survey. *There were several charted bottom characteristics in this survey and they have been brought through from the ENC's and in the final features file.*

Environmental Conditions and Notes

H11709 spanned nearly 3 months of which there were periods the ship was deployed to different locations and then returned to this survey. Thus, there are several areas where crosslines show some variation when compared to data from other days of acquisition or different MBES systems. This phenomenon may primarily be attributed to development and migration of sand waves (Figure 5). The dynamics of the areas should be considered when addressing anomalies in the data.

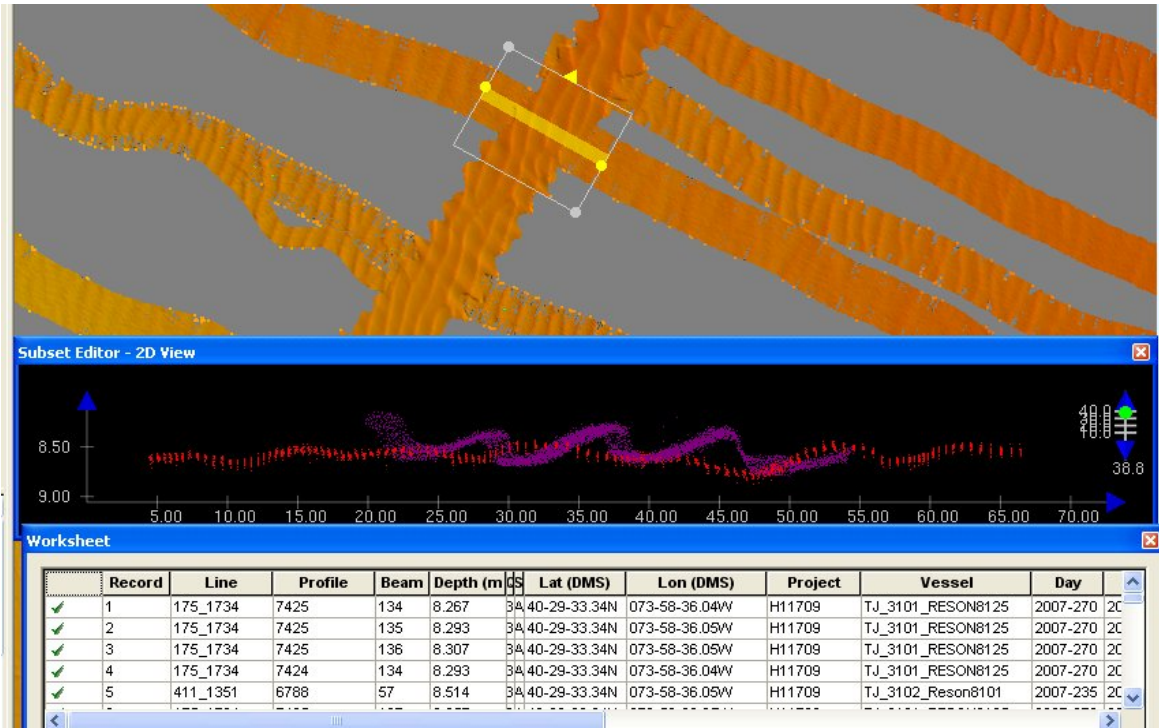


Figure 5. Short term bottom variability. The variability between Reson 8101 and Reson 8125 MBES data acquired 35 days apart may be primarily attributed to short term development and/or migration of sand waves.

D.8 Adequacy of Survey

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

Summary and Recommendations for Additional Work

As discussed previously in this report, the Hydrographer recommends that new shoreline be acquired around Sandy Hook. *Concur.* The Hydrographer has no further recommendations.

E. APPROVAL

As Lead Hydrographer, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the 2007 Office of Coast Survey Hydrographic Surveys Division’s *Field Procedures Manual*, and 2007 NOS *Hydrographic Surveys Specifications and Deliverables*. Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy.

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

Survey H11709 is adequate to supersede charted soundings in their common areas.

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

<u>Title</u>	<u>Date Sent</u>	<u>Office</u>
Fall 2007 Data Acquisition and Processing Report	Nov. 30, 2007	N/CS33
2007 Hydrographic Systems Readiness Report	April 6, 2007	N/CS31
Horizontal and Vertical Control Report for OPR-B310-TJ-07	Oct. 28, 2007	N/CS33
Tides and Water Levels Package for OPR-B310-TJ-07	Sept. 30, 2007	N/OPS1
Coast Pilot Report for OPR-B310-TJ-07	TBD	N/CS26

Approved and Forwarded:

LCDR Christiaan H. van Westendorp, NOAA
Field Operations Officer

CDR P. Tod Schattgen, NOAA
Commanding Officer

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

Survey Manager:



Peter G. Lewit
Senior Survey Technician

APPENDIX I
Dangers to Navigation

H11709 DTON Report

Registry Number: H11709
State: New York
Locality: New York Harbor and Approaches, NY+NJ
Sub-locality: 2 NM Northeast of Sandy Hook
Project Number: OPR-B310-TJ-07
Survey Dates: 06/30/2007 - 12/13/2007

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	10th	05/01/2006	1:15,000 (12402_1)	[L]NTM: ?
12401	8th	02/01/2005	1:15,000 (12401_1)	[L]NTM: ?
12327	99th	10/01/2006	1:40,000 (12327_1)	[L]NTM: ?
12324	32nd	03/01/2006	1:40,000 (12324_1)	[L]NTM: ?
12326	50th	05/01/2006	1:80,000 (12326_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	33rd	04/01/2006	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	DTON1 Sounding 54/93	Shoal	7.81 m	40° 28' 45.8" N	074° 01' 01.1" W	---
1.2	DTON1 Sounding 73/1	Shoal	4.39 m	40° 28' 44.7" N	074° 01' 00.7" W	---
1.3	DtoN2 Obstrn 297/23	Obstruction	5.48 m	40° 31' 15.4" N	074° 01' 57.4" W	---
1.4	DtoN2 Obstrn 1743/5	Obstruction	3.65 m	40° 31' 29.3" N	074° 01' 29.4" W	---
1.5	DtoN2 Obstrn 1189/22	Obstruction	5.51 m	40° 29' 45.7" N	074° 02' 31.5" W	---
1.6	DtoN2 Pile 67/224	Pile	5.08 m	40° 27' 47.1" N	074° 00' 51.8" W	---
1.7	DtoN2 Ruins 209/234	Obstruction	3.21 m	40° 28' 01.9" N	074° 00' 40.9" W	---
1.8	DTON3 Rock 1507/4	Rock	4.52 m	40° 31' 34.4" N	074° 01' 20.1" W	---

1.9	DTON3 Rock 6084/49	Rock	7.83 m	40° 31' 33.2" N	073° 56' 01.1" W	---
1.10	DTON3 Rock 3402/95	Rock	7.30 m	40° 28' 12.6" N	073° 57' 36.3" W	---
1.11	DTON3 Rock 175/167	Rock	7.60 m	40° 28' 29.9" N	073° 58' 03.4" W	---
1.12	DTON3 Rock 318/37	Rock	11.86 m	40° 27' 35.0" N	073° 55' 51.5" W	---
1.13	DTON3 Obstruction 186/236	Obstruction	14.40 m	40° 27' 57.5" N	073° 55' 22.5" W	---
1.14	DTON4 Sounding 154/188	Shoal	4.36 m	40° 31' 14.2" N	074° 00' 48.1" W	---
1.15	DTON4 Obstrn 645/160	Obstruction	4.11 m	40° 31' 08.8" N	073° 58' 24.0" W	---
1.16	DTON5 Chart Discrepancy Special Report 2	Shoal	[None]	40° 27' 18.2" N	074° 02' 59.4" W	---
1.17	DTON5 Obstrn 173/164	Obstruction	5.06 m	40° 28' 00.7" N	074° 00' 50.9" W	---
1.18	DTON5 Sounding 14/26	Shoal	0.73 m	40° 28' 00.3" N	074° 00' 37.8" W	---
1.19	DTON5 Sounding 459/10	Shoal	1.92 m	40° 27' 59.3" N	074° 00' 37.8" W	---

1 - DR_DToN

1.1) Profile/Beam - 54/93 from h11709 / tj_3102_reson8101 / 2007-185 / 384_1356

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 28' 45.8" N, 074° 01' 01.1" W
Least Depth: 7.81 m (= 25.61 ft = 4.268 fm = 4 fm 1.61 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.984 m ; TVU (TPEv) ± 0.399 m
Timestamp: 2007-185.13:56:39.783 (07/04/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-185 / 384_1356
Profile/Beam: 54/93
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This shoaling area was found with Reson 8101 multibeam and corrected to MLLW using observed water levels and TCARI for water level computation. The 25 ft sounding is above the Sandy Hook Channel controlling depth of 40.2 FT (left inside quarter). This encroaching spit descends from the 14-foot sounding on the outside left quarter to 17 ft, 19 ft, 22 ft, and 25 ft toward the edge of the left inside quarter of the channel. Subsequent to DTON submission, data were corrected to MLLW using verified water levels and final TCARI for water level computation 11/14/08

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-185/384_1356	54/93	0.00	000.0	Primary

Hydrographer Recommendations

Chart dangerous sounding of 25 feet. Update tabulated controlling depth of left inside quarter to 25 feet.

Cartographically-Rounded Depth (Affected Charts):

25ft (12401_1, 12324_1, 12327_1, 12326_1)
 4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 7.8m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: QUASOU - 1:depth known
SORDAT - 20070704
SORIND - Bathymetry
TECSOU - 1:found by echo-sounder
VERDAT - 12:Mean lower low water

Office Notes

Concur.

Feature Images

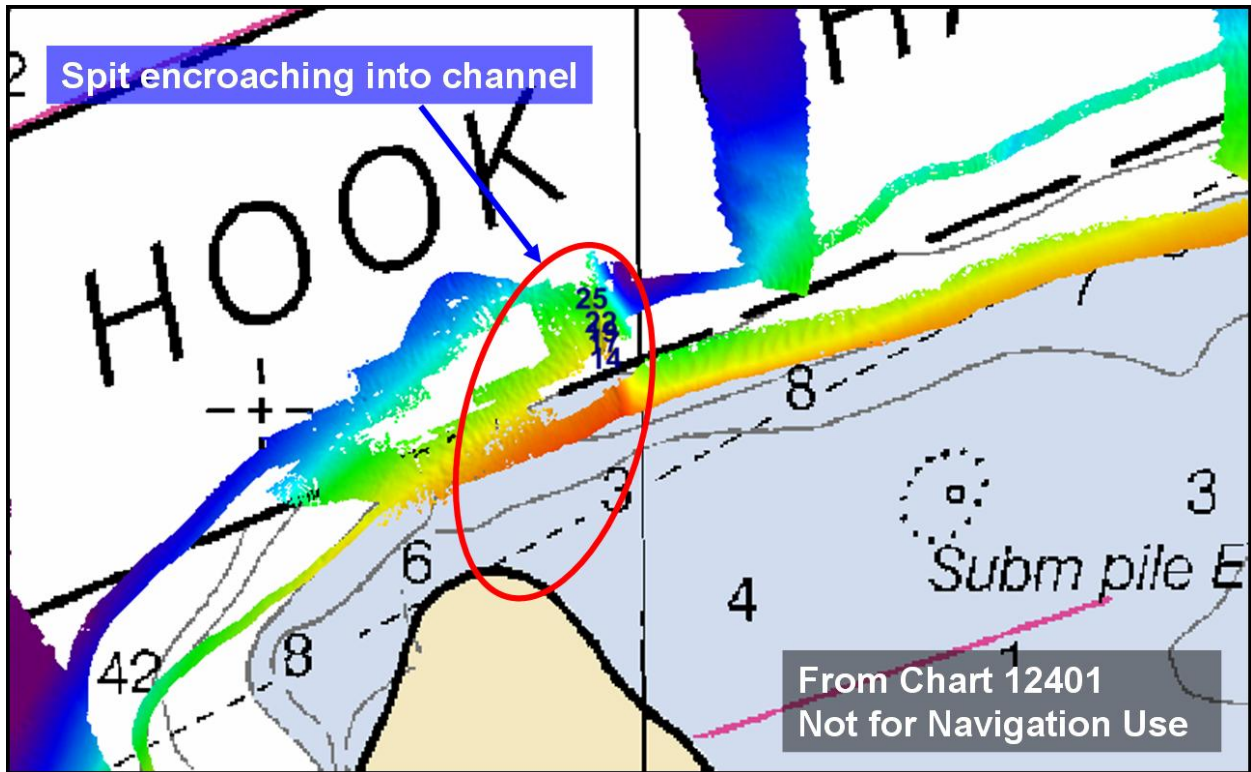


Figure 1.1.1

1.2) Profile/Beam - 73/1 from h11709 / tj_3102_reson8101 / 2007-185 / 384_1356

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 28' 44.7" N, 074° 01' 00.7" W
Least Depth: 4.39 m (= 14.40 ft = 2.400 fm = 2 fm 2.40 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.986 m ; **TVU (TPEv)** ± 0.426 m
Timestamp: 2007-185.13:56:45.054 (07/04/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-185 / 384_1356
Profile/Beam: 73/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This shoaling area was found with Reson 8101 multibeam and corrected to MLLW using observed water levels and TCARI for water level computation. The 14 ft sounding is above the Sandy Hook Channel controlling depth of 19.6 FT (Controlling Depth Table Note B). This shoaling "spit" descends from the 14-foot sounding on the left outside quarter to 17 ft, 19 ft, 22 ft, and 25 ft toward the edge of the left inside quarter of the channel. Subsequent to DTON submission, data were corrected to MLLW using verified water levels and final TCARI for water level computation 11/14/08

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-185/384_1356	73/1	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-265/493_1431	0002	9.03	154.7	Secondary (grouped)
h11709/tj_3102_reson8101/2007-185/384_1356	63/11	9.21	173.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-183/520_1448	0002	14.26	340.9	Secondary (grouped)
h11709/tj_3102_reson8101/2007-185/384_1356	60/26	15.23	171.4	Secondary (grouped)
h11709/tj_3101_reson8125/2007-216/004_1609	1971/93	18.81	167.0	Secondary (grouped)
h11709/tj_3102_reson8101/2007-185/384_1356	57/54	20.73	171.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-185/542_1335a	0006	23.10	178.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-185/384_1356	0001	28.65	149.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-265/494_1423	0002	53.63	171.3	Secondary (grouped)

Hydrographer Recommendations

Update Note B of the tabulated controlling depths to "EXCEPT FOR SHOALS TO 14 FT AT 40/28/44.7 N 74/01/01.1 W ALONG THE LEFT OUTSIDE QUARTER OF REACH."

Cartographically-Rounded Depth (Affected Charts):

14ft (12401_1, 12324_1, 12327_1, 12326_1)

2 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

4.4m (5161_1)

S-57 Data

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

Office Notes

Concur.

Feature Images

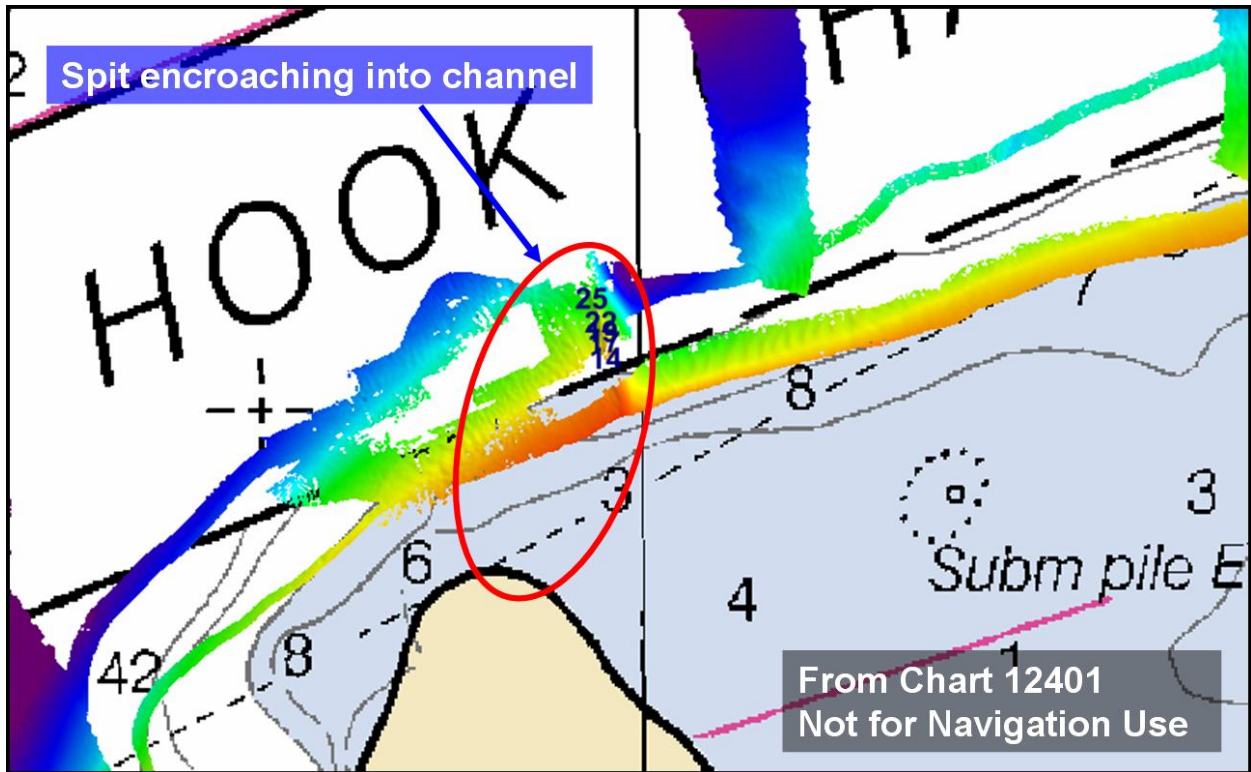


Figure 1.2.1

1.3) Profile/Beam - 297/23 from h11709 / tj_3101_reson8125 / 2007-268 / 077_2056

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 31' 15.4" N, 074° 01' 57.4" W
Least Depth: 5.48 m (= 17.98 ft = 2.996 fm = 2 fm 5.98 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-268.20:57:08.782 (09/25/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-268 / 077_2056
Profile/Beam: 297/23
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous obstruction was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and preliminary TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-268/077_2056	297/23	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/425_1403	0001	1.17	310.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-187/501_1320	0007	6.13	044.8	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous obstruction in current survey position with a least depth of 5.46 meters (18 feet).

Cartographically-Rounded Depth (Affected Charts):

18ft (12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.5m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 5.479 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images



Figure 1.3.1

1.4) Profile/Beam - 1743/5 from h11709 / tj_3102_reson8101 / 2007-227 / 527_1349

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 31' 29.3" N, 074° 01' 29.4" W
Least Depth: 3.65 m (= 11.99 ft = 1.998 fm = 1 fm 5.99 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.983 m ; **TVU (TPEv)** ± 0.398 m
Timestamp: 2007-227.13:52:21.726 (08/15/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-227 / 527_1349
Profile/Beam: 1743/5
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found with Reson 8101 MBES and Klein 5000 SSS. The obstruction appears to be a pile of rock or debris. Soundings are corrected to MLLW with verified water levels and TCARI for water level computation. Chart has now been updated.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-227/527_1349	1743/5	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-227/527_1349	0003	2.30	121.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-187/527_1605	0002	2.38	040.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-231/404_1813	0002	5.41	221.8	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous obstruction in the current survey position with a least depth of 3.65 meters (12 feet).

Cartographically-Rounded Depth (Affected Charts):

12ft (12402_1, 12327_1, 12326_1)

2fm (12300_1, 13006_1, 13003_1, 14500_1)

3.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 3.654 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

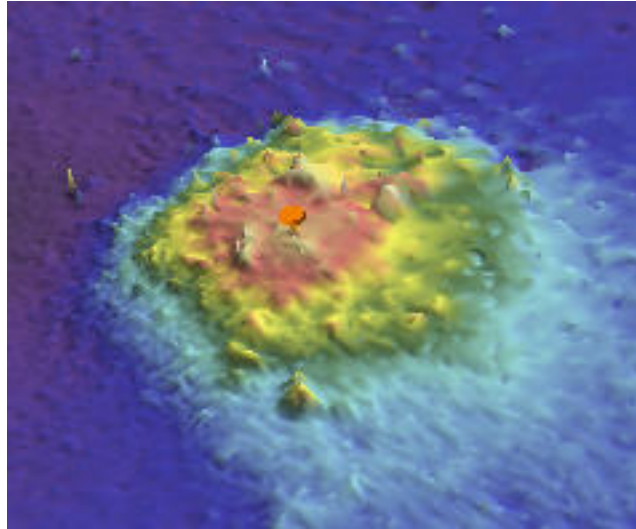


Figure 1.4.1

1.5) Profile/Beam - 1189/22 from h11709 / tj_3101_reson8125 / 2007-228 / 160_1943

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 29' 45.7" N, 074° 02' 31.5" W
Least Depth: 5.51 m (= 18.09 ft = 3.016 fm = 3 fm 0.09 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-228.19:45:13.311 (08/16/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-228 / 160_1943
Profile/Beam: 1189/22
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous obstruction was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and preliminary TCARI for water level computation. Item is now charted

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-228/160_1943	1189/22	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-180/502_1450	0001	1.60	176.4	Secondary

Hydrographer Recommendations

Chart a dangerous obstruction in current survey position with a least depth of 5.55 meters (18 feet).

Cartographically-Rounded Depth (Affected Charts):

18ft (12401_1, 12324_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.5m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.515 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

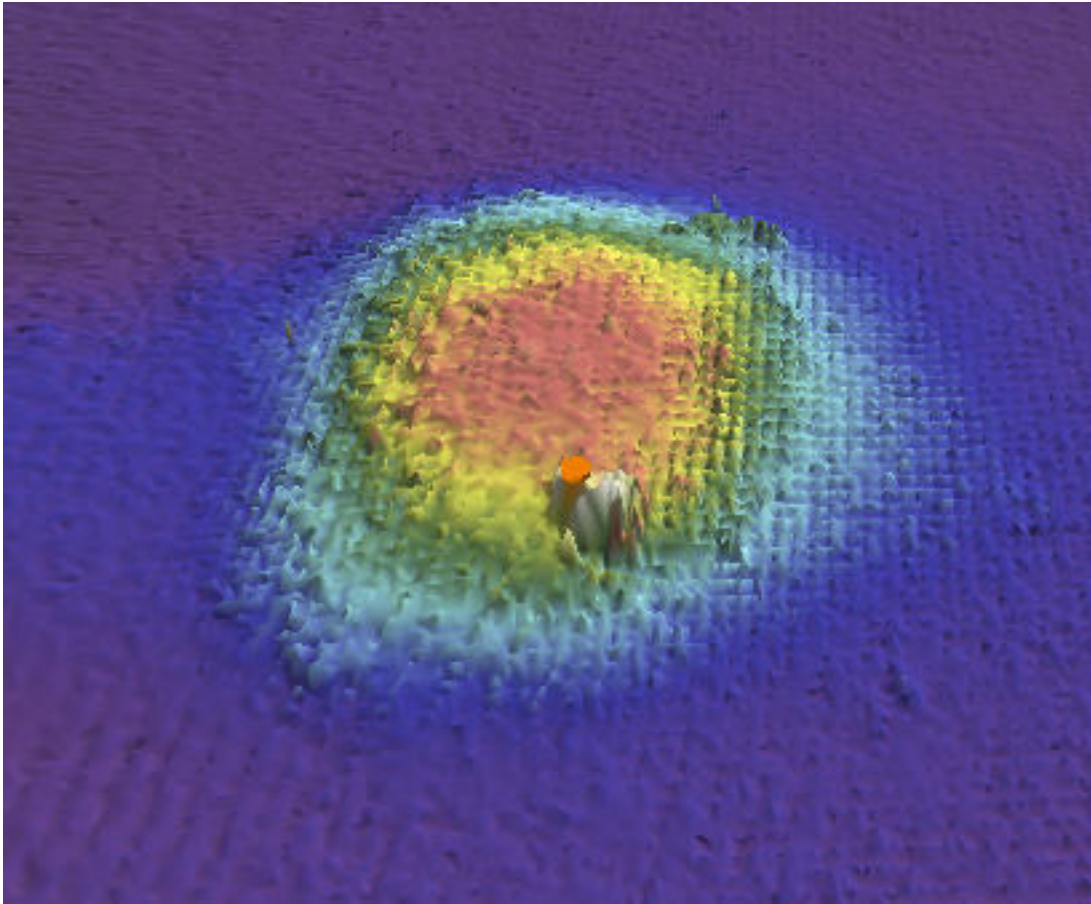


Figure 1.5.1

1.6) Profile/Beam - 67/224 from h11709 / tj_3101_reson8125 / 2007-234 / 557_2011

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 27' 47.1" N, 074° 00' 51.8" W
Least Depth: 5.08 m (= 16.67 ft = 2.778 fm = 2 fm 4.67 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-234.20:11:41.711 (08/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-234 / 557_2011
Profile/Beam: 67/224
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted submerged pile was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and preliminary TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-234/557_2011	67/224	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-221/606_1830	0001	1.09	154.0	Secondary
h11709/tj_3102_klein5000_sss100/2007-185/370_1513	0001	3.23	000.4	Secondary

Hydrographer Recommendations

Chart a submerged pile in the current survey position with a least depth of 5.07 meters (16 feet).

Cartographically-Rounded Depth (Affected Charts):

16ft (12401_1, 12324_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.1m (5161_1)

S-57 Data

Geo object 1: Pile (PILPNT)

Attributes: CONVIS - 2: not visual conspicuous

Office Notes

Concur.

Feature Images



Figure 1.6.1

1.7) Profile/Beam - 209/234 from h11709 / tj_3101_reson8125 / 2007-234 / 626_2037

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 28' 01.9" N, 074° 00' 40.9" W
Least Depth: 3.21 m (= 10.54 ft = 1.757 fm = 1 fm 4.54 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-234.20:37:21.600 (08/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-234 / 626_2037
Profile/Beam: 209/234
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted debris field was found with Reson 8125 MBES and Klein 5000 SSS. The debris field is a collection of obstructions that appear to be the ruins of a previous pier for Coast Guard Station Sandy Hook, NJ. Soundings are corrected to MLLW using verified water levels and preliminary TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-234/626_2037	209/234	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-185/542_1335	0004	12.86	324.0	Secondary
h11709/tj_3102_klein5000_sss100/2007-185/384_1357	0009	23.44	358.5	Secondary (grouped)

Hydrographer Recommendations

Recommend charting ruins with dimensions of 110m x 110m centered around current survey position and a least depth of 3.21 meters (10 feet).

Cartographically-Rounded Depth (Affected Charts):

10ft (12401_1, 12324_1, 12327_1, 12326_1)
 1 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 3.2m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CATOBS - 6:foul area
CONDTN - 2:ruined
QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 3.214 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

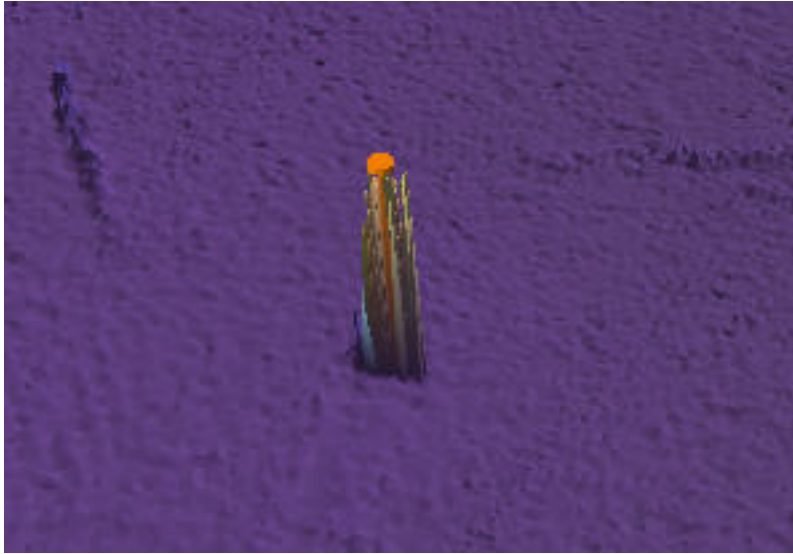


Figure 1.7.1

1.8) Profile/Beam - 1507/4 from h11709 / tj_3101_reson8125 / 2007-181 / 046_1425

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 31' 34.4" N, 074° 01' 20.1" W
Least Depth: 4.52 m (= 14.84 ft = 2.473 fm = 2 fm 2.84 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-181.14:26:46.073 (06/30/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-181 / 046_1425
Profile/Beam: 1507/4
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous Rock was found with Reson 8125 MBES and Klein 5000 SSS. The selected least depth is the shoalest of four rocks in close proximity. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Chart has now been updated.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-181/046_1425	1507/4	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-219/535_1715	0001	0.84	334.3	Secondary
h11709/tj_3101_reson8125/2007-181/046_1425	1513/199	11.69	052.0	Secondary (grouped)
h11709/tj_3101_reson8125/2007-236/034_1407	259/148	13.30	231.9	Secondary (grouped)
h11709/tj_3101_reson8125/2007-181/042_1427	128/35	27.53	314.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-231/413_1316	0002	27.58	322.2	Secondary

Hydrographer Recommendations

Chart a dangerous Rock in the current survey position with a least depth of 4.52 meters (15 feet).

Cartographically-Rounded Depth (Affected Charts):

15ft (12402_1, 12327_1, 12326_1)

2 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

4.5m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 1:depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 4.522 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Geo object 2: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 4.522 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

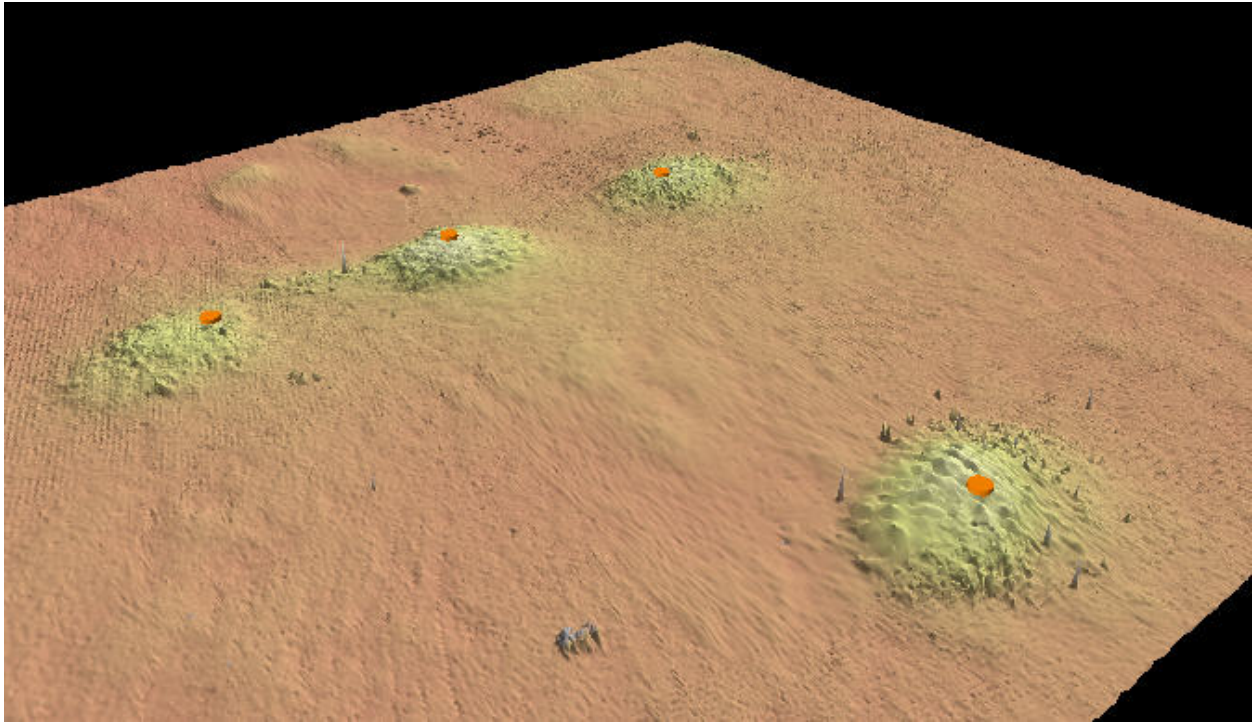


Figure 1.8.1

1.9) Profile/Beam - 6084/49 from h11709 / tj_3101_reson8125 / 2007-184 / 851_1607

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 31' 33.2" N, 073° 56' 01.1" W
Least Depth: 7.83 m (= 25.68 ft = 4.280 fm = 4 fm 1.68 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-184.16:13:39.204 (07/03/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-184 / 851_1607
Profile/Beam: 6084/49
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation. Chart has now been updated

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-184/851_1607	6084/49	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/333_1629	0002	32.38	030.1	Secondary
h11709/tj_3102_reson8101/2007-220/216_1530	771/9	33.56	030.5	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous Rock in current survey position with a least depth of 7.83 meters (25 feet).

Cartographically-Rounded Depth (Affected Charts):

25ft (12327_1, 12326_1)

4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

7.8m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 7.827 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

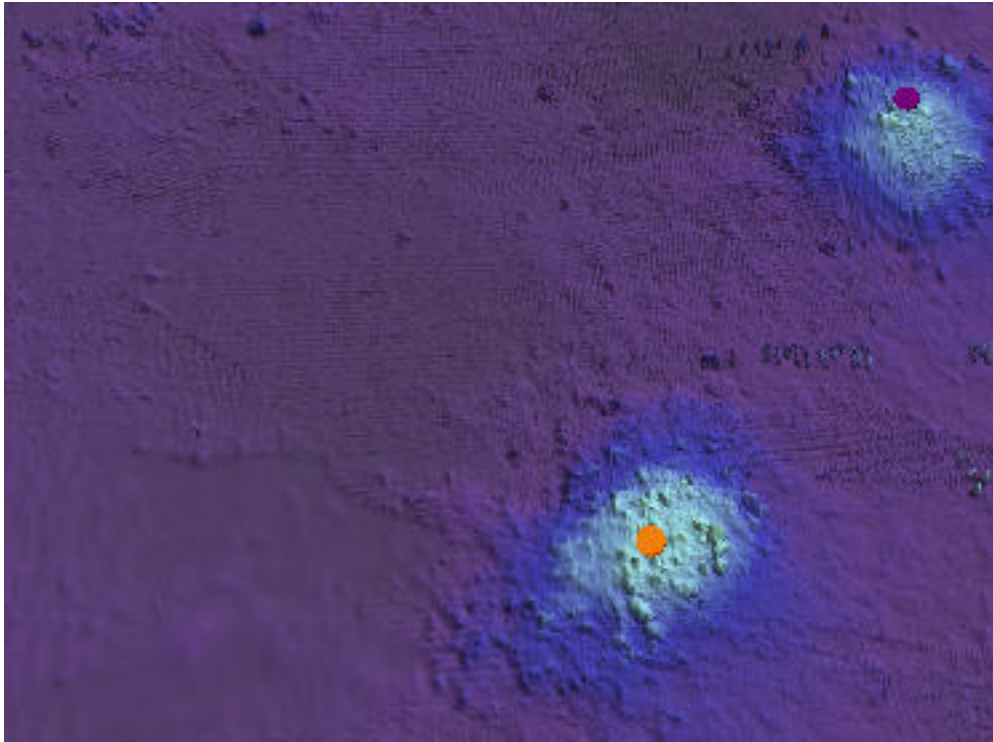


Figure 1.9.1

1.10) Profile/Beam - 3402/95 from h11709 / tj_3101_reson8125 / 2007-265 / 258_2032

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 28' 12.6" N, 073° 57' 36.3" W
Least Depth: 7.30 m (= 23.94 ft = 3.990 fm = 3 fm 5.94 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-265.20:36:00.460 (09/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-265 / 258_2032
Profile/Beam: 3402/95
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation. Chart has now been updated.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-265/258_2032	3402/95	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-183/529_1721	0005	2.45	172.2	Secondary
h11709/tj_3102_klein5000_sss100/2007-183/537_1732	0001	11.16	034.9	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous Rock in current survey position with a least depth of 7.30 meters (24 feet).

Cartographically-Rounded Depth (Affected Charts):

24ft (12401_1, 12324_1, 12327_1, 12326_1)

4fm (12300_1, 13006_1, 13003_1, 14500_1)

7.3m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 7.296 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

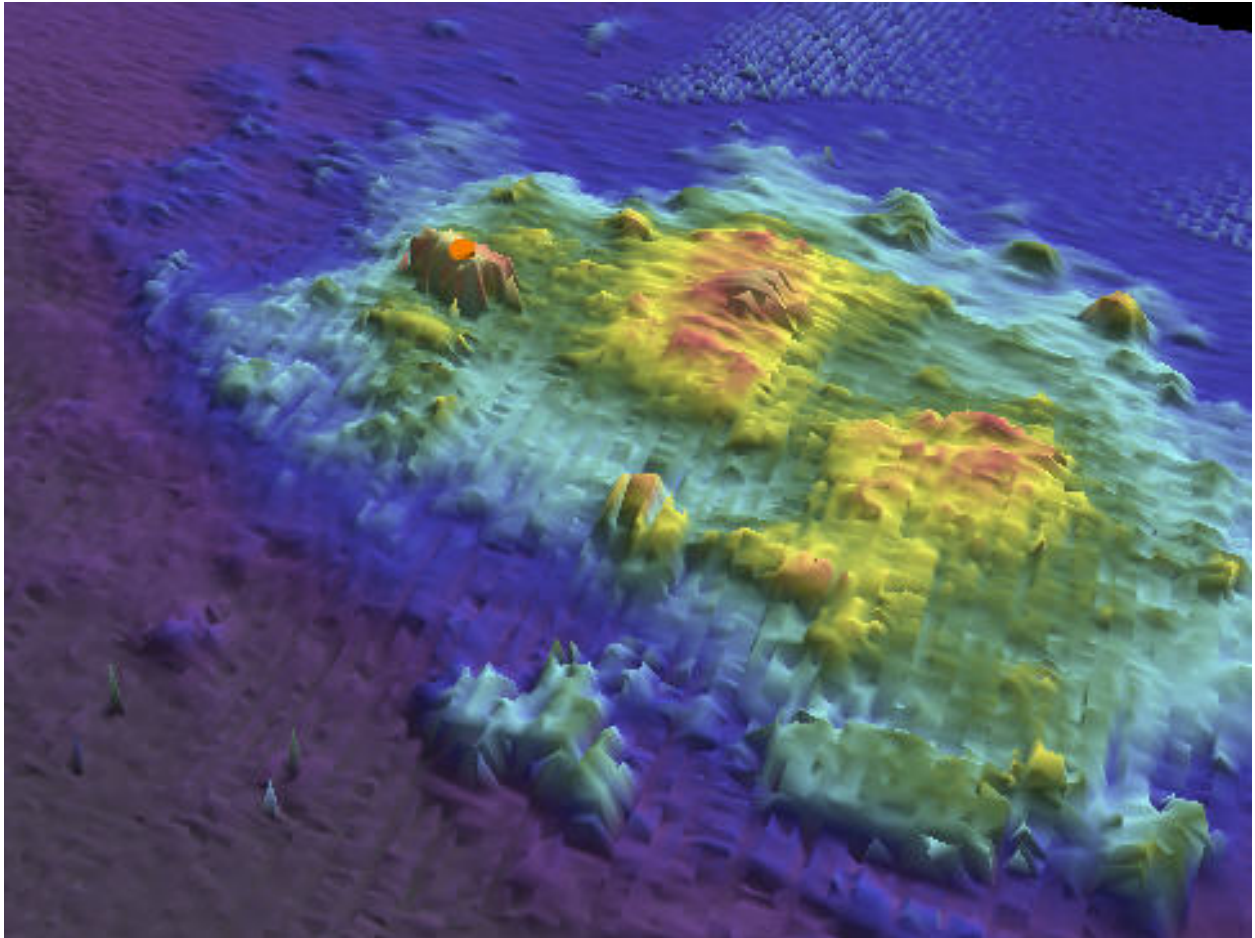


Figure 1.10.1

1.11) Profile/Beam - 175/167 from h11709 / tj_3101_reson8125 / 2007-265 / 265_2053

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 28' 29.9" N, 073° 58' 03.4" W
Least Depth: 7.60 m (= 24.92 ft = 4.154 fm = 4 fm 0.92 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-265.20:54:31.587 (09/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-265 / 265_2053
Profile/Beam: 175/167
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-265/265_2053	175/167	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-183/512_1712	0011	2.11	146.5	Secondary (grouped)
h11709/tj_3102_reson8101/2007-183/512_1712	799/51	5.33	136.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-266/287_1657	0003	5.88	341.7	Secondary
h11709/tj_3102_klein5000_sss200/2007-266/289_1649	0001	6.73	278.4	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous Rock in current survey position with a least depth of 7.60 meters (25 feet).

Cartographically-Rounded Depth (Affected Charts):

25ft (12401_1, 12324_1, 12327_1, 12326_1)

4fm (12300_1, 13006_1, 13003_1, 14500_1)

7.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 7.596 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

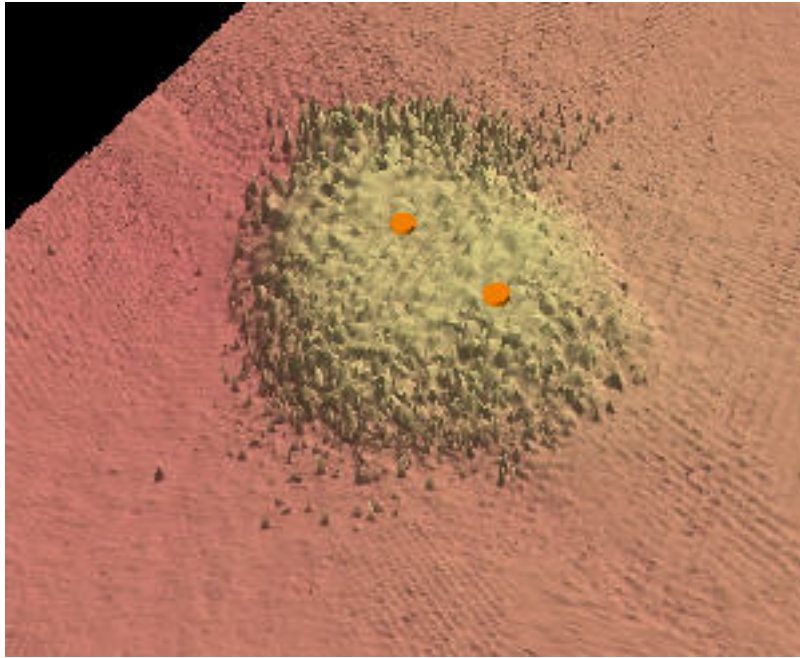


Figure 1.11.1

1.12) Profile/Beam - 318/37 from h11709 / tj_3101_reson8125 / 2007-226 / 167_1655

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 27' 35.0" N, 073° 55' 51.5" W
Least Depth: 11.86 m (= 38.92 ft = 6.487 fm = 6 fm 2.92 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.155 m
Timestamp: 2007-226.16:56:18.978 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 167_1655
Profile/Beam: 318/37
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation. Chart is now updated.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/167_1655	318/37	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-181/328_1652	0001	7.36	262.6	Secondary
h11709/tj_3102_klein5000_sss200/2007-182/232_1503	0001	9.62	101.1	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous Rock in current survey position with a least depth of 11.86 meters (39 feet).

Cartographically-Rounded Depth (Affected Charts):

39ft (12324_1, 12327_1, 12326_1)

6 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

11.9m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 11.863 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

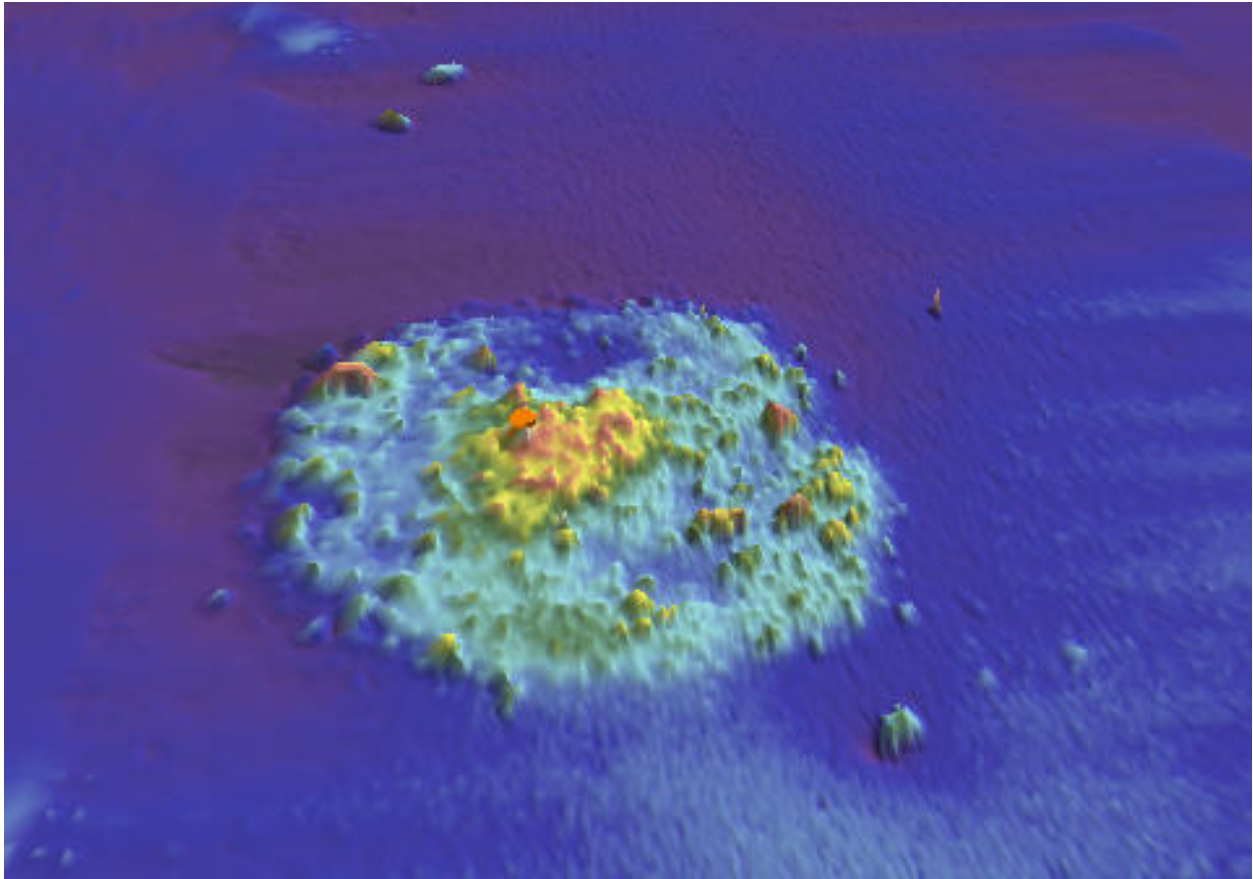


Figure 1.12.1

1.13) Profile/Beam - 186/236 from h11709 / tj_3101_reson8125 / 2007-226 / 182_1634

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 27' 57.5" N, 073° 55' 22.5" W
Least Depth: 14.40 m (= 47.25 ft = 7.875 fm = 7 fm 5.25 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.985 m ; **TVU (TPEv)** ± 0.178 m
Timestamp: 2007-226.16:34:43.144 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 182_1634
Profile/Beam: 186/236
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Check Positioning of Charted Obstruction. This charted dangerous Obstruction was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/182_1634	186/236	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-181/321_1549	0004	8.81	155.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-182/228_1658a	0002	20.26	154.3	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous Obstruction in current survey position with a least depth of 14.40 meters (47 feet).

Cartographically-Rounded Depth (Affected Charts):

47ft (12324_1, 12327_1, 12326_1)

7 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

14.4m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 14.402 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images



Figure 1.13.1

1.14) Profile/Beam - 154/188 from h11709 / tj_3101_reson8125 / 2007-236 / 698_1431

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 31' 14.2" N, 074° 00' 48.1" W
Least Depth: 4.36 m (= 14.29 ft = 2.382 fm = 2 fm 2.29 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-236.14:31:43.605 (08/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-236 / 698_1431
Profile/Beam: 154/188
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This shoaling area was found with Reson 8125 MBES and Klein 5000 SSS. The shoaling area is a mound. Soundings are corrected to MLLW using verified water levels and final TCARI for water level computation. The shoal sounding is between Ambrose Channel and Romer Shoal Light.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-236/698_1431	154/188	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-231/404_1813	0001	10.02	199.1	Secondary (grouped)

Hydrographer Recommendations

Chart a sounding of 4.36 meters (14 ft) in current survey position.

Cartographically-Rounded Depth (Affected Charts):

14ft (12402_1, 12327_1, 12326_1)
 2 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 4.4m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: EXPSOU - 2:shoaler than range of depth of the surrounding depth area

QUASOU - 6:least depth known

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

VERDAT - 12:Mean lower low water

Office Notes

Concur.

Feature Images

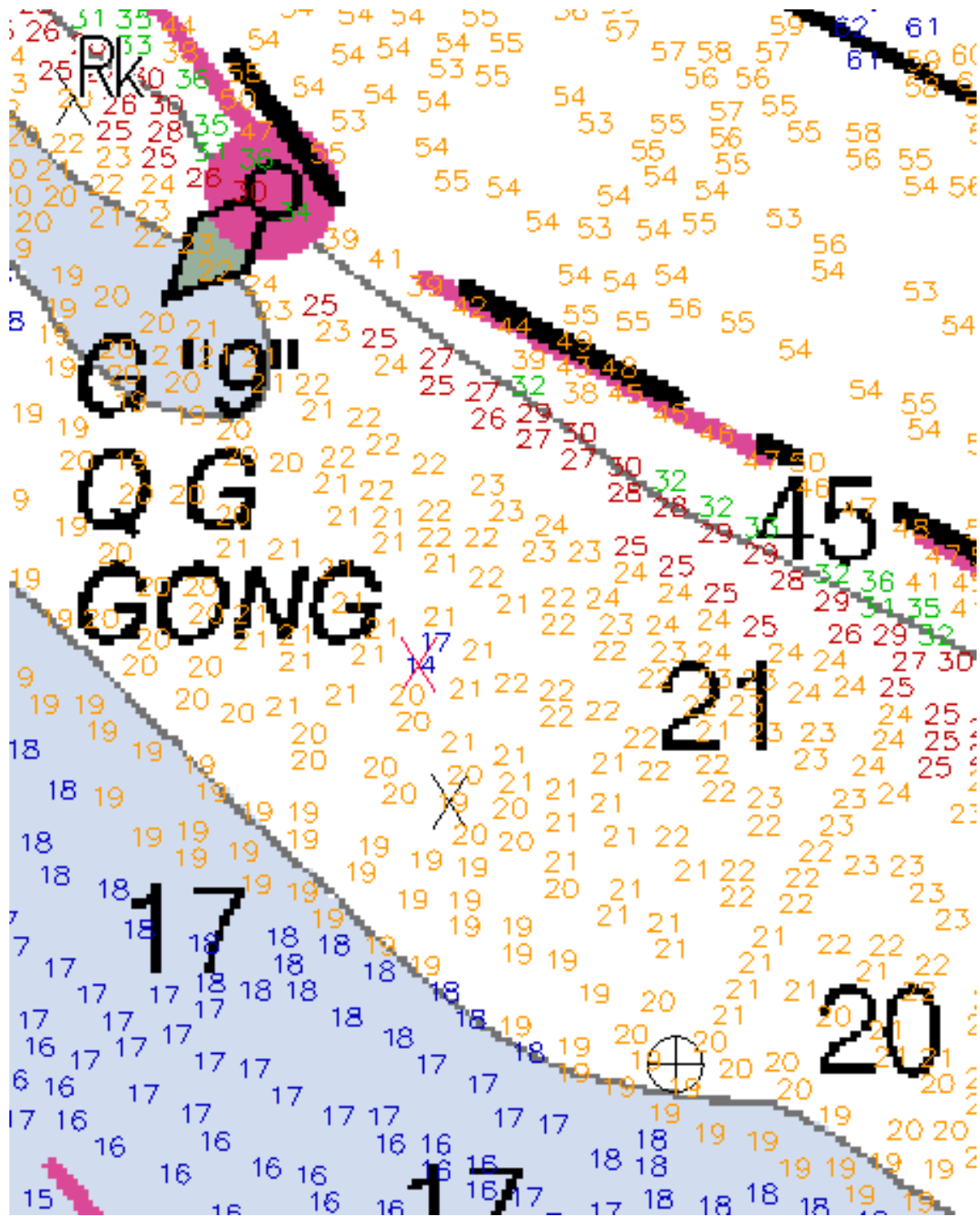


Figure 1.14.1

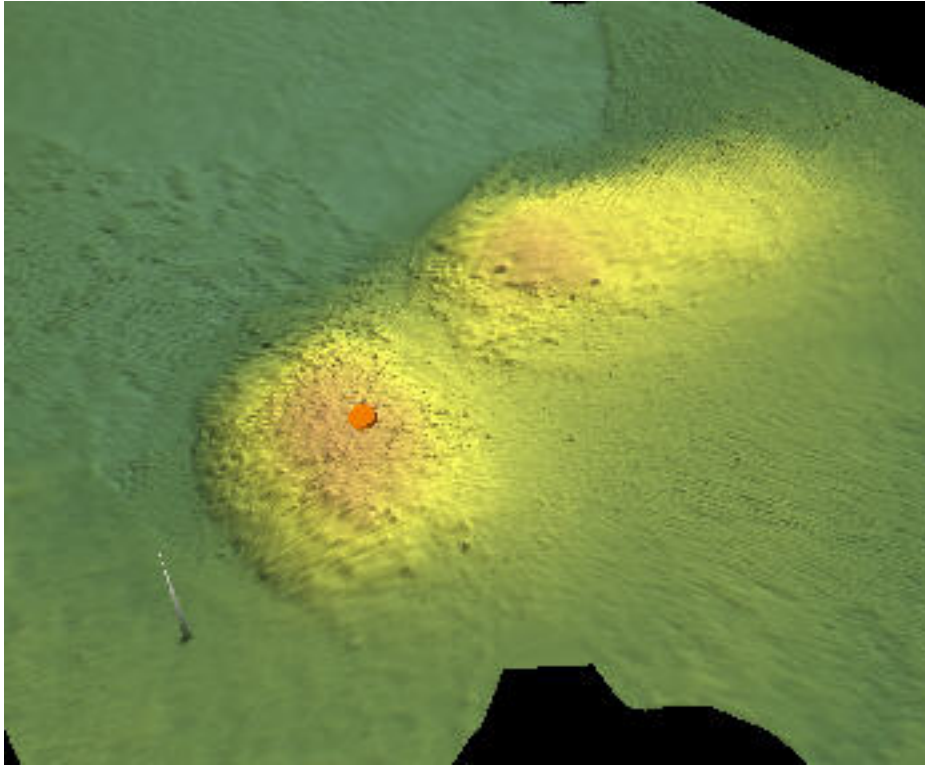


Figure 1.14.2

1.15) Profile/Beam - 645/160 from h11709 / tj_3101_reson8125 / 2007-235 / 175_1911

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 31' 08.8" N, 073° 58' 24.0" W
Least Depth: 4.11 m (= 13.47 ft = 2.246 fm = 2 fm 1.47 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-235.19:11:59.407 (08/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-235 / 175_1911
Profile/Beam: 645/160
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous obstruction was found with Reson 8125 MBES and Klein 5000 SSS. The obstruction appears to be a large mound of debris. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-235/175_1911	645/160	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-236/632_1804	0001	2.43	348.8	Secondary (grouped)
h11709/tj_3101_reson8125/2007-236/632_1804	278/180	4.72	322.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-229/269_1614	0001	7.50	051.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/571_1357	0001	13.10	040.2	Secondary (grouped)
h11709/tj_3101_reson8125/2007-235/175_1911	715/213	17.42	045.1	Secondary (grouped)
h11709/tj_3101_reson8125/2007-236/632_1804	191/162	20.58	045.5	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous obstruction with least depth 4.11 m (13 ft).

Cartographically-Rounded Depth (Affected Charts):

13ft (12402_1, 12327_1, 12326_1)

2 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

4.1m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 4.107 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

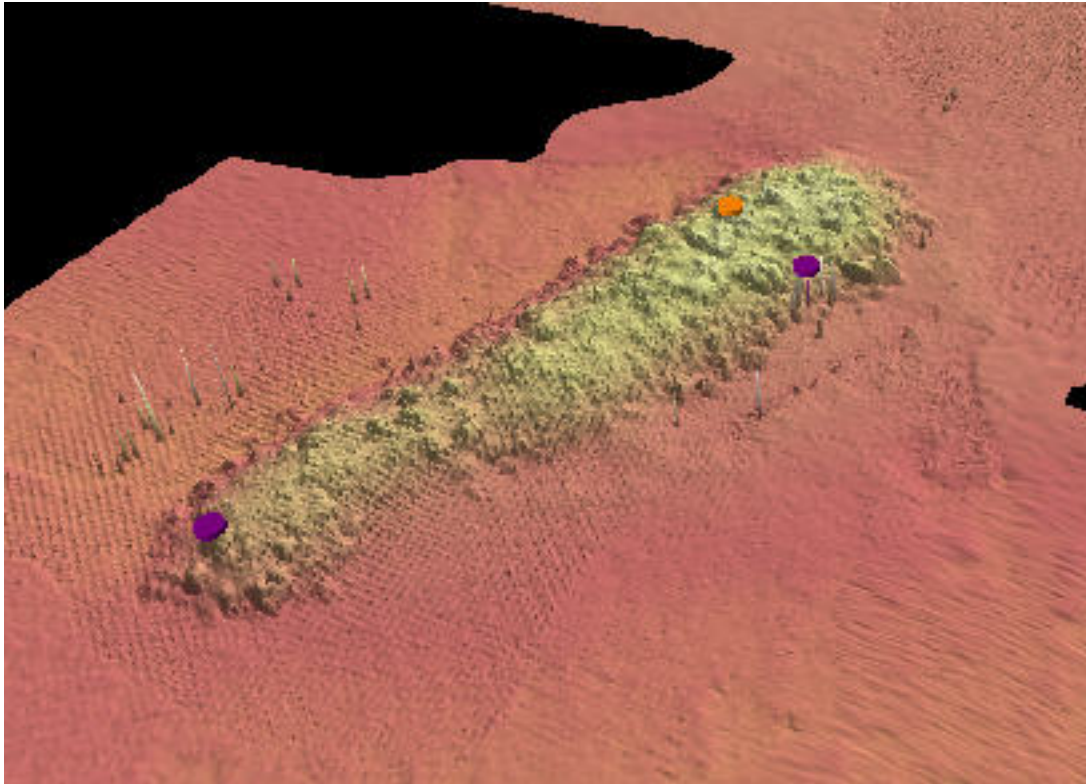


Figure 1.15.1

1.16) Profile/Beam - 1/1 from h11709 / tj_3102_reson8101 / 2007-347 / 3102_12132007_chartdp

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 27' 18.2" N, 074° 02' 59.4" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2007-347.16:15:00.000 (12/13/2007)
DP Dataset: h11709 / tj_3102_reson8101 / 2007-347 / 3102_12132007_chartdp
Profile/Beam: 1/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

The charted and tabulated project depth of this turning basin on raster chart 12401 is 45 ft. Comparison of corresponding ENC US5NY18M shows several depths inside the basin shoaler than 45 ft, of which the shoalest is 35 ft (10.6 meters) at position 40/27/18.192 N 074/02/59.392 W.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-347/3102_12132007_chartdp	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Recommend revising channel tabulation to reflect best available information. ENC reflects basin least depth of 35 ft.

S-57 Data

[None]

Office Notes

Do not see any soundings to back this up.

1.17) Profile/Beam - 173/164 from h11709 / tj_3101_reson8125 / 2007-234 / 662_1934

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 28' 00.7" N, 074° 00' 50.9" W
Least Depth: 5.06 m (= 16.60 ft = 2.767 fm = 2 fm 4.60 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-234.19:34:25.245 (08/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-234 / 662_1934
Profile/Beam: 173/164
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted dangerous obstruction was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-234/662_1934	173/164	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-234/609_1444	0002	3.08	013.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-185/506_1252	0002	4.90	110.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-186/374_1241	0002	5.25	185.7	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous obstruction with a least depth of 5.06 meters (16 feet).

Cartographically-Rounded Depth (Affected Charts):

16ft (12401_1, 12324_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.1m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 5.060 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images



Figure 1.17.1

1.18) Profile/Beam - 14/26 from h11709 / tj_3101_reson8125 / 2007-234 / 633_2055

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 28' 00.3" N, 074° 00' 37.8" W
Least Depth: 0.73 m (= 2.40 ft = 0.400 fm = 0 fm 2.40 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.146 m
Timestamp: 2007-234.20:55:09.962 (08/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-234 / 633_2055
Profile/Beam: 14/26
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This shoaling area was found with Reson 8125 multibeam and corrected to MLLW using verified water levels and final TCARI for water level computation. The 2 ft sounding is west of the Coast Guard Station Sandy Hook pier, and the shoal appears to proceed northwest from the end of the pier.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-234/633_2055	14/26	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-234/633_2055	226/32	13.45	359.4	Secondary (grouped)

Hydrographer Recommendations

Chart a sounding of 0.73 meters (2 feet).

Cartographically-Rounded Depth (Affected Charts):

2ft (12401_1, 12324_1, 12327_1, 12326_1)
 0 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 .7m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: EXPSOU - 2:shoaler than range of depth of the surrounding depth area

QUASOU - 1:depth known

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

VERDAT - 12:Mean lower low water

Office Notes

Concur.

Feature Images

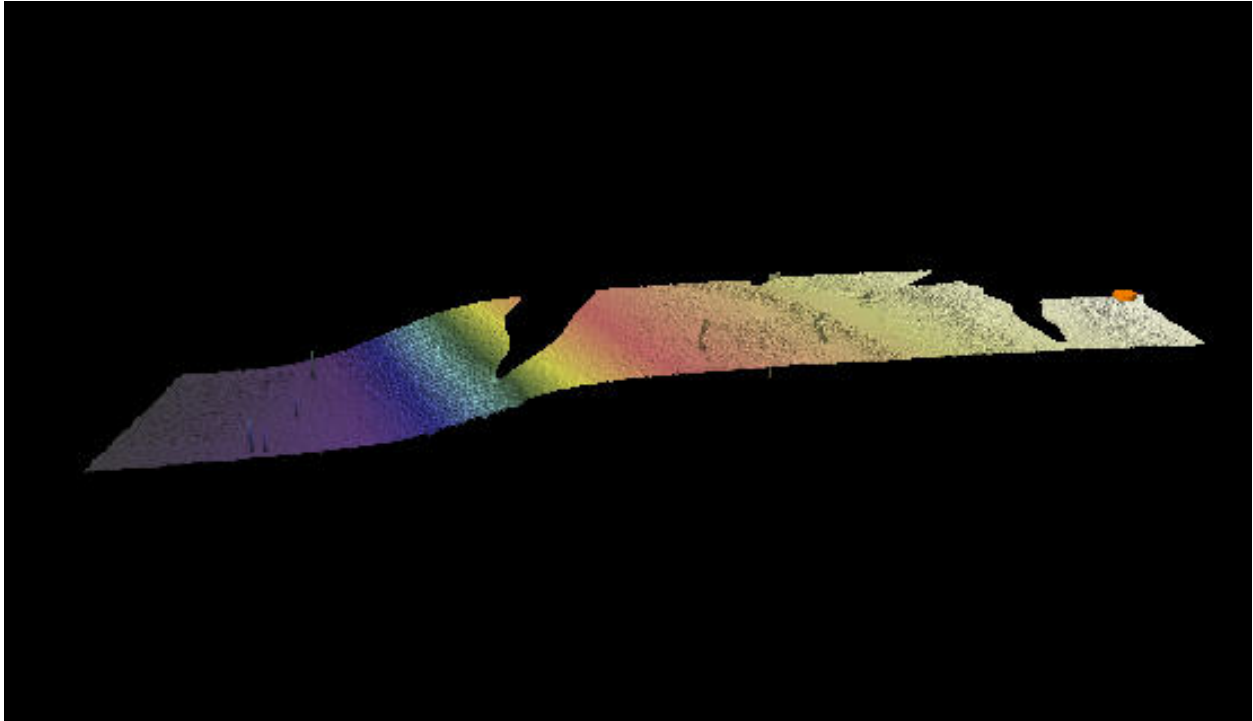


Figure 1.18.1

1.19) Profile/Beam - 459/10 from h11709 / tj_3101_reson8125 / 2007-234 / 633_2055

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 27' 59.3" N, 074° 00' 37.8" W
Least Depth: 1.92 m (= 6.30 ft = 1.049 fm = 1 fm 0.30 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-234.20:55:36.438 (08/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-234 / 633_2055
Profile/Beam: 459/10
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This shoaling area was found with Reson 8125 multibeam and corrected to MLLW using verified water levels and final TCARI for water level computation. The 6 ft sounding is southwest of the Coast Guard Station Sandy Hook pier, and the shoal appears to proceed northwest from the end of the pier.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-234/633_2055	459/10	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-270/063_1846	853/240	7.73	319.5	Secondary
h11709/tj_3101_reson8125/2007-234/633_2055	312/6	10.17	182.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-185/384_1357	0004	12.15	220.7	Secondary (grouped)

Hydrographer Recommendations

Chart a sounding of 1.92 meters (6 feet).

Cartographically-Rounded Depth (Affected Charts):

6ft (12401_1, 12324_1, 12327_1, 12326_1)

1fm (12300_1, 13006_1, 13003_1, 14500_1)

1.9m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 1:depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VERDAT - 12:Mean lower low water

Office Notes

Concur.

Feature Images

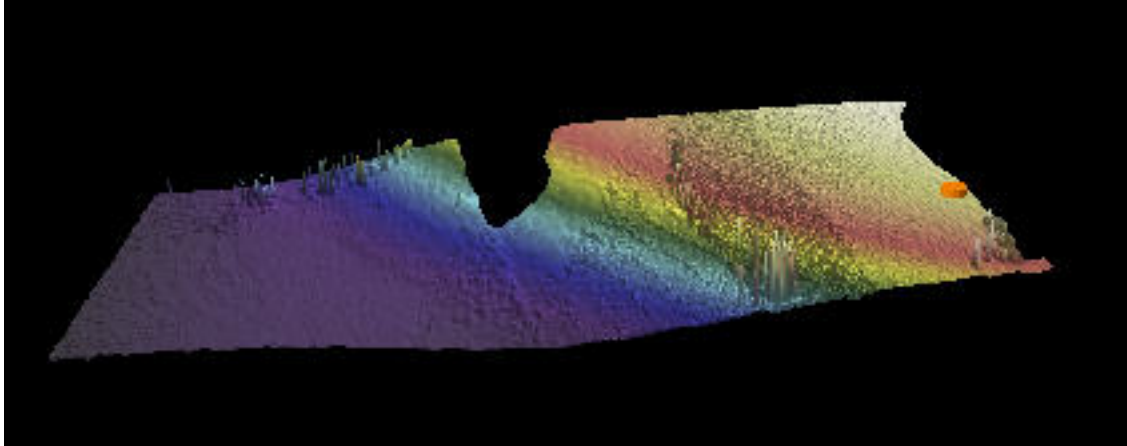


Figure 1.19.1

APPENDIX II
Survey Features Report

H11709 AWOIS

Registry Number: H11709
State: New York
Locality: New York Harbor and Approaches, NY+NJ
Sub-locality: 2 NM Northeast of Sandy Hook
Project Number: OPR-B310-TJ-07
Survey Dates: 06/30/2007 - 12/05/2007

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	10th	05/01/2006	1:15,000 (12402_1)	USCG LNM: 04/29/2008 (10/14/2008) NGA NTM: 11/15/1997 (10/18/2008)
12401	9th	07/01/2007	1:15,000 (12401_1)	USCG LNM: 04/29/2008 (10/14/2008) CHS NTM: None (08/29/2008) NGA NTM: 11/15/1997 (10/18/2008)
12327	101st	04/01/2008	1:40,000 (12327_1)	USCG LNM: 09/02/2008 (10/14/2008) NGA NTM: 06/17/2006 (10/18/2008)
12324	32nd	03/01/2006	1:40,000 (12324_1)	[L]NTM: ?
12326	50th	05/01/2006	1:80,000 (12326_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	33rd	04/01/2006	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	AWOIS 4745 Rk	Rock	7.08 m	40° 29' 27.4" N	073° 58' 47.9" W	4745
1.2	DISPROVAL AWOIS 1646	Shoal	16.65 m	40° 31' 45.9" N	074° 01' 09.0" W	1646
1.3	AWOIS 1645 981/163	Shoal	16.91 m	40° 31' 39.2" N	074° 00' 55.3" W	1645
1.4	30-ft shoal (AWOIS 9711 disproved)	Shoal	9.14 m	40° 31' 12.3" N	074° 02' 59.7" W	9711
1.5	AWOIS 2457 Disproval of Wk 2294/41	Shoal	6.25 m	40° 30' 15.2" N	074° 02' 28.6" W	2457

1.6	AWOIS 2452 Rks	Rock	4.51 m	40° 30' 33.1" N	074° 01' 16.0" W	2452
1.7	AWOIS 9707 Disproval	Obstruction	7.25 m	40° 30' 22.3" N	073° 56' 31.4" W	9707
1.8	AWOIS 13258 Obstn	Obstruction	6.03 m	40° 29' 06.5" N	074° 00' 47.1" W	13258
1.9	AWOIS 9724 Obstn - Insignificant	Obstruction	10.11 m	40° 29' 08.9" N	073° 58' 50.9" W	9714
1.10	AWOIS 9715 Obstn	Obstruction	8.99 m	40° 28' 49.6" N	073° 58' 21.9" W	9715
1.11	AWOIS 8087 Wreck found	Wreck	14.12 m	40° 28' 03.2" N	073° 55' 33.5" W	8087
1.12	AWOIS 751 found - Wk	Wreck	15.27 m	40° 28' 26.1" N	073° 54' 26.4" W	7932
1.13	AWOIS 7508 Obstn found	Obstruction	11.31 m	40° 29' 31.1" N	073° 54' 18.7" W	7508
1.14	AWOIS 7514 Rk insignificant	Rock	11.23 m	40° 29' 49.2" N	073° 55' 15.7" W	7514
1.15	AWOIS 11422 Wk	Wreck	8.12 m	40° 27' 55.1" N	074° 02' 43.0" W	11422
1.16	AWOIS 12937 Obstn found	Obstruction	6.73 m	40° 27' 52.7" N	073° 56' 11.7" W	12937
1.17	AWOIS 13776 Wreck 403/62	Wreck	14.73 m	40° 27' 29.4" N	073° 55' 21.9" W	13776
1.18	AWOIS 4744 Obstns	Obstruction	6.33 m	40° 28' 10.2" N	073° 57' 18.3" W	4744
1.19	AWOIS 7512 Obstn Anchor found	Obstruction	16.83 m	40° 29' 33.1" N	073° 55' 17.4" W	7512
1.20	AWOIS 1640 found - wreckage	Wreck	8.36 m	40° 30' 00.4" N	073° 59' 58.7" W	1640
1.21	AWOIS 13274 found - Rks	Rock	5.76 m	40° 29' 58.1" N	074° 00' 13.5" W	13274
1.22	AWOIS 12965 found - Obstn	Obstruction	4.64 m	40° 30' 49.7" N	074° 02' 02.0" W	12965
1.23	AWOIS 8093 found - Obstn	Obstruction	11.15 m	40° 27' 43.4" N	073° 55' 47.0" W	8093
1.24	AWOIS 8085 found - Wk	Wreck	11.33 m	40° 27' 32.4" N	073° 56' 05.5" W	8085
1.25	AWOIS 7509 found - Obstn	Obstruction	11.25 m	40° 29' 28.9" N	073° 54' 19.7" W	7509
1.26	AWOIS 2456 found - Wk	Wreck	8.16 m	40° 28' 35.0" N	073° 58' 41.9" W	2456
1.27	AWOIS 8088 found - Wk	Wreck	16.01 m	40° 28' 55.0" N	073° 55' 10.9" W	8088
1.28	AWOIS 1626 found - Wk	Wreck	14.42 m	40° 28' 55.7" N	073° 54' 22.2" W	1626
1.29	AWOIS 13256 found - Obstn	Obstruction	13.82 m	40° 28' 59.8" N	073° 54' 41.7" W	13256
1.30	AWOIS 7511 found - Insignificant	Wreck	18.79 m	40° 29' 30.1" N	073° 55' 15.5" W	7511
1.31	AWOIS 7513 Disproved	SSS	[None]	40° 29' 23.7" N	073° 55' 07.1" W	7513
1.32	AWOIS 54 found - sounding	Shoal	4.71 m	40° 28' 13.4" N	074° 01' 35.5" W	54

1 - DR_AWOIS

1.1) Profile/Beam - 457/65 from h11709 / tj_3101_reson8125 / 2007-219 / 266_1506

Primary Feature for AWOIS Item #4745

Search Position: 40° 29' 27.5" N, 073° 58' 48.0" W
Historical Depth: 5.79 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10035/82--OPR-B139-WH-82; DIVER INVESTIGATION OF SPIKE ON ECHOGRAM REVEALED ■A 100 FT DIAMETER STRUCTURE OF RK AND RUBBLE EXTENDING 7-10 FT VERTICALLY IN ■LAT 40-29-27.22N, LONG 73-58-49.36W; 23 FT LEADLINE LEAST DEPTH; ABUNDANT ■MARINE LIFE; EVALUATOR RECOMMENDS CHARTING AS A 23 RK. (ENTERED MSM 6/87)■ H10686/96--OPR-C399-RU; "Q-DRAWING" SUPPLIED TO MCD PRIOR TO PROCESSING OF PRESENT SURVEY. A ROCK WITH A DEPTH OF 20 FEET (6.1 METERS) LOCATED IN LAT. 40-29-27.47N, LONG. 73-58-47.97W WAS CHARTED FROM THE "Q-DRAWING". THE ROCK ORIGINATING WITH AWOIS 4745 WAS DELETED AT THAT TIME. EVALUATOR RECOMMENDS REVISING ROCK TO 19 FEET. (UP 12/21/04, SJV)

Survey Summary

Survey Position: 40° 29' 27.4" N, 073° 58' 47.9" W
Least Depth: 7.08 m (= 23.22 ft = 3.870 fm = 3 fm 5.22 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.148 m
Timestamp: 2007-219.15:07:11.593 (08/07/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-219 / 266_1506
Profile/Beam: 457/65
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 4745 found. This charted dangerous rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-219/266_1506	457/65	0.00	000.0	Primary

h11709/tj_3102_klein5000_sss200/2007-235/409_1552	0004	2.53	337.9	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 4745	2.99	116.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/409_1618	0002	3.45	272.2	Secondary (grouped)
ChartGPs - ENC US5NY18M	Danger 11	5.45	182.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/408_1644	0009	6.83	034.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

7.1m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 7.077 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Change 19 Rk to 23 Rk.

1.2) Profile/Beam - 851/59 from h11709 / tj_3101_reson8125 / 2007-181 / 010_1746

Primary Feature for AWOIS Item #1646

Search Position: 40° 31' 42.4" N, 074° 01' 08.1" W
Historical Depth: [None]
Search Radius: 500
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

HISTORY ■ NM52/63-ANCHOR AND CHAIN REPORTED SW OF AMBROSE CHANNEL ABOUT 2000 YDS. ■ 344 DEG. FROM ROMER SHOAL LIGHT IN 30 FT. OF WATER. ■ FE221/78-79--OPR-C622, ITEM 12; SEARCHED FOR W/SS, NOT FOUND BUT SONOGRAM ■ SUGGESTS PRESENCE OF SEVERAL SECTIONS OF DREDGE PIPE IN AREA. ■ H9820/79--OPR-B139-WH-79, ITEM H; INVESTIGATED W/ECHO SOUNDER, 45-METER LS, ■ NOT FOUND, RECOMMENDED WD. ■ FE232/80--OPR-B645-R/H-80, ITEM 12; VERIFY OR DISPROVE, OR PROVIDE CLEARED ■ DEPTH; NOT DONE DUE TO LACK OF TIME. CHG 1 DELETED SURVEY REQUIREMENT. ■ ■ DESCRIPTION ■ **** TELECON COE-NY, TOM CLARK AND JIM DAILEY, 3/26/85- MR. CLARK INDICATED ■ THAT THE USCG WAS TO DO A SSS INVESTIGATION OF ITEM, APPROX APR 15, 1985.

Survey Summary

Survey Position: 40° 31' 45.9" N, 074° 01' 09.0" W
Least Depth: 16.65 m (= 54.64 ft = 9.106 fm = 9 fm 0.64 ft)
TPU ($\pm 1.96\sigma$): THU (TPE_h) ± 0.982 m ; TVU (TPE_v) ± 0.159 m
Timestamp: 2007-181.17:46:24.758 (06/30/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-181 / 010_1746
Profile/Beam: 851/59
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 1646 disproved. The entire search radius was investigated with 200% Klein 5000 SSS and object detection Reson MBES. No obstruction matching description found.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-181/010_1746	851/59	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-187/547_1712	0005	4.83	272.6	Secondary

AWOIS_B310-TJ-07	AWOIS # 1646	110.42	348.6	Secondary
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Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

[None]

1.3) Profile/Beam - 981/163 from h11709 / tj_3101_reson8125 / 2007-181 / 050_1816

Primary Feature for AWOIS Item #1645

Search Position: 40° 31' 42.4" N, 074° 00' 58.5" W
Historical Depth: [None]
Search Radius: 500
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

LNM33/72-UNIDENTIFIED SUBM. OBSTR. REPORTED APPROX. 1870 YDS. 352.5 DEG. FROM ■ROMER SHOAL LIGHT(LL NO.1617) ■ FE221/78-79--OPR-C622, ITEM 1; SEARCHED FOR W/SS, NOT FOUND BUT SONOGRAM ■SUGGESTS PRESENCE OF SEVERAL SECTIONS OF DREDGE PIPE IN AREA. ■ H9820/79--OPR-B139-WH-79, ITEM H; INVESTIGATED W/ECHO SNDR, 45-METER LS, ■NOT FOUND; RECOMMENDED WD ■ FE232/80--OPR-B645-R/H-80, ITEM 11; VERIFY OR DISPROVE, OR PROVIDE CLEARED ■DEPTH; NOT DONE DUE TO LACK OF TIME. ■■ DESCRIPTION■ **** TELECON COE-NY, TOM CLARK, 212-265-0164, 9/15/81(NAV. BRANCH)-COE WILL ■ SURVEY AND FORWARD RESULTS VIA MEMO. ■ TELECON COE-NY, TOM CLARK AND JIM DAILEY 3/21/85- INDICATED THAT 3 DIVES ■ WERE CONDUCTED, DATA NOT AVAILABLE. ■ TELECON COE-NY, TOM CLARK AND JIM DAILEY, 3/26/85- MR. CLARK INDICATED ■ THAT THE USCG WAS TO DO A SSS INVESTIGATION OF ITEM, APPROX APR 15, 1985.

Survey Summary

Survey Position: 40° 31' 39.2" N, 074° 00' 55.3" W
Least Depth: 16.91 m (= 55.49 ft = 9.248 fm = 9 fm 1.49 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.159 m
Timestamp: 2007-181.18:18:24.795 (06/30/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-181 / 050_1816
Profile/Beam: 981/163
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 1645 disproved. Entire search radius was investigated with object detection Reson 8125 multibeam and 200% Klein 5000 SSS. Soundings corrected to MLLW with verified water levels and final TCARI for water level computation. No obstruction found.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-181/050_1816	981/163	0.00	000.0	Primary
AWOIS_B310-TJ-07	AWOIS # 1645	123.19	142.6	Secondary

Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

[None]

1.4) Profile/Beam - 1287/7 from h11709 / tj_3101_reson8125 / 2007-182 / 107_1414

Primary Feature for AWOIS Item #9711

Search Position: 40° 31' 14.0" N, 074° 02' 60.0" W
Historical Depth: [None]
Search Radius: 300
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

LNM53/72-- OBSTRUCTION OR POSSIBLE SHOALING COVERED 17 FEET HAS BEEN REPORTED 2,225 YARDS, 198 DEG. FROM WEST BANK LIGHT. POSITION SCALED FROM CHART 12327 IN APPROX. LAT. 40-31-14N, LONG. 74-03-00W. (ENT 3/26/96, SJV)

Survey Summary

Survey Position: 40° 31' 12.3" N, 074° 02' 59.7" W
Least Depth: 9.14 m (= 29.98 ft = 4.997 fm = 4 fm 5.98 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.982 m ; TVU (TPEv) ± 0.159 m
Timestamp: 2007-182.14:16:23.013 (07/01/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-182 / 107_1414
Profile/Beam: 1287/7
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 9711 found. This charted dangerous rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The rock appears to have migrated down the side of a rock mound. This rock is the shoalest item in the AWOIS search area, thus more of a hazard than the charted 17 ft Obstn (not found).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-182/107_1414	1287/7	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-187/359_1817	0001	9.58	250.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-237/470_1547	0001	14.28	219.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-187/511_1802	0001	18.00	252.9	Secondary (grouped)

ChartGPs - Digitized	12	20.16	308.2	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 9711	54.13	171.4	Secondary (grouped)
ChartGPs - ENC US5NY19M	Danger 1	70.18	155.4	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 3:found by multi-beam
VERDAT - 12:Mean lower low water

Office Notes

Do not concur. "Item" is 36m wide with no rough edges. The least depth is 30 ft and coincides with the charted shoal of 30 ft. This "item" does NOT appear to be AWOIS 9711. AWOIS 9711 is disproved.

1.5) Profile/Beam - 2294/41 from h11709 / tj_3101_reson8125 / 2007-183 / 187_1433

Primary Feature for AWOIS Item #2457

Search Position: 40° 30' 15.4" N, 074° 02' 28.5" W
Historical Depth: [None]
Search Radius: 500
Search Technique: SD, S2
Technique Notes: search not required in less than 4 meters of water depth

History Notes:

LNM39/75--23 FT. L SPEEDBOAT SUNK AT APPROX. POS. 40-30-15N, 74-02-30W IN ■ 26-30 FT WATER.
 ■ L179/78--CES 12330, OPR-B408, ITEM 3; SEARCHED FOR WITH ECHO SOUNDER AT 50 ■ METER
 LINE SPACING, GRID PATTERN, NOT FOUND. ■ MAR--8/82, OPR-B139-WH-82; NEGATIVE SOUNDER
 SEARCH FOR 750 ■ METER RADIUS, 40 METERS LS (NO RECOMENDATION)
 ■ H10031/82--OPR-B139-WH-82; 1:10,000 SCALE; DELNORTE (R/R), DELNORTE-THEODOLITE■ (R/A); 40
 M LINE SPACING TO 750 M RADIUS FROM CHARTED POSITION; ADDITIONAL 20■ M SDG LINES
 RUN; NO TRACE OF WK; EVALUATOR RECOMMENDED RETAINING AS CHARTED ■ W/ FUTURE
 WIRE DRAG OR SSS INVESTIGATION. (ENTERED 1/7/85 MSM)■ H10675/96-97--OPR-C399-RU; ITEM
 INVESTIGATED WITH 200% SIDE SCAN SONAR OVER 2/3 OF THE AREA, WITH EASTERN SECTION
 AREA NOT COVERED DUE TO SHALLOW WATER. EVALUATOR RECOMMENDS TO RETAIN AS
 CHARTED. UPDATED 6/00 MCR

Survey Summary

Survey Position: 40° 30' 15.2" N, 074° 02' 28.6" W
Least Depth: 6.25 m (= 20.51 ft = 3.419 fm = 3 fm 2.51 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.149 m
Timestamp: 2007-183.14:35:30.584 (07/02/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-183 / 187_1433
Profile/Beam: 2294/41
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Disproval of AWOIS 2457 charted wreck. The entire search radius was investigated with 200% Klein 5000 Side Scan Sonar and object detection Reson 8125 multibeam - no wreck found. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-183/187_1433	2294/41	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-237/436_2026	0002	2.75	303.5	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 2457	6.00	210.9	Secondary (grouped)
ChartGPs - ENC US5NY18M	Danger 15	9.95	222.3	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

[None]

1.6) Profile/Beam - 500/93 from h11709 / tj_3101_reson8125 / 2007-183 / 232_1835

Primary Feature for AWOIS Item #2452

Search Position: 40° 30' 33.3" N, 074° 01' 16.3" W
Historical Depth: 4.27 m
Search Radius: 100
Search Technique: [None]
Technique Notes: [None]

History Notes:

LNM49/72--UNIDENTIFIED OBSTRUCTION. REPORTED TO LIE 660 YARDS 210 DEGREES FROM ROMER SHOAL LIGHTHOUSE. CHARTED IN POS. 40/30/29.40N 074/01/02.90W NAD27 CL1749/78--CES 12330, OPR-B408, ITEM 4; SEARCHED FOR WITH ECHO SOUNDER AT 50 METER LINE SPACING, NOT FOUND. MAR--8/82, OPR-B139-WH-82; NEGATIVE SOUNDER SEARCH FOR 750 METER RADIUS, 10-80 M LS. (NO RECOMMENDATION). H10031/82--OPR-B139-WH-82; 1:10,000 SCALE; DELNORTE (R/R), DELNORTE-THEODOLITE(R/A); 80 M LINE SPACING (N-S); 50 M LINE SPACING (NW-SE) DEFINING CIRCLE W/ 750 M RADIUS FROM CHARTED POSTIONS 40 M LINE SPACING (NE-SW) CIRCLE W/ 325 M RADIUS; TWO DRIFT SOUNDING LINES OVER CHARTED POSITION; NO TRACE OF OBSTR ON ANY FATHOGRAM; HYDROGRAPHER RECOMMENDED CHART REVISION FROM PA TO ED; EVALUATOR RECOMMENDED RETAINING AS CHARTED W/ FUTURE WIREDRAG OR SSS WORK. (ENTERED 1/4/85 MSM) H10675/96-97--OPR-C399-RU; HYDROGRAPHER LOCATED A ROCK WITH A LD OF 14 FT WITH A 500M RADIUS, 200% SSS INVESTIGATION . DIVERS DESCRIBE TWO LARGE STONE BLOCKS RISING 6 FEET ABOVE THE BOTTOM. RECOMMEND TO REMOVE SUBM OBSTN REP PA AND 15 OBSTN CHARTED IN POS. 40-30-33.35 N 074-01-16.62 W AND CHART 14 RK. UPDATED 6/00 MCR

Survey Summary

Survey Position: 40° 30' 33.1" N, 074° 01' 16.0" W
Least Depth: 4.51 m (= 14.79 ft = 2.466 fm = 2 fm 2.79 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.147 m
Timestamp: 2007-183.18:34:33.382 (07/02/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-183 / 232_1835
Profile/Beam: 500/93
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 2452 found. This charted dangerous rock was found with Reson 8125 multibeam and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-183/232_1835	500/93	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-183/232_1835	466/81	7.90	137.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/412_1418	0013	8.72	133.5	Secondary (grouped)
ChartGPs - ENC US5NY18M	Danger 13	10.69	132.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/533_1818	0001	11.21	126.4	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 2452	11.82	131.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

15ft (12401_1, 12402_1, 12327_1, 12326_1)

2 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

4.5m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 4.509 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Change designation from "Rk" to "Rks." Least depth = 15 ft.

Feature Images

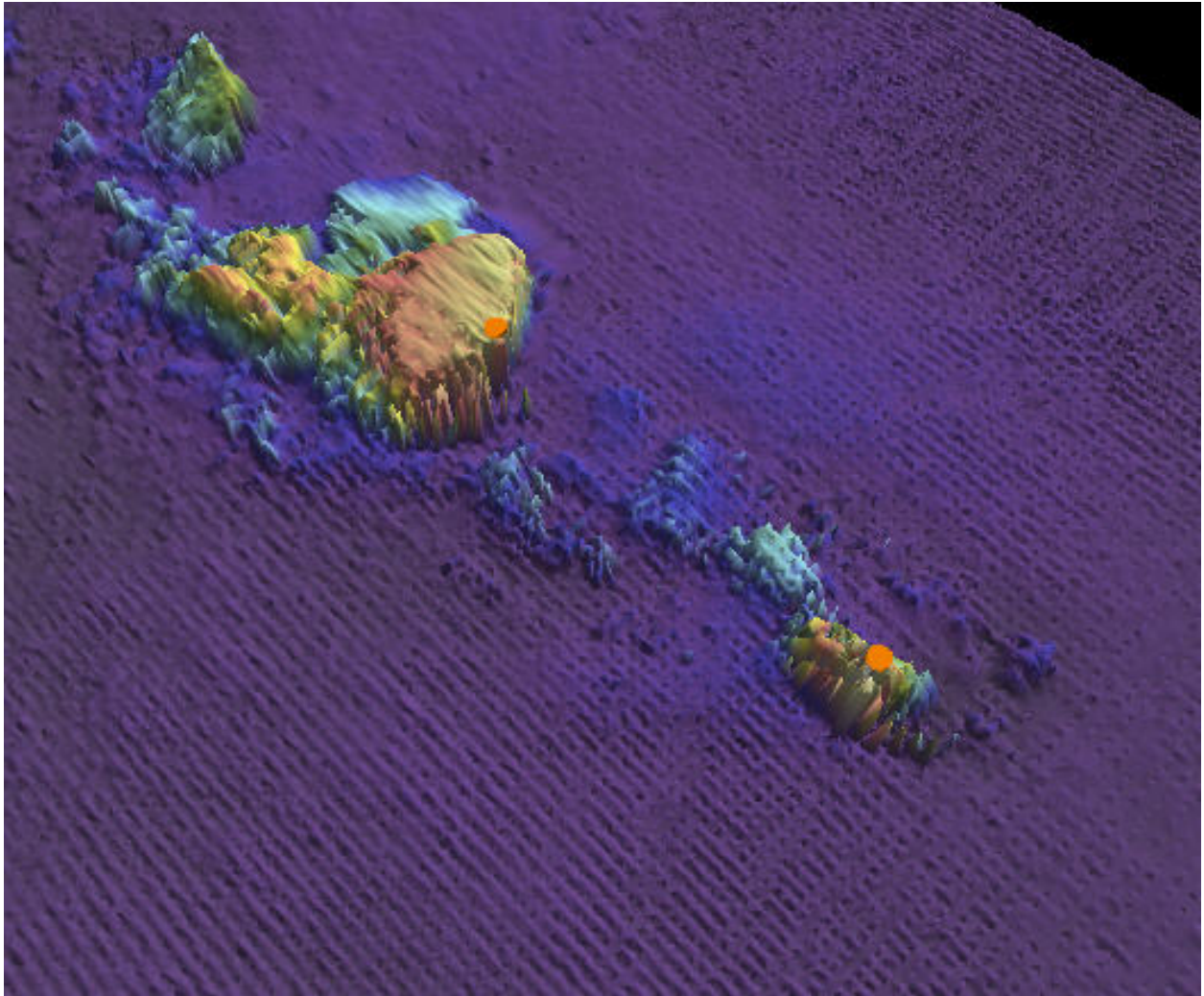


Figure 1.6.1

1.7) Profile/Beam - 953/157 from h11709 / tj_3101_reson8125 / 2007-184 / 984_1820

Primary Feature for AWOIS Item #9707

Search Position: 40° 30' 25.0" N, 073° 56' 32.0" W
Historical Depth: [None]
Search Radius: 100
Search Technique: MB, S2, SD
Technique Notes: [None]

History Notes:

LN49/89-- THE 107-FOOT F/V BRONX QUEEN HAS SUNK IN THE VICINITY OF AMBROSE CHANNEL IN APPROX. POSITION LAT. 40-30-25N, LONG. 73-56-32W IN 27 FEET. CLEARANCE OF 7 FEET OVER WRECK. MARKED BY A WHITE CLOROX BOTTLE WITH A WHITE STROBE LIGHT. MARINERS ARE ADVISED TO USE CAUTION IN AREA. (ENT 3/22/96, SJV)■ FE00434/97-- OPR-C399-RU; COMPLETE INVESTIGATION RESTRICTED BY SHOAL WATER. EVALUATOR RECOMMENDS RETAINING SUBMERGED DANGEROUS WRECK (7 FT REP) PA AS CHARTED. (UP 12/17/98, SJV)■
 DESCRIPTION■ **** TELCON. STEVE VERRY (N/CS31) AND DAN BERG (AQUA■ EXPLORERS, INC), 6/19/97, (516) 868-2658; DOVE■ ON "BRONX QUEEN" IN MAY, 1997 AND OBSERVED REMAINS■ OF WRECK TO BE LARGELY SILTED OVER. 4 ENGINES ARE■ VISIBLE EXTENDING APPROX. 5 FEET ABOVE BOTTOM■ SURROUNDED BY A SCOUR DEPRESSION. PROPELLOR SHAFTS■ EXTEND INTO THE BOTTOM AND DISAPPEAR. ESTIMATES■ REMAINS ARE COVERED BY AT LEAST 25 FEET IN 35 FEET■ OF WATER. WRECK APPEARED TO HAVE BEEN WIRE-DRAGGED■ AT ONE TIME (COE) AS PORTHOLES WERE OBSERVED TO BE■ DISTORTED (PULLED AND STRETCHED). STATES THIS WAS A■ SUBCHASER (SC-635) CONVERTED TO A "HEAD BOAT" THAT WAS■ BASED IN SHEEPSHEAD BAY. WOODEN PLANK CONSTRUCTION.■ **** TELCON. STEVE VERRY (N/CS31) AND CHRIS MALLERY (COE,■ CRAVEN POINT), 6/19/97, (212) 264-9055; STATED VESSEL■ SANK IN A DEC., 1989 STORM AND AT THAT TIME WAS BROKEN■ UP INTO 5 OR 6 SECTIONS. 1 OR 2 PERSONS DIED. APPROX.■ 6 FEET OFF THE BOTTOM. (UP 6/19/97, SJV)

Survey Summary

Survey Position: 40° 30' 22.3" N, 073° 56' 31.4" W
Least Depth: 7.25 m (= 23.80 ft = 3.967 fm = 3 fm 5.80 ft)
TPU (±1.96σ): THU (TPEh) ±0.980 m ; TVU (TPEv) ±0.148 m
Timestamp: 2007-184.18:21:05.224 (07/03/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-184 / 984_1820
Profile/Beam: 953/157
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Nothing in AWOIS radius or area from dive charter position fit the description of the item. All items in these areas are considered unrelated.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-184/984_1820	953/157	0.00	000.0	Primary
ChartGPs - ENC US5NY18M	Danger 16	83.25	170.6	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 9707	83.43	170.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/244_1417	0005	85.24	192.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/244_1417	0006	85.28	173.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

24ft (12401_1, 12402_1, 12327_1, 12326_1)

4fm (12300_1, 13006_1, 13003_1, 14500_1)

7.3m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 1:depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 7.255 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

AWOIS 9707 Disproved, remove dangerous submerged wreck "(7 ft rep) PA from chart.

1.8) Profile/Beam - 288/178 from h11709 / tj_3101_reson8125 / 2007-218 / 254_1850

Primary Feature for AWOIS Item #13258

Search Position: 40° 29' 06.5" N, 074° 00' 46.9" W
Historical Depth: 4.57 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10675 -- OPR-C399-RU-97; OBSTR FOUND AT 40/29/06.53N 74/00/46.87W WITH A LEAST DEPTH OF 15 FT (ENT. 05/26/05, SME)

Survey Summary

Survey Position: 40° 29' 06.5" N, 074° 00' 47.1" W
Least Depth: 6.03 m (= 19.77 ft = 3.295 fm = 3 fm 1.77 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.148 m
Timestamp: 2007-218.18:51:14.441 (08/06/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-218 / 254_1850
Profile/Beam: 288/178
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 13258 found. This charted dangerous obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Reported as a spoil Pile from prior survey H10675 in 1997, the obstruction appears to have fallen over. A new least depth of 6.03 meters (19.8 ft) was found.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-218/254_1850	288/178	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/457_2031	0001	2.95	331.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-180/567_1631	0001	4.09	340.5	Secondary (grouped)
ChartGPs - ENC US5NY18M	Danger 3	5.09	276.8	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 13258	5.71	265.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

6.0m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.025 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Modify 15-ft Obstn to be 20-ft Obstn.

1.9) Profile/Beam - 440/137 from h11709 / tj_3101_reson8125 / 2007-219 / 278_1403

Primary Feature for AWOIS Item #9714

Search Position: 40° 29' 08.4" N, 073° 58' 51.1" W
Historical Depth: 8.53 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H8330WD/56-- PROJECT NO. 10,000-803; HANG AT 28 FEET IN LAT. 40-29-06N, LONG. 73-58-48W. CLEARED AT 23 FEET. (ENT 3/28/96, SJV) ■ H10686/96-- OPR-C399-RU; FEATURE RISING ABOUT 5 FEET OFF BOTTOM WITH A LD OF 28 FEET IN LAT. 40-29-08.396N, LONG. 73-58-51.137W. EVALUATOR RECOMMENDS DELETING CHARTED 23-FOOT CLEARED SYMBOL AND CHARTING 28 OBSTN AS SURVEYED. (UP 12/21/04,SJV)

Survey Summary

Survey Position: 40° 29' 08.9" N, 073° 58' 50.9" W
Least Depth: 10.11 m (= 33.18 ft = 5.529 fm = 5 fm 3.18 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.150 m
Timestamp: 2007-219.14:03:48.718 (08/07/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-219 / 278_1403
Profile/Beam: 440/137
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 9714 found. New sounding on Obstn. This charted dangerous obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-219/278_1403	440/137	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/518_1310	0005	4.79	161.4	Secondary (grouped)
ChartGPs - ENC US5NY18M	Danger 4	10.20	122.2	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 9714	15.91	021.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

33ft (12401_1, 12324_1, 12327_1, 12326_1)

5 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

10.1m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 10.112 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Geo object 2: Sounding (SOUNDG)

Attributes: EXPSOU - 1:within the range of depth of the surrounding depth area
QUASOU - 1:depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VERDAT - 12:Mean lower low water

Office Notes

AWOIS 9724 found but now insignificant. Remove 28 Obstn from chart.

1.10) Profile/Beam - 277/139 from h11709 / tj_3101_reson8125 / 2007-219 / 288_1422

Primary Feature for AWOIS Item #9715

Search Position: 40° 28' 49.6" N, 073° 58' 21.8" W
Historical Depth: 8.23 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H8330WD/56-- PROJECT NO. 10,000-803; HANG AT 24 FEET IN LAT. 40-28-44N, LONG. 73-58-24W. CLEARED AT 13 FEET. (ENT 3/28/96, SJV) (NOTE: CHARTED AS CLEARED TO 18 FEET, SOURCE UNKNOWN 2/19/97, SJV). ■ H10686/96-- OPR-C399-RU; WHAT APPEARS TO BE A DEBRIS PILE WAS LOCATED WITH A LD OF 27 FEET IN LAT. 40-28-49.555N, LONG. 73-58-21.838W. EVALUATOR RECOMMENDS DELETING WIRE DRAG CLEARED SYMBOL AND CHARTING A 27 OBSTN AS SURVEYED. (UP 12/21/04, SJV)

Survey Summary

Survey Position: 40° 28' 49.6" N, 073° 58' 21.9" W
Least Depth: 8.99 m (= 29.51 ft = 4.919 fm = 4 fm 5.51 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.149 m
Timestamp: 2007-219.14:23:14.821 (08/07/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-219 / 288_1422
Profile/Beam: 277/139
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 9715 found. This charted dangerous obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-219/288_1422	277/139	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/298_1807	0001	0.50	018.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/598_1416	0003	0.74	201.6	Secondary (grouped)

AWOIS_B310-TJ-07	AWOIS # 9715	1.52	314.2	Secondary (grouped)
ChartGPs - ENC US5NY18M	Danger 5	4.32	151.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

29ft (12401_1, 12324_1, 12327_1, 12326_1)

4 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

9.0m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 8.995 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Modify charted 27 Obstn to 29 Obstn.

Feature Images

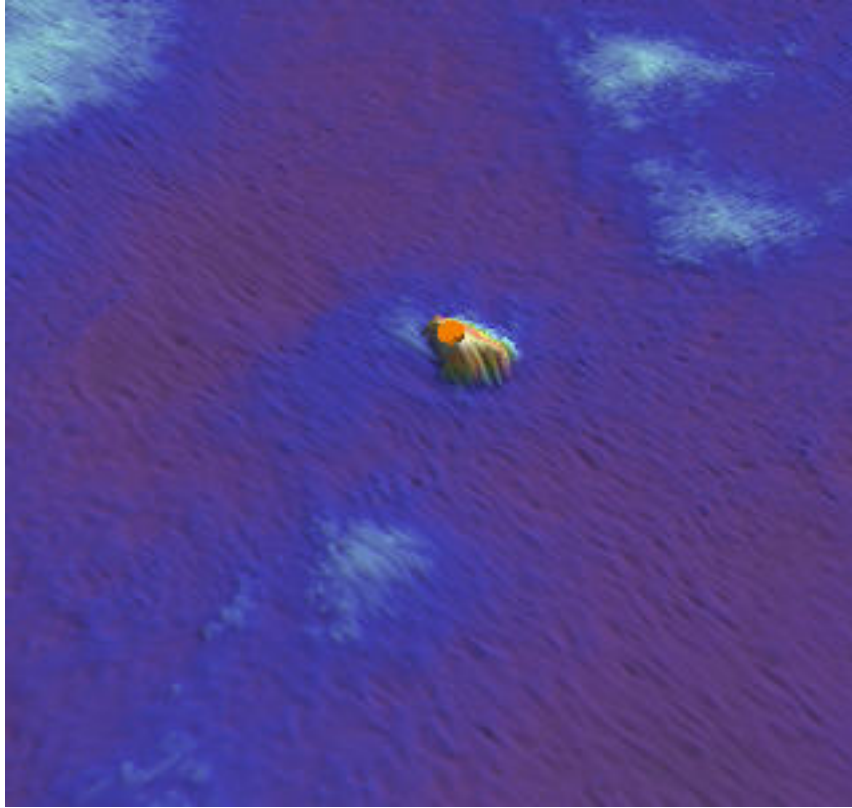


Figure 1.10.1

1.11) Profile/Beam - 211/10 from h11709 / tj_3101_reson8125 / 2007-219 / 324_1733

Primary Feature for AWOIS Item #8087

Search Position: 40° 28' 03.5" N, 073° 55' 33.8" W
Historical Depth: 14.33 m
Search Radius: 50
Search Technique: [None]
Technique Notes: [None]

History Notes:

FE327SS/89--OPR-C147-HE-89; CONTACT #22 ON SURVEY H-10284/88; DIVER INVESTIGATION FOUND THE REMAINS OF A LARGE WOODEN SHIP OR BARGE COMPLETELY COLLAPSED UPON ITSELF; A LARGE PILE OF BLOCKS, WHICH RESEMBLED BALLAST BLOCKS, REMAINS; DIVER PNEUMATIC DEPTH GAUGE LEAST DEPTH OF 47 FT TAKEN ON TOP OF PILE OF BLOCKS IN LAT 40-28-03.49N, LONG 73-55-33.81W (NAD83); LORAN C RATES: 9960-W 15490.6, 9960-X 26956.6, 9960-Y 43712.2, 9960-Z 59864.1; POSITION IS 16M NW OF THE 44 OBSTR SHOWN ON SURVEY H-10224 AND THE EVALUATOR RECOMMENDED THAT THE 47 WK FOUND ON THIS SURVEY SUPERSEDE THAT 44 OBSTR. (ENTERED MSD 7/91)

Survey Summary

Survey Position: 40° 28' 03.2" N, 073° 55' 33.5" W
Least Depth: 14.12 m (= 46.33 ft = 7.721 fm = 7 fm 4.33 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.985 m ; TVU (TPEv) ± 0.174 m
Timestamp: 2007-219.17:32:51.619 (08/07/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-219 / 324_1733
Profile/Beam: 211/10
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 8087 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Least depth updated to 46 feet.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-219/324_1733	211/10	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-181/325_1619	0001	1.25	186.6	Secondary (grouped)

h11709/tj_3102_klein5000_sss200/2007-182/229_1641	0004	8.81	223.0	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 8087	10.99	145.3	Secondary (grouped)
ChartGPs - ENC US5NY1BM	Danger 13	11.05	146.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

46ft (12324_1, 12327_1, 12326_1)

7 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

14.1m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 CONVIS - 2:not visual conspicuous
 QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 14.120 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Modify chart to 46 Wk.

Feature Images

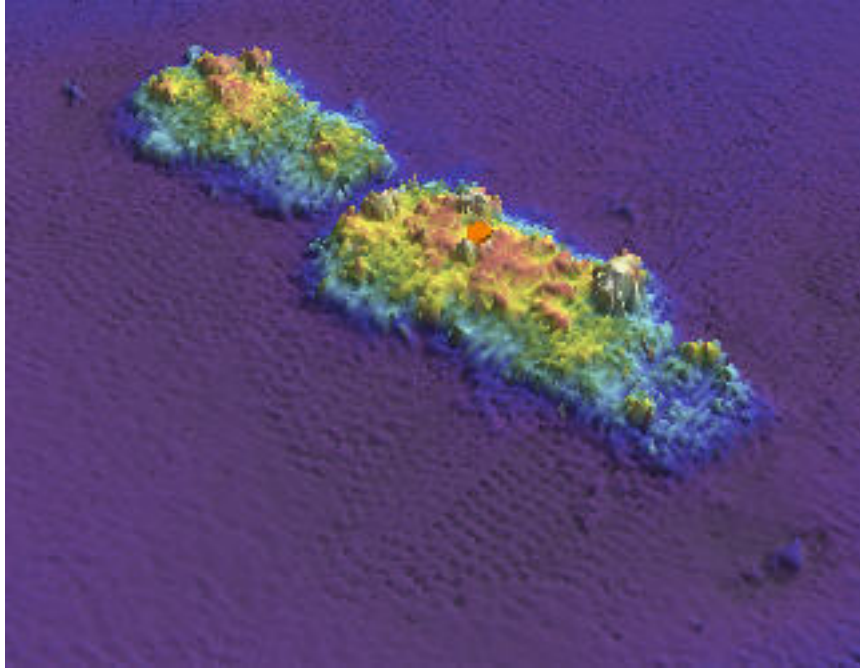


Figure 1.11.1

1.12) Profile/Beam - 233/110 from h11709 / tj_3101_reson8125 / 2007-219 / 331_1839

Primary Feature for AWOIS Item #7932

Search Position: 40° 28' 26.6" N, 073° 54' 26.3" W
Historical Depth: 15.24 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10224/86--OPR-C121-WH-86; WHILE INVESTIGATING ITEM 751, AN AREA WITH NUMEROUS SIDE SCAN SONAR CONTACT WAS FOUND AND DEVELOPED USING SIDE SCAN AND ECHOSOUNDER; DIVER INVESTIGATION DETERMINED LIMITS OF SITE, NATURE OF WRECKAGE AND LOCATION OF THE LEAST DEPTH; SITE WAS ORIENTED NORTHEAST-SOUTHWEST; CONSISTS MOSTLY OF SHIPYARD DEBRIS IN THE FORM OF HEAT EXCHANGERS, BUCKLED DECK PLATING, TWISTED ANGLE IRON, WOODEN RIBS, AND PIPING OF VARIOUS LENGTHS AND SIZES; THE NORTHEAST END OF THE SITE CONSISTED OF A BARGE LYING IN A NORTHWEST-SOUTHEAST DIRECTION WITH THE BOW OF THE BARGE DEFINING THE SOUTHEAST WALL OF THE SITE; THE NORTHWEST END OF THE BARGE, THE STERN, WAS COVERED WITH METAL DEBRIS, HAWSER LINES AND TRAWLER NETTING; DIVERS CONCLUDED THAT THIS SITE IS THE WRECK OF A BARGE THAT WAS FILLED WITH SHIPYARD SCRAP IRON AND DEBRIS; PNEUMATIC DEPTH GAUGE LEAST DEPTH OF 50 FT IN LAT 40-28-26.24N, LONG 73-54-27.84W (NAD27); EVALUATOR RECOMMENDED CHARTING A 50 OBSTR (WRECKAGE) AS SHOWN ON PRESENT SURVEY. (ENTERED MSD 4/91)■■ S00003/03 -- S-B601-RU-02/03 HLS; ■ Survey Position: 40.47393999° N, 73.90728417° W ■ Least Depth: 15.30 m ■ Timestamp: 2002-312.02:54:22.351 (11/08/2002) ■ Charted 50 Obstrn discovered using 100% mainscheme SWMB coverage. Retain as charted ■ Updated 9/11/2006 JCM

Survey Summary

Survey Position: 40° 28' 26.1" N, 073° 54' 26.4" W
Least Depth: 15.27 m (= 50.11 ft = 8.352 fm = 8 fm 2.11 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.158 m
Timestamp: 2007-219.18:40:13.949 (08/07/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-219 / 331_1839
Profile/Beam: 233/110
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 751 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The position of AWOIS 751 is listed in error in the database; nothing was found at the listed location

as evidenced by sidescan. AWOIS 751 and 7932 report wrecks and obstructions and cross reference each other. This is the least depth of the Wreck.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-219/331_1839	233/110	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-188/219_1530	0001	4.05	272.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-188/220_1515	0001	9.46	311.0	Secondary (grouped)
ChartGPs - ENC US5NY1BM	Danger 2	11.98	145.5	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 7932	16.10	182.9	Secondary
h11709/tj_3102_klein5000_sss100/2007-181/305_1358	0001	20.94	073.7	Secondary (grouped)
h11709/tj_3101_reson8125/2007-226/048_1754	397/61	56.28	072.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/305_1357	0001	188.90	015.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-188/220_1515	0002	189.17	015.0	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 751	189.85	015.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

50ft (12324_1, 12327_1, 12326_1)

8 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

15.3m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

CONVIS - 2:not visual conspicuous

QUASOU - 6:least depth known

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

VALSOU - 15.274 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AWOIS 751 found. Relocate to current position. Chart dangerous Wk 50-ft.

Feature Images

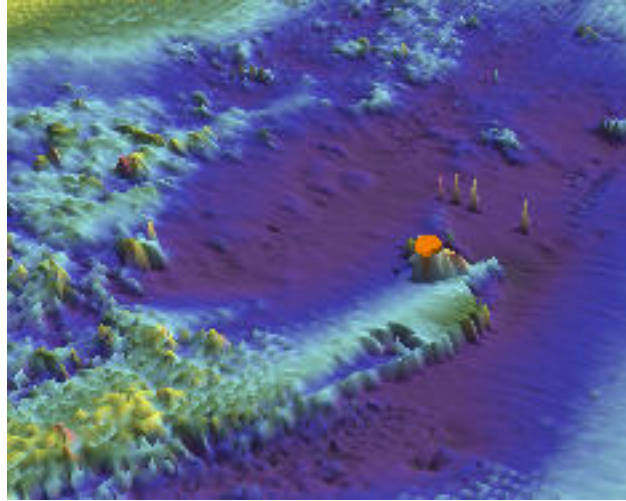


Figure 1.12.1

1.13) Profile/Beam - 334/235 from h11709 / tj_3101_reson8125 / 2007-220 / 356_1717

Primary Feature for AWOIS Item #7508

Search Position: 40° 29' 31.1" N, 073° 54' 18.5" W
Historical Depth: 11.28 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

FE312SS/88--OPR-C121-WH-88; WHILE SEARCHING FOR AWOIS ITEM 1634, TWO SIDE SCAN SONAR CONTACTS WERE LOCATED AND IDENTIFIED AS WRECKAGE (ALSO SEE ITEM 7509); FIRST OBSTRUCTION (CONTACT NO. 330.1S) WAS FOUND TO BE WRECKAGE IN A SCOUR 2 FT. DEEP IN LAT 40-29-31.38N, LONG 73-54-20.45W; DIVER LEAST DEPTH OF 39 FT. IN PRESENT SURVEY DEPTHS OF 37 - 38 FT.; WRECKAGE WAS A FOUR SIDED METAL STRUCTURE APPROXIMATELY 2 - 5 FT. THICK; TOP THREE SIDES WERE PAINTED WITH RED ANTI-FOULING PAINT; FOURTH SIDE HAD JAGGED EDGES COVERED WITH HEAVY MARINE GROWTH AND SEVERAL HOLES EXPOSING LONGITUDINAL SUPPORTS IN THE INTERIOR OF THE STRUCTURE; 45 X 20 X 5 FT; EVALUATOR RECOMMENDED CHARTING A 39 FT. OBSTR (WRECKAGE). (ENTERED MSM 10/89) ■ H10668/97--OPR-C399-RU; 200% SIDE SCAN SONAR SEARCH LOCATED ONE SIGNIFICANT CONTACT. SWMB LD OF 11.0 METERS (36 FEET) IN LAT. 40-29-31.113N, LONG. 73-54-18.537W. EVALUATOR RECOMMENDS DELETING THE CHARTED 39 AND 36-FOOT OBSTRUCTIONS AND CHARTING A 36 OBSTN AS SURVEYED. (UP 12/22/04, SJV) ■■ S00003/03 -- S-B601-RU-02/03 HLS; ■ Survey Position: 040° 29' 31.138" N, 73° 54' 18.716" W ■ Least Depth: 11.28 m ■ Timestamp: 2002-317.17:14:31.484 (11/13/2002) ■ Charted Obstn seen with SWMB - 1 ft deeper than charted Correlates to AWOIS 7508 ■ Updated 9/8/2006 JCM

Survey Summary

Survey Position: 40° 29' 31.1" N, 073° 54' 18.7" W
Least Depth: 11.31 m (= 37.12 ft = 6.187 fm = 6 fm 1.12 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.983 m ; TVU (TPEv) ± 0.164 m
Timestamp: 2007-220.17:17:45.704 (08/08/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-220 / 356_1717
Profile/Beam: 334/235
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 7508 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Wreck appears to have boat shape, but item description is listed as Wreckage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-220/356_1717	334/235	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-221/302_1506	0001	1.42	184.4	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 7508	3.13	252.6	Secondary (grouped)
ChartGPs - ENC US5NY1BM	Danger 6	3.23	078.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-188/200_1604	0001	8.73	194.1	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 11.314 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Retain charted Obstrn least depth 37 ft.

Feature Images

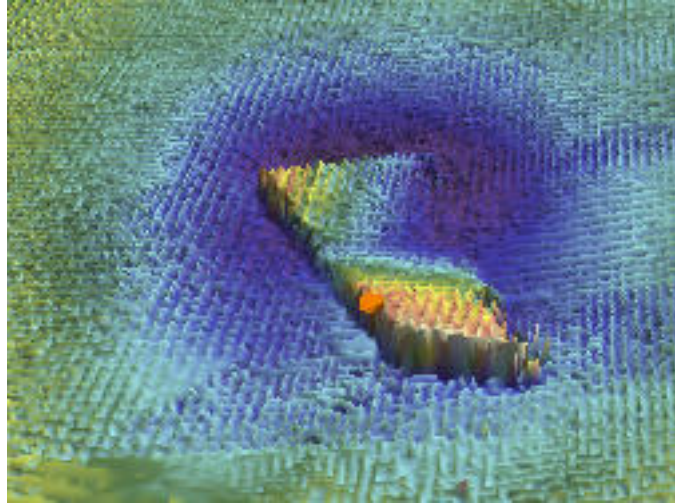


Figure 1.13.1

1.14) Profile/Beam - 172/56 from h11709 / tj_3101_reson8125 / 2007-220 / 362_1658

Primary Feature for AWOIS Item #7514

Search Position: 40° 29' 49.2" N, 073° 55' 13.3" W
Historical Depth: 11.13 m
Search Radius: 50
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

FE312SS/88--OPR-C121-WH-88; WHILE SEARCHING FOR AWOIS ITEM 1634, A SHOAL SOUNDING WAS FOUND; 50M SSS LINE SPACING, 5M LINE SPACING ECHO SOUNDER DEVELOPMENT; 35 FT. ECHO SOUNDER LEAST DEPTH IN SURROUNDING DEPTHS OF 40 FT.; NO DIVER INVESTIGATION; EVALUATOR RECOMMENDED CHARTING AN UNIDENTIFIED OBSTRUCTION WITH A 35 FT. SOUNDING. (ENTERED MSM 10/88)■■ S00003/03 -- S-B601-RU-02/03 HLS; ■■Survey Position: 40.49700996° N, 73.92101447° W■Least Depth: 11.13 m■Timestamp: 2002-317.15:11:05.328 (11/13/2002)■Mainscheme SWMB coverage reveals a number of rocky outcrops. Current feature is the shoalest with least■depth 36 ft.■Updated 9/11/2006 JCM

Survey Summary

Survey Position: 40° 29' 49.2" N, 073° 55' 15.7" W
Least Depth: 11.23 m (= 36.86 ft = 6.143 fm = 6 fm 0.86 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.153 m
Timestamp: 2007-220.16:58:33.407 (08/08/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-220 / 362_1658
Profile/Beam: 172/56
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 7514 found. This charted dangerous rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-220/362_1658	172/56	0.00	000.0	Primary
AWOIS_B310-TJ-07	AWOIS # 7514	57.88	268.9	Secondary (grouped)

ChartGPs - ENC US5NY1BM	Danger 4	80.30	274.7	Secondary (grouped)
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Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 11.234 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Rock is insignificant. Remove 36 "Rk" from chart.

Feature Images

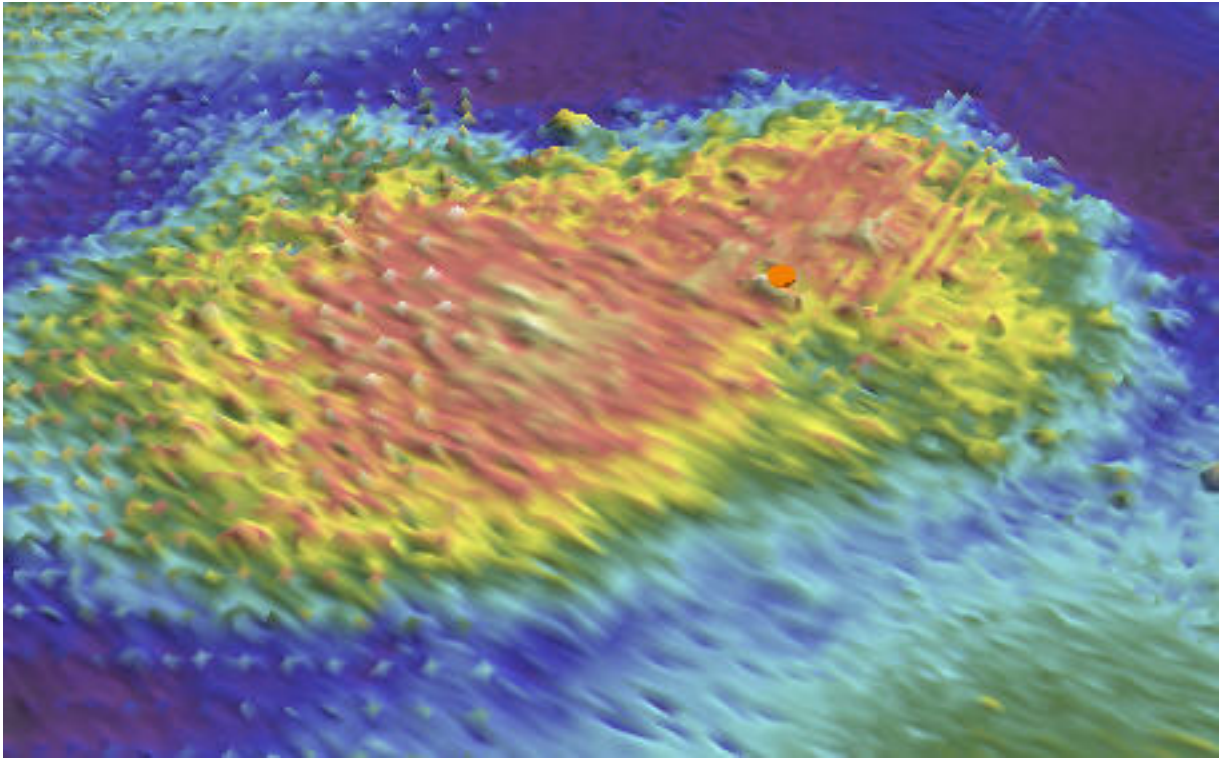


Figure 1.14.1

1.15) Profile/Beam - 338/75 from h11709 / tj_3101_reson8125 / 2007-221 / 246_1805

Primary Feature for AWOIS Item #11422

Search Position: 40° 27' 55.3" N, 074° 02' 42.9" W
Historical Depth: 7.92 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10675/96-97--OPR-C309-RU; INVESTIGATED USING 200% SIDE SCAN SONAR, SEABAT YIELDED A LEAST DEPTH OF 26 FEET. SONAGRAMS SHOWED A LARGE RECTANGULAR MANMADE OBSTRUCTION. DIVER INVESTIGATION FOUND A BARGE WITH SURROUNDING SCOUR OF ABOUT 8 FEET. HYDROGRAPHER RECOMENDS CHARTING THE 26 FOOT SOUNDING AS 26 WK. (ENT 03/02, PSH)

Survey Summary

Survey Position: 40° 27' 55.1" N, 074° 02' 43.0" W
Least Depth: 8.12 m (= 26.64 ft = 4.440 fm = 4 fm 2.64 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.149 m
Timestamp: 2007-221.18:06:14.205 (08/09/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-221 / 246_1805
Profile/Beam: 338/75
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 11422 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-221/246_1805	338/75	0.00	000.0	Primary
ChartGPs - ENC US5NY18M	Danger 14	3.34	092.6	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 11422	4.49	212.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-234/622_1333	0003	4.59	217.2	Secondary (grouped)

h11709/tj_3102_klein5000_sss200/2007-234/623_1357	0002	5.10	129.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-186/539_1656	0001	6.42	247.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-186/525_1703	0005	151.45	303.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-186/525_1703	0004	172.83	330.4	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.120 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Retain as charted.

Feature Images

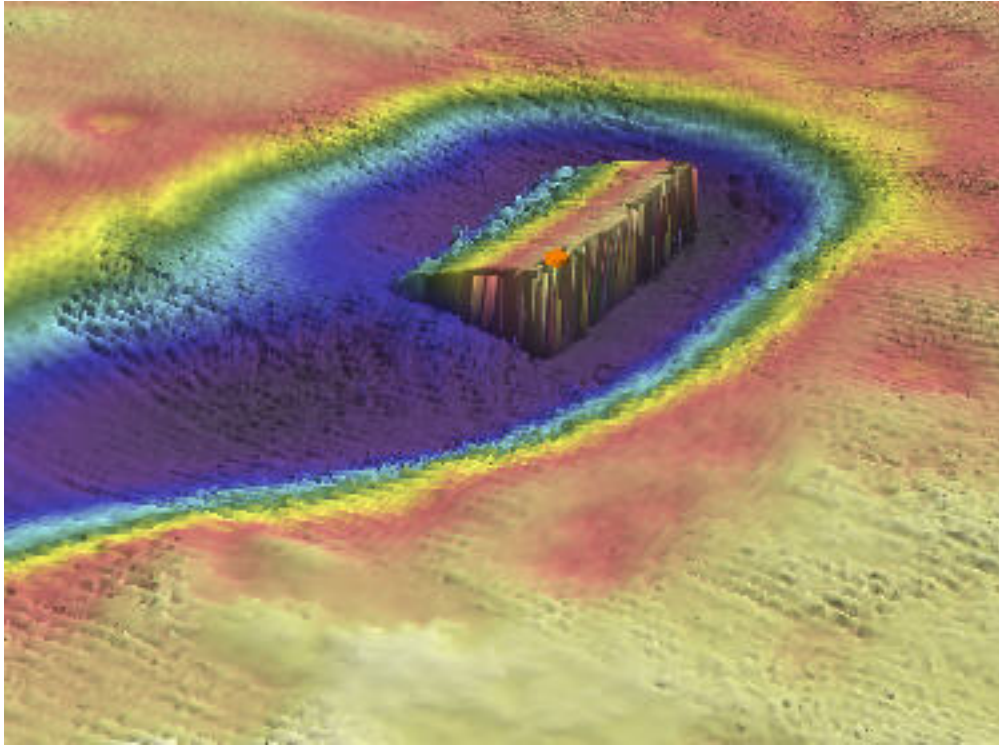


Figure 1.15.1

1.16) Profile/Beam - 1069/140 from h11709 / tj_3101_reson8125 / 2007-226 / 157_1708

Primary Feature for AWOIS Item #12937

Search Position: 40° 27' 52.6" N, 073° 56' 11.8" W
Historical Depth: [None]
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10686/96-- OPR-C399-RU; WHAT APPEARS TO BE A SPOIL OR DEBRIS PILE LOCATED WITH A LD OF 19 FEET IN LAT. 40-27-52.636N, LONG. 73-56-11.802W. EVALUATOR RECOMMENDS CHARTING A 19 OBSTN AS SURVEYED. (ENT 12/21/04, SJV)

Survey Summary

Survey Position: 40° 27' 52.7" N, 073° 56' 11.7" W
Least Depth: 6.73 m (= 22.08 ft = 3.681 fm = 3 fm 4.08 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.148 m
Timestamp: 2007-226.17:09:32.341 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 157_1708
Profile/Beam: 1069/140
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 12937 found. This charted dangerous obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/157_1708	1069/140	0.00	000.0	Primary
AWOIS_B310-TJ-07	AWOIS # 12937	3.16	068.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/347_1753a	0001	5.29	184.4	Secondary (grouped)
ChartGPs - ENC US5NY18M	Danger 6	5.50	184.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-182/235_1355	0004	6.99	111.1	Secondary (grouped)

h11709/tj_3102_klein5000_sss200/2007-182/235_1404	0002	13.82	329.4	Secondary (grouped)
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Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

VALSOU - 6.731 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22 Obstrn, update AWOIS database.

Feature Images

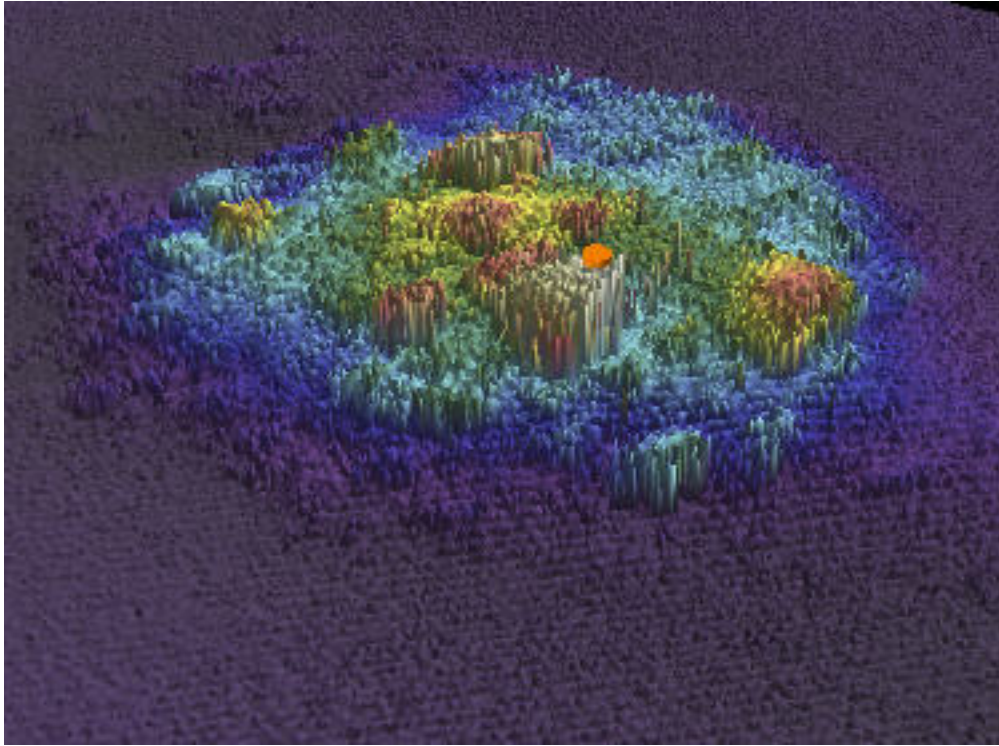


Figure 1.16.1

1.17) Profile/Beam - 403/62 from h11709 / tj_3101_reson8125 / 2007-226 / 181_1730

Primary Feature for AWOIS Item #13776

Search Position: 40° 27' 29.4" N, 073° 55' 21.9" W
Historical Depth: 14.90 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

S00003/03 -- S-B601-RU-02/03 HLS; ■Survey Position: 040° 27' 29.390" N, 73° 55' 21.866" W ■Least Depth: 14.90 m ■Timestamp: 2003-153.22:26:05.065 (06/02/2003) ■Survey Line: b601 / ru00_mb / 2003-153 / 821_2225 ■Profile/Beam: 193/188 ■Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1 ■Remarks: ■A very deteriorated wreck or wreckage - least depth of debris lies 25 m north of this contact (the main wreck, but is ■not shoaler than surrounding soundings. ■Updated 9/14/2006 JCM

Survey Summary

Survey Position: 40° 27' 29.4" N, 073° 55' 21.9" W
Least Depth: 14.73 m (= 48.32 ft = 8.054 fm = 8 fm 0.32 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.156 m
Timestamp: 2007-226.17:30:55.092 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 181_1730
Profile/Beam: 403/62
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 13776 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/181_1730	403/62	0.00	000.0	Primary
AWOIS_B310-TJ-07	AWOIS # 13776	0.44	149.7	Secondary
h11709/tj_3102_klein5000_sss200/2007-182/228_1659	0001	25.81	080.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/321_1549	0003	27.14	241.5	Secondary (grouped)

h11709/tj_3101_reson8125/2007-226/181_1730	179/59	80.69	251.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/319_1537	0001	85.64	251.9	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 CONVIS - 2:not visual conspicuous
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 14.729 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

[None]

1.18) Profile/Beam - 1870/77 from h11709 / tj_3101_reson8125 / 2007-227 / 067_1521

Primary Feature for AWOIS Item #4744

Search Position: 40° 28' 10.2" N, 073° 57' 18.2" W
Historical Depth: 5.79 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

H10035/82--OPR-B139-WH-82; WHILE INVESTIGATING AWOIS ITEM 2458, A SPIKE WAS NOTED ON THE ECHOGRAM; DIVE INVESTIGATION REVEALED A STRUCTURE MADE OF ROCKS AND CONCRETE BLOCKS; NOT CONSIDERED A DANGER TO NAVIGATION; DUE TO RICHNESS IN MARINE LIFE, HYDROGRAPHER RECOMMENDED THAT THIS STRUCTURE BE CHARTED AS A FISH HAVEN; 100 FT SQUARE AND 5-7 FT UP FROM SEABEAD; 19FT LEAST DEPTH; EVALUATOR RECOMMENDS CHARTING AS A 19 OBSTR. (ENTERED MSM 6/87) H10686/96-- OPR-C399-RU; 2 CONTACTS LOCATED, EACH WITH A LD OF 18 FEET IN LAT. 40-28-10.193N, LONG. 73-57-18.246W AND LAT. 40-28-12.146N, LONG. 73-57-21.403W. EVALUATOR RECOMMENDS CHARTING AS SURVEYED. (UP 12/21/04, SJV)

Survey Summary

Survey Position: 40° 28' 10.2" N, 073° 57' 18.3" W
Least Depth: 6.33 m (= 20.77 ft = 3.462 fm = 3 fm 2.77 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.148 m
Timestamp: 2007-227.15:23:43.176 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 067_1521
Profile/Beam: 1870/77
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 4744 found. This charted dangerous obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The item contains several mounds, all of which appear man made and in line. The least depth is found on correlating contacts in the area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/067_1521	1870/77	0.00	000.0	Primary
AWOIS_B310-TJ-07	AWOIS # 4744	1.77	304.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.3m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: NATCON - 2,3:concreted,loose boulders
 QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.332 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Chart 21 Obstrn

Feature Images

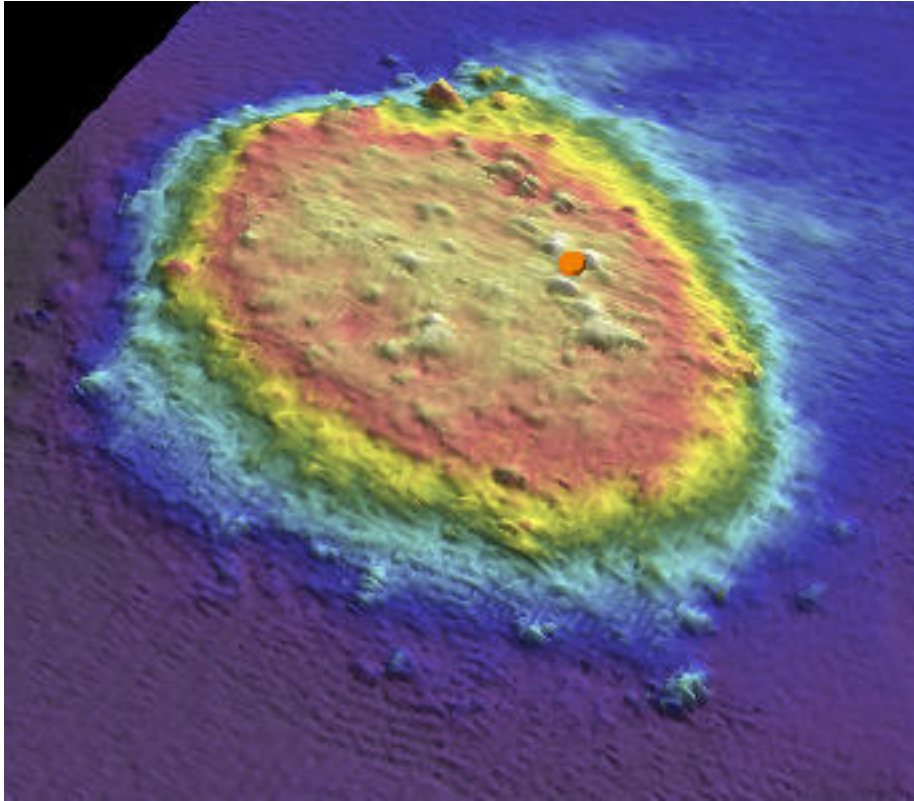


Figure 1.18.1

1.19) Profile/Beam - 78/187 from h11709 / tj_3101_reson8125 / 2007-237 / 723_1751

Primary Feature for AWOIS Item #7512

Search Position: 40° 29' 27.3" N, 073° 55' 18.9" W
Historical Depth: 15.54 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

FE312SS/88--OPR-C121-WH-88; WHILE SEARCHING FOR AWOIS ITEM 1634, AN OBSTRUCTION WAS FOUND IN LAT 40-29-26.96N, LONG 73-55-20.44W (NAD27); DIVER LOCATED AN ANCHOR, 90% BURIED IN THE SAND WITH ONLY THE BOTTOM OF THE FLUKES STICKING OUT OF THE SAND; ANCHOR MANUFACTURED BY BALDT COMPANY, CHESTER, PA.; IT IS A TYPE OF STOCKLESS ANCHOR USED BY THE NAVY; ANCHOR MEASURED 8 FT. FROM FLUKE TO FLUKE; DIVER LEAST DEPTH OF 51 FT.; EVALUATOR RECOMMENDED CHARTING AN OBSTRUCTION (ANCHOR) WITH 51 FT. (ENTERED MSM 10/89)

Survey Summary

Survey Position: 40° 29' 33.1" N, 073° 55' 17.4" W
Least Depth: 16.83 m (= 55.21 ft = 9.201 fm = 9 fm 1.21 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.982 m ; TVU (TPEv) ± 0.161 m
Timestamp: 2007-237.17:51:47.621 (08/25/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-237 / 723_1751
Profile/Beam: 78/187
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 7512 found. This charted dangerous obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Item appears to be an old stock style anchor.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-237/723_1751	78/187	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-231/236_1426	0001	9.96	004.8	Secondary

AWOIS_B310-TJ-07	AWOIS # 7512	181.61	011.6	Secondary (grouped)
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Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CATOBS - 9:ground tackle
NATCON - 7:metal
QUASOU - 6:least depth known
STATUS - 13:historic
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 16.827 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

AWOIS 7512 found although insignificant. Update AWOIS database to new location.

Feature Images

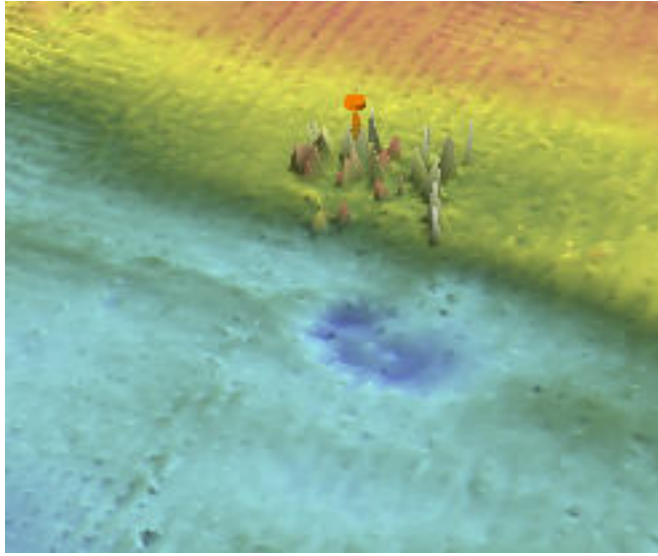


Figure 1.19.1

1.20) Profile/Beam - 173/159 from h11709 / tj_3101_reson8125 / 2007-266 / 720_1813

Primary Feature for AWOIS Item #1640

Search Position: 40° 30' 00.4" N, 073° 59' 58.5" W
Historical Depth: [None]
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

H10031/82--OPR-B139-WH-82; 1:10,000 SCALE; DELNORTE (R/R), DELNORTE-THEODOLITE (R/A); WK NOT CHARTED; NO TRACE FOUND ON SURVEY; EVALUATOR RECOMMENDED RETAINING CHARTING DISPOSITION. (ENTERED 1/7/85 MSM) ■■ DESCRIPTION ■ 24 NO.4900; CARGO, 1630 GT; SUNK 1/3/44 BY MARINE CASUALTY; POS. ACC. 3-5 MILES ■ 61 ■ **** REF. AWOIS ITEM 1641, 4440, 4441, 4442, AND 4444. ■ 195 LORAN-C RATES HAVE BEEN PROVIDED BY MR. RICHARDS TARACKA, GREENWICH, ■ CT. POLICE DEPT., TEL. NO. 203-622-8007; 9960-X 26936.3, 9960-Y 43725.6.(ENTERED MSM 6/89)

Survey Summary

Survey Position: 40° 30' 00.4" N, 073° 59' 58.7" W
Least Depth: 8.36 m (= 27.43 ft = 4.572 fm = 4 fm 3.43 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.149 m
Timestamp: 2007-266.18:13:58.486 (09/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-266 / 720_1813
Profile/Beam: 173/159
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 1640 disproved. Entire search radius was investigated with object detection Reson 8125 multibeam and 200% Klein 5000 SSS. Soundings are corrected to MLLW using verified water levels and final TCARI for water level computation. A rock was found in the search but no wreck (as stated in the item description).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-266/720_1813	173/159	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-267/980_2052	0017	0.36	305.3	Secondary (grouped)

h11709/tj_3102_klein5000_sss200/2007-235/412_1418	0007	3.15	255.6	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 1640	4.60	295.3	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 3:distributed remains of wreck
 QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.362 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Multibeam shows debris. AWOIS 1640 found. Chart sounding of 27-ft and update AWOIS database to reflect new location. Item is insignificant.

Feature Images

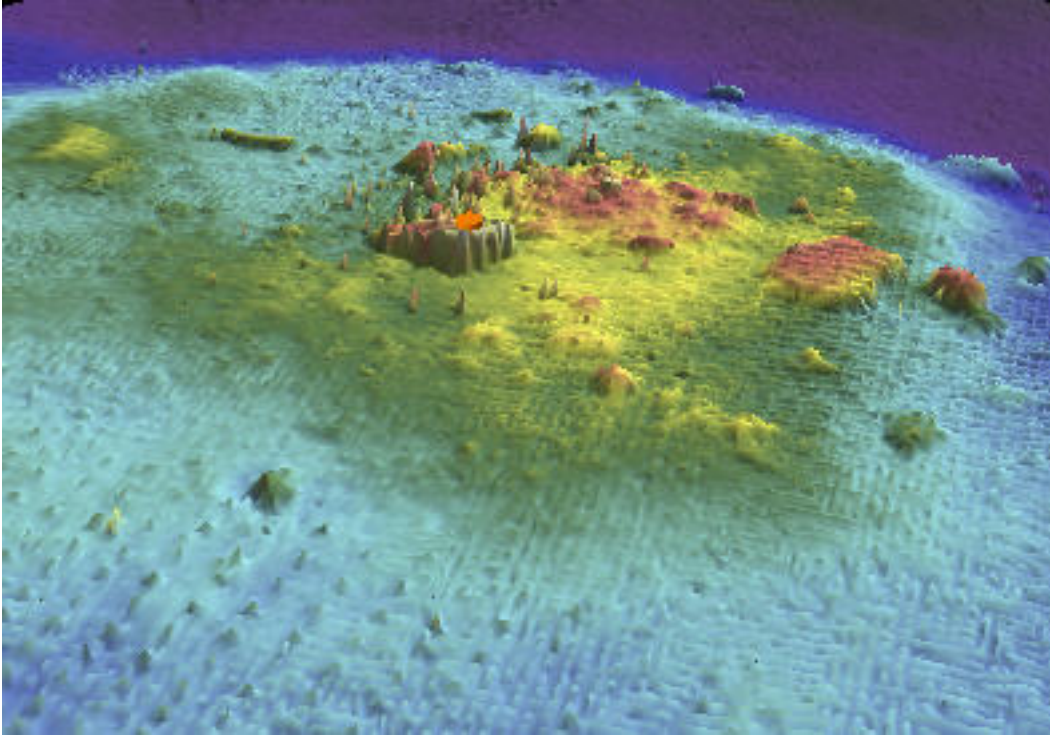


Figure 1.20.1

1.21) Profile/Beam - 136/209 from h11709 / tj_3101_reson8125 / 2007-267 / 207_1435

Primary Feature for AWOIS Item #13274

Search Position: 40° 29' 58.0" N, 074° 00' 13.5" W
Historical Depth: 5.79 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

H10675/96-97--OPR-C399-RU-97; A ROCK WITH A LEAST DEPTH OF 19FT WAS LOCATED IN POS. 40/29/57.98N 74/00/13.47W (ENT. 06/02/05, SME)

Survey Summary

Survey Position: 40° 29' 58.1" N, 074° 00' 13.5" W
Least Depth: 5.76 m (= 18.89 ft = 3.149 fm = 3 fm 0.89 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.148 m
Timestamp: 2007-267.14:35:40.493 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 207_1435
Profile/Beam: 136/209
Charts Affected: 12401_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 13274 found. This charted dangerous rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/207_1435	136/209	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/530_1623	0001	2.37	134.4	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 13274	3.08	005.8	Secondary (grouped)
ChartGPs - ENC US5NY18M	Danger 12	3.59	043.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/408_1645	0005	4.58	207.2	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 5.758 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

AWOIS 13274 found. Retain as charted.

Feature Images

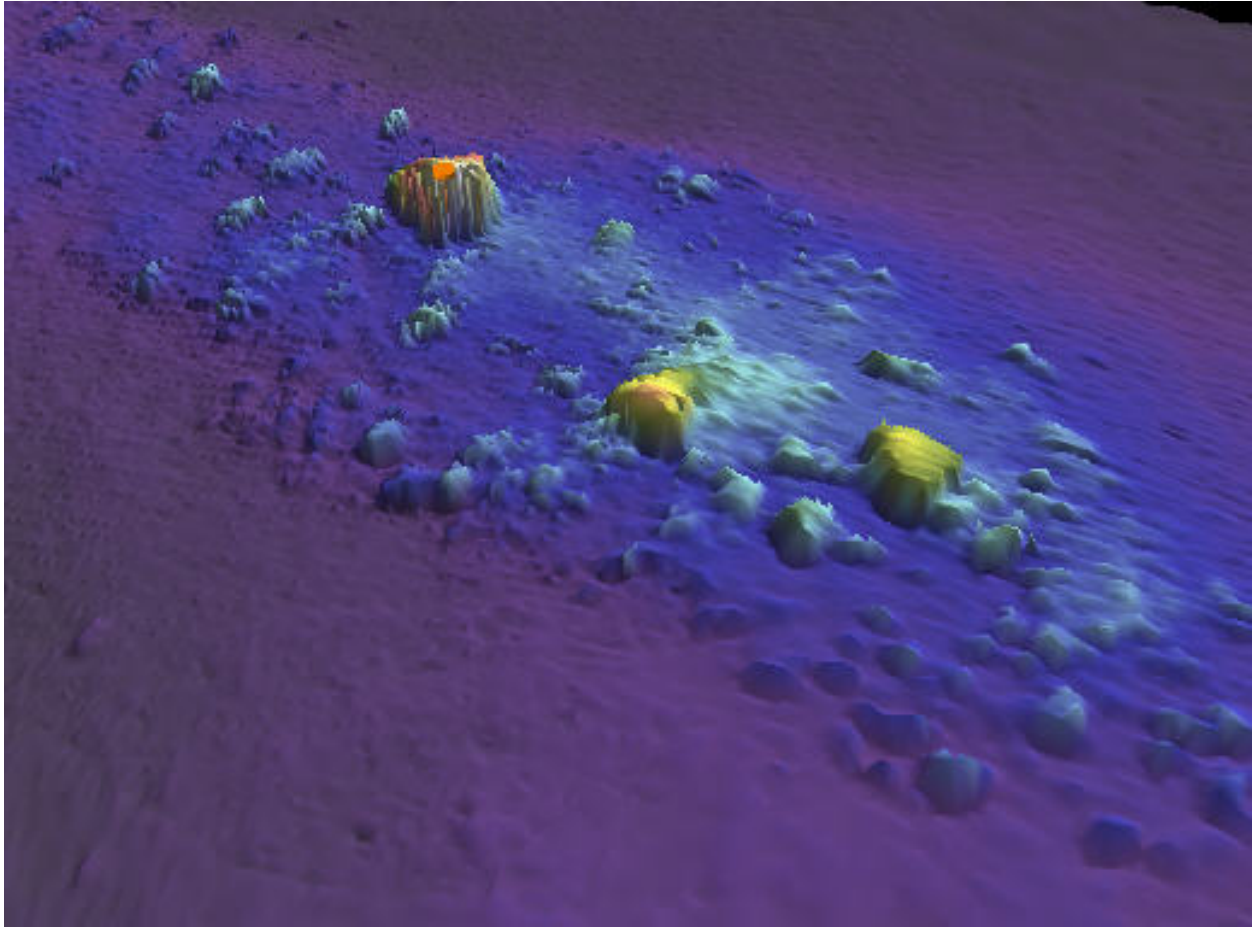


Figure 1.21.1

1.22) Profile/Beam - 853/13 from h11709 / tj_3101_reson8125 / 2007-268 / 093_1959

Primary Feature for AWOIS Item #12965

Search Position: 40° 30' 49.8" N, 074° 02' 02.3" W
Historical Depth: 4.27 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

H10675/96-97-- OPR-C399-RU; SWMB LD OF 14 FEET OBTAINED IN LAT. 40-30-49.78N, LONG. 74-02-02.31W. EVALUATOR RECOMMENDS DELETING CHARTED 14 OBSTN AND CHARTING AREA AS SURVEYED. (ENT 12/23/04, SJV).

Survey Summary

Survey Position: 40° 30' 49.7" N, 074° 02' 02.0" W
Least Depth: 4.64 m (= 15.24 ft = 2.540 fm = 2 fm 3.24 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-268.20:00:41.413 (09/25/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-268 / 093_1959
Profile/Beam: 853/13
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 12965 found. This charted dangerous rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-268/093_1959	853/13	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/531_1739	0004	4.03	136.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/412_1419	0001	5.01	144.5	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 12965	7.27	099.7	Secondary (grouped)
h11709/tj_3101_reson8125/2007-268/093_1959	802/1	10.04	110.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

15ft (12401_1, 12402_1, 12327_1, 12326_1)

2 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

4.6m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 4.645 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

AWOIS 12965 found. Chart 15 Obstrn

Feature Images

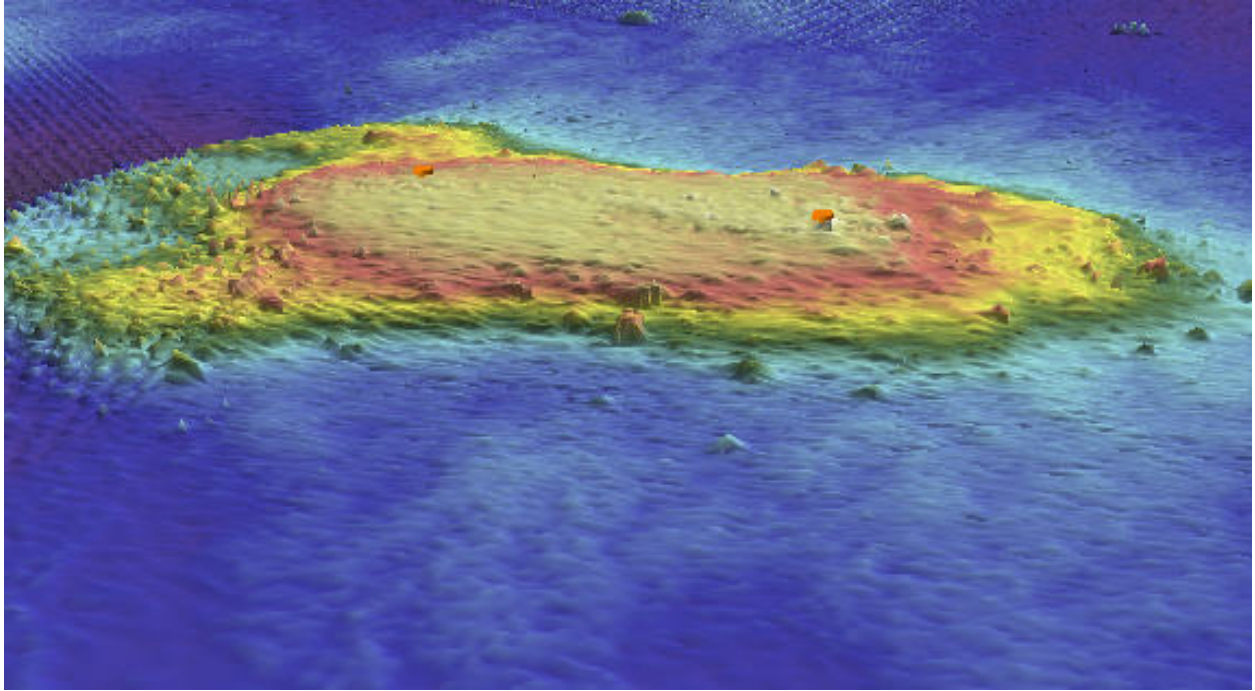


Figure 1.22.1

1.23) Profile/Beam - 622/7 from h11709 / tj_3102_reson8101 / 2007-182 / 231_1519

Primary Feature for AWOIS Item #8093

Search Position: 40° 27' 43.6" N, 073° 55' 47.1" W
Historical Depth: 10.67 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

H10284/88--OPR-C147-WH-88; AN UNCHARTED DANGEROUS SUBMERGED OBSTRUCTION WAS FOUND IN LAT 40-27-43.47N, LONG 73-55-46.94W (NAD83) WITH FATHOMETER DEPTH OF 37 FT; EVALUATOR RECOMMENDED CHARTING A 37 OBSTR AS SHOWN ON PRESENT SURVEY AND CONDUCTING FURTHER INVESTIGATION AT AN OPPORTUNE TIME. (ENTERED MSD 7/91)■
 H10686/96-- OPR-C399-RU; PILE OF DEBRIS LOCATED WITH A LD OF 35 FEET IN LAT. 40-27-43.615N, LONG. 73-55-47.082W. EVALUATOR RECOMMENDS CHARTING A 35 OBSTN AND DELETING (REP 1989). (UP 12/21/04, SJV)

Survey Summary

Survey Position: 40° 27' 43.4" N, 073° 55' 47.0" W
Least Depth: 11.15 m (= 36.58 ft = 6.097 fm = 6 fm 0.58 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.990 m ; TVU (TPEv) ± 0.416 m
Timestamp: 2007-182.15:21:41.913 (07/01/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-182 / 231_1519
Profile/Beam: 622/7
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 8093 found. This charted dangerous obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The obstruction circle is off-position on chart 12327.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-182/231_1519	622/7	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-182/231_1519	0005	3.16	209.3	Secondary (grouped)

ChartGPs - ENC US5NY1BM	Danger 1	5.09	113.2	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 8093	5.66	160.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/328_1652	0002	8.14	170.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/327_1637	0006	62.23	253.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

36ft (12324_1, 12327_1, 12326_1)

6fm (12300_1, 13006_1, 13003_1, 14500_1)

11.2m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 11.151 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

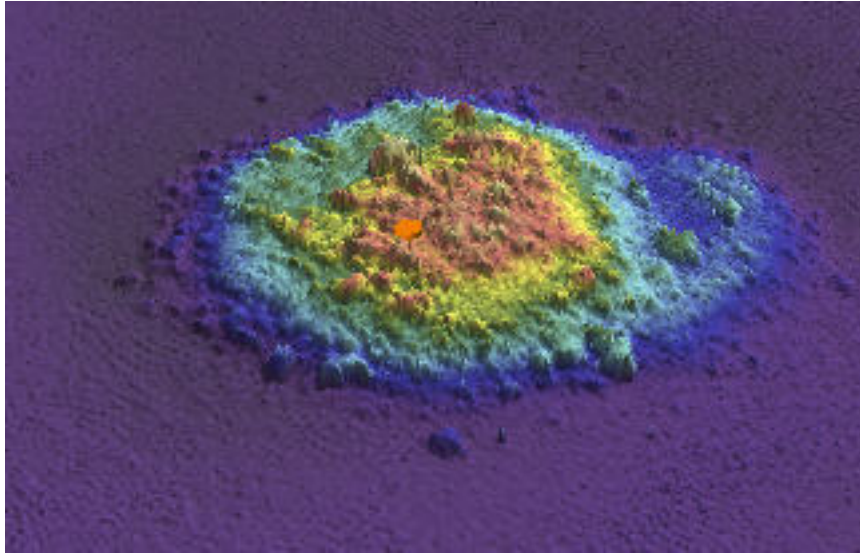


Figure 1.23.1

1.24) Profile/Beam - 247/16 from h11709 / tj_3102_reson8101 / 2007-216 / 009_1416

Primary Feature for AWOIS Item #8085

Search Position: 40° 27' 32.4" N, 073° 56' 05.2" W
Historical Depth: 10.67 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

FE327SS/89--OPR-C147-HE-89; CONTACT #16 ON SURVEY H-10284/88; DIVER INVESTIGATION FOUND WRECKAGE IN LAT 40-27-32.39N, LONG 73-56-05.24W (NAD83); LORAN C RATES: 9960-W 15494.1, 9960-X 26959.2, 9960-Y 43707.7, 9960-Z 59861.2; ECHOSOUNDER DEPTH OF 35 FT; EVALUATOR RECOMMENDED CHARTING 35 OBSTR (WRECKAGE) AS SHOWN ON SURVEY. (ENTERED MSD 7/91)

Survey Summary

Survey Position: 40° 27' 32.4" N, 073° 56' 05.5" W
Least Depth: 11.33 m (= 37.16 ft = 6.193 fm = 6 fm 1.16 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.984 m ; **TVU (TPEv)** ± 0.398 m
Timestamp: 2007-216.14:17:43.574 (08/04/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-216 / 009_1416
Profile/Beam: 247/16
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 8085 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-216/009_1416	247/16	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-181/332_1734	0001	3.41	248.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-182/234_1424	0003	4.47	121.2	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 8085	5.18	268.6	Secondary (grouped)

ChartGPs - ENC US5NY1BM	Danger 12	16.28	019.5	Secondary (grouped)
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Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

37ft (12324_1, 12327_1, 12326_1)

6 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

11.3m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

CONVIS - 2:not visual conspicuous

QUASOU - 6:least depth known

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

VALSOU - 11.326 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Update position in database. Modify to least depth = 37 ft.

1.25) Profile/Beam - 1629/87 from h11709 / tj_3102_reson8101 / 2007-221 / 302_1506

Primary Feature for AWOIS Item #7509

Search Position: 40° 29' 29.0" N, 073° 54' 19.9" W
Historical Depth: 11.23 m
Search Radius: 50
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

FE312SS/88--OPR-C121-WH-88; WHILE SEARCHING FOR AWOIS ITEM 1634, TWO SIDE SCAN SONAR CONTACTS WERE LOCATED AND IDENTIFIED AS WRECKAGE (ALSO REFERENCE ITEM 7508); AN OBSTRUCTION (SSS CONTACT NO. 379.6S) WAS FOUND IN LAT 40-29-28.57N, LONG 73-54-21.20W (NAD27); DIVER LEAST DEPTH OF 36 FT. IN PRESENT SURVEY DEPTHS OF 38 FT.; REMAINS OF A PORTION OF A KEEL OF A METAL HULLED VESSEL; VESSEL WAS LYING INVERTED WITH THE KEEL EXPOSED; PORTION OF MIDSECTION OF VESSEL WAS VISIBLE; ENTIRE STRUCTURE WAS COATED WITH ANTI FOULING PAINT; 45 FT. WIDE AT THE BEAM, 37 FT. AT THE NORTHERN END AND 18 FT. LONG; SOUTHERN END OF SITE WAS BENT AND TWISTED; HULL STOOD APPROXIMATELY 3 FT. OFF THE BOTTOM AT THE NORTHERN END, AND A SAND SCOUR AT THE SOUTHERN END EXPOSED APPROXIMATELY 6-8 FT. OF THE WRECK (3-4 FT. BELOW THE SURROUNDING BOTTOM); EVALUATOR RECOMMENDED CHARTING AN OBSTRUCTION (WRECKAGE) WITH A LEAST DEPTH OF 36 FT. (ENTERED MSM 10/89) H10668/97 --OPR-C399-RU; 200% SIDE SCAN SONAR SEARCH LOCATED ONE SIGNIFICANT CONTACT. SWMB LD OF 11.0 METERS (36 FEET) IN LAT. 40-29-31.113N, LONG. 73-54-18.537W. EVALUATOR RECOMMENDS DELETING THE CHARTED 39 AND 36-FOOT OBSTRUCTIONS AND CHARTING A 36 OBSTN AS SURVEYED. (UP 12/22/04, SJV) S00003/03 -- S-B601-RU-02/03 HLS; Survey Position: 040° 29' 28.976" N, 73° 54' 19.935" W Least Depth: 11.23 m Timestamp: 2002-317.15:47:38.368 (11/13/2002) Charted Obstn seen with SWMB Correlates to AWOIS 7509 Updated 9/8/2006 JCM

Survey Summary

Survey Position: 40° 29' 28.9" N, 073° 54' 19.7" W
Least Depth: 11.25 m (= 36.91 ft = 6.152 fm = 6 fm 0.91 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.983 m ; TVU (TPEv) ± 0.396 m
Timestamp: 2007-221.15:21:15.857 (08/09/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-221 / 302_1506
Profile/Beam: 1629/87
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 7509 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The item is charted as an Obstn, but AWOIS description lists it as wreckage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-221/302_1506	1629/87	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-221/302_1506	0002	3.29	148.0	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 7509	6.12	119.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-188/201_1625	0001	6.92	105.1	Secondary (grouped)
ChartGPs - ENC US5NY1BM	Danger 5	41.59	344.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

37ft (12324_1, 12327_1, 12326_1)

6fm (12300_1, 13006_1, 13003_1, 14500_1)

11.3m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 11.251 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

AWOIS 7509 found. Update database. Chart 37 Obstn.

Feature Images

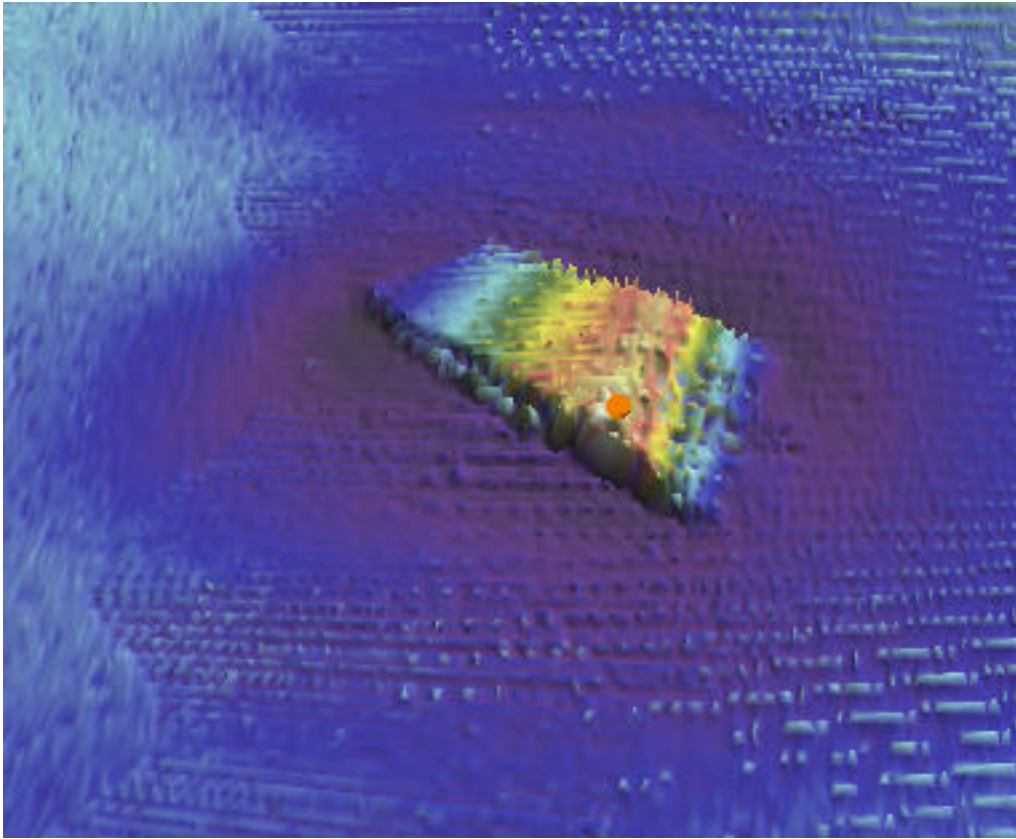


Figure 1.25.1

1.26) Profile/Beam - 10994/65 from h11709 / tj_3102_reson8101 / 2007-228 / 508_1817

Primary Feature for AWOIS Item #2456

Search Position: 40° 28' 34.9" N, 073° 58' 40.8" W
Historical Depth: 8.46 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

NM44/56--OBSTRUCTION ABOUT 70 FT.L, WITH 17 FT. OF WATER OVER IT IS REPORTED ABOUT 2750 YARDS 49 DEGREES FROM SANDY HOOK LIGHT. ■ NM44/66--OMIT OBSTR. FROM CHART. ■■ S00003/03 -- S-B601-RU-02/03 HLS; ■ Survey Position: 040° 28' 34.943" N, 73° 58' 40.793" W ■ Least Depth: 8.46 m ■ Timestamp: 2003-153.23:14:24.801 (06/02/2003) ■ SWMB Investigation of wreck found with SSS - very deteriorated and navigationally insignificant, app. 150 ft long ■ Possibly AWOIS 2456 ■ Updated 9/11/2006 JCM

Survey Summary

Survey Position: 40° 28' 35.0" N, 073° 58' 41.9" W
Least Depth: 8.16 m (= 26.76 ft = 4.460 fm = 4 fm 2.76 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.394 m
Timestamp: 2007-228.18:31:22.079 (08/16/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-228 / 508_1817
Profile/Beam: 10994/65
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 2456 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The least depth of the wreck is off center of the danger circle.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-228/508_1817	10994/65	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-265/493_1431	0006	1.55	066.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-265/490_1504	0006	7.08	003.2	Secondary (grouped)

h11709/tj_3102_klein5000_sss200/2007-265/490_1504	0005	16.82	304.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-228/508_1817	0004	22.40	255.6	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 2456	26.98	272.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

27ft (12401_1, 12324_1, 12327_1, 12326_1)

4 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

8.2m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

CONVIS - 2:not visual conspicuous

HEIGHT - 3.37 m

QUASOU - 6:least depth known

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

VALSOU - 8.157 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Adjust AWOIS 2456 to updated position. Chart 27 "Wk"

Feature Images

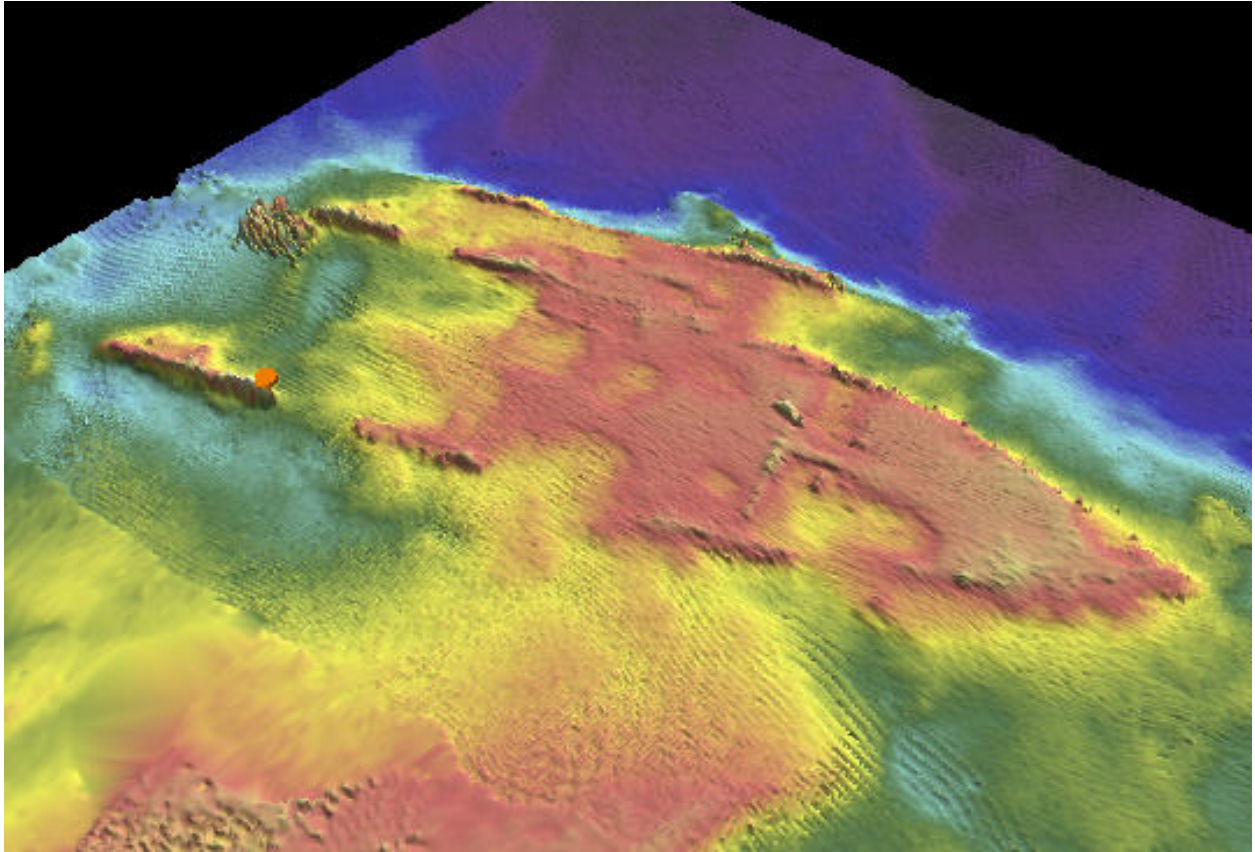


Figure 1.26.1

1.27) Profile/Beam - 268/154 from h11709 / tj_3101_reson8125 / 2007-220 / 349_1534

Primary Feature for AWOIS Item #8088

Search Position: 40° 28' 55.1" N, 073° 55' 11.1" W
Historical Depth: 15.93 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

FE327SS/89--OPR-C147-HE-89; CONTACT #23 FROM SURVEY H-10284/88; DIVER INVESTIGATION FOUND A MAST-LIKE OBJECT RISING ABOUT 5 FT OUT OF A SANDY BOTTOM; MOST OF THE WRECKAGE APPEARED TO HAVE BEEN BURIED IN THE SAND AND THE ENTIRE WRECK WAS COVERED WITH TRAWL NETS AND COULD NOT BE EXAMINED CLOSELY; DIVER PNEUMATIC DEPTH GAUGE LEAST DEPTH OF 52 FT IN LAT 40-28-53.31N, LONG 73-55-15.86W (NAD83); LORAN C RATES: 9960-W 15488.4, 9960-X 26956.6, 9960-Y 43720.1, 9960-Z 59868.1; EVALUATOR RECOMMENDED CHARTING A 52 WK AS SHOWN ON SURVEY AND NOT CHARTING THE 53 OBSTR (A) SHOWN ON H-10284. (ENTERED MSD 7/91) ■■■ S00003/03 -- S-B601-RU-02/03 HLS; ■ Survey Position: 040° 28' 55.080" N, 73° 55' 11.138" W ■ Least Depth: 15.93 m ■ Timestamp: 2002-289.00:47:12.461 (10/16/2002) ■ Obstruction found during 100% mainscheme SWMB operations. Due to proximity of charted AWOIS #8088 - ■ Retain as charted. ■ Office Notes: Do not concur. Delete 52 Wk in lat. 40°28'53.310"N, long. 73°55'15.860"W ■ Chart 52 Wk in lat. 40°28'55.080"N, long 73°55'11.138"W ■ Updated 9/11/2006 JCM

Survey Summary

Survey Position: 40° 28' 55.0" N, 073° 55' 10.9" W
Least Depth: 16.01 m (= 52.52 ft = 8.754 fm = 8 fm 4.52 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.158 m
Timestamp: 2007-220.15:35:00.880 (08/08/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-220 / 349_1534
Profile/Beam: 268/154
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 8088 found. This charted dangerous wreck was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-220/349_1534	268/154	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-181/317_1521	0001	3.88	263.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/319_1535	0002	4.29	053.0	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 8088	5.70	113.2	Secondary (grouped)
ChartGPs - ENC US5NY1BM	Danger 14	161.00	063.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

52ft (12324_1, 12327_1, 12326_1)

8 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

16.0m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck
 CONVIS - 2:not visual conspicuous
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 16.009 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

AWOIS 8088 found. Retain dangerous Wk least depth 52 ft.

Feature Images

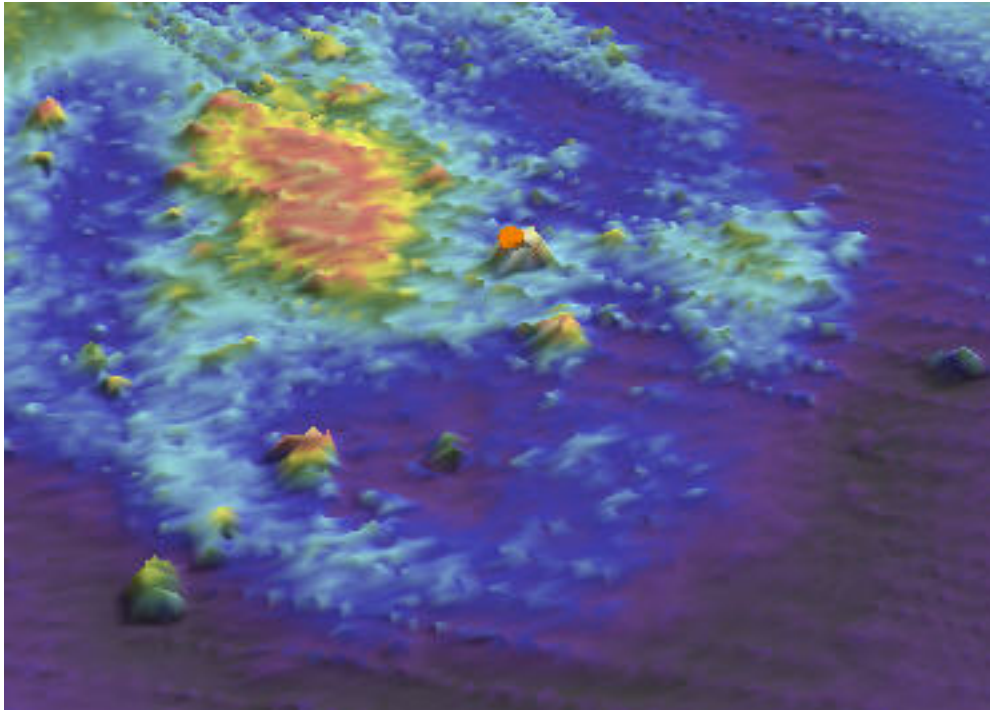


Figure 1.27.1

1.28) Profile/Beam - 339/20 from h11709 / tj_3101_reson8125 / 2007-219 / 337_1852

Primary Feature for AWOIS Item #1626

Search Position: 40° 28' 54.9" N, 073° 54' 22.5" W
Historical Depth: 14.33 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

LHM52/29--BUOY ESTABLISHED 6 MILES 38.5 DEGREES FROM NAVESINK LIGHTHOUSE IN 51 FT OF WATER TO MARK WK OF FORT VICTORIA; WK LIES E AND W WITH PART OF HULL SHOWING AT LOW WATER; BUOY IS MOORED 100 YDS EAST OF WK; BUOY WILL LATER BE MOVED TO WEST END OF WK; CHARTED AS A VISIBLE WK. ■ BP25778/32--COE; DRIFT SWEEPING AFTER REMOVAL; CLEARED TO 50 FT; WK LOCATED IN LAT 40-28-27.26N, LONG 73-54-27.60W; DELETED FROM CHART. ■ CL395/50--CGS; PROJ. INSTR. FOR CS-326; COE STATES WK CLEARED TO 50 FT UNDER CONTRACT. ■ FE101/51WD (FE10/51WD)--CS-326; 10/11/50; COE STATES WK SANK IN 1929 IN LAT 40-28-27N, LONG 73-53-15W; AREA CLEAR EXCEPT FOR OBSTR IN LAT 40-28-38N, LONG 73-53-13W (REF ITEM 755). (ENTERED MSM 11/85) ■ H10224/86--OPR-C121-WH-86; FOUND DURING MAIN SCHEME HYDROGRAPHY AND SIDE SCAN SONAR OPERATIONS 1200M NORTHWEST OF AWOIS POSITION; DIVER INVESTIGATION REVEALED A VESSEL, AT LEAST 280FT LONG, 56FT WIDE, SITTING UPRIGHT IN FINE SAND IN A NORTHEAST-SOUTHWEST DIRECTION; PNEUMATIC DEPTH GAUGE LEAST DEPTH OF 46FT TAKEN ON STARBOARD SECTION OF BULWARK EXTENDING APPROXIMATELY 9FT OFF THE BOTTOM IN LAT 40-28-54.42N, LONG 73-54-23.88W (NAD27); HYDROGRAPHER AND EVALUATOR RECOMMENDED CHARTING 46 WK AS SHOWN ON SURVEY. (UPDATED MSD 4/91) ■ S00003/03 -- S-B601-RU-02/03 HLS; Multibeam development of charted 46 Wk -Wk found 1 ft deeper than charted. Hydrographer Recommendations: Revise 46 Wk to 47 Wk in Survey Position: 040° 28' 54.937" N, 73° 54' 22.543" W (NAD 83). Updated 9/5/2006 JCM ■ DESCRIPTION ■ 24 NO.604; LAT. 40-28-30N, LONG. 73-53-13W; POS. ACCUR. 1 MILE. REPORTED DEMOLISHED; SUNK 1925; LATEST REPORT 1950, CLEARED TO 42 FT.

Survey Summary

Survey Position: 40° 28' 55.7" N, 073° 54' 22.2" W
Least Depth: 14.42 m (= 47.31 ft = 7.885 fm = 7 fm 5.31 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.984 m ; TVU (TPEv) ± 0.166 m
Timestamp: 2007-219.18:53:15.688 (08/07/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-219 / 337_1852
Profile/Beam: 339/20
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 1626 found. This charted dangerous wreck was found with 100% Reson 8125 multibeam and 200% Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The least depth of the wreck and its symbol are slightly out of position.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-219/337_1852	339/20	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-231/239_1640	0002	15.59	252.3	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 1626	24.41	017.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-231/635_1337	0003	27.89	042.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/305_1358	0002	32.16	048.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/303_1345	0001	36.01	033.4	Secondary (grouped)
h11709/tj_3101_reson8125/2007-219/338_1854	180/227	43.63	236.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-227/559_1504	0001	45.40	253.5	Secondary (grouped)
ChartGPs - ENC US5NY1BM	Danger 15	50.63	045.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

47ft (12324_1, 12327_1, 12326_1)

7 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

14.4m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

QUASOU - 6:least depth known

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

VALSOU - 14.421 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

AWOIS 1626 found. Least depth = 47-ft. "Wk"

Feature Images

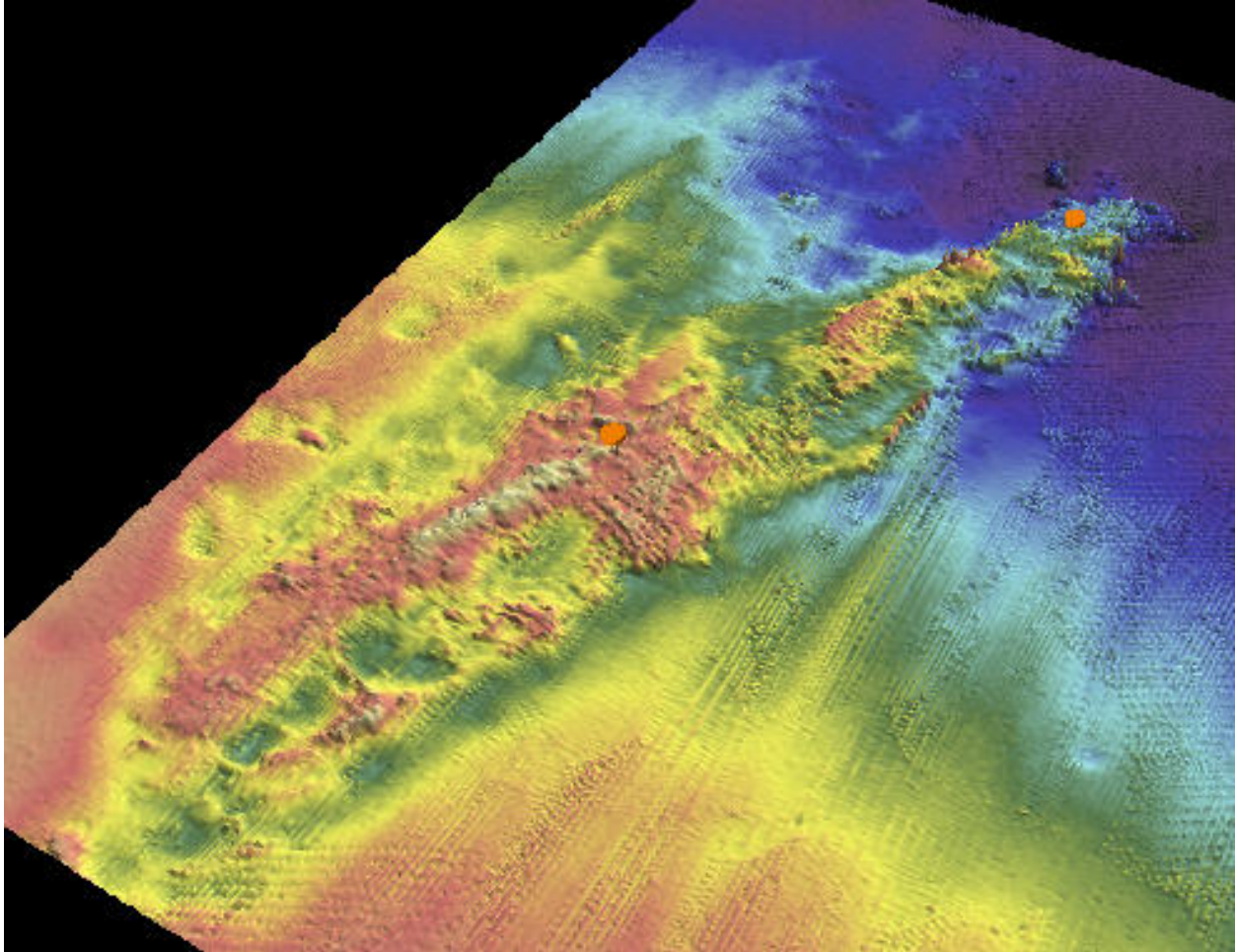


Figure 1.28.1

1.29) Profile/Beam - 2522/78 from h11709 / tj_3102_reson8101 / 2007-231 / 635_1337

Primary Feature for AWOIS Item #13256

Search Position: 40° 28' 59.9" N, 073° 54' 42.0" W
Historical Depth: 13.41 m
Search Radius: 50
Search Technique: MB, S2
Technique Notes: [None]

History Notes:

L-54/03 -- S-B601-RU/2002, HLS DTON; OBSTR LOCATED AT 40/28/59.909N 73/54/41.972W WITH A LEAST DEPTH OF 44 FT (ENT. 05/26/05, SME)

Survey Summary

Survey Position: 40° 28' 59.8" N, 073° 54' 41.7" W
Least Depth: 13.82 m (= 45.36 ft = 7.560 fm = 7 fm 3.36 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.983 m ; TVU (TPEv) ± 0.399 m
Timestamp: 2007-231.14:18:50.858 (08/19/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-231 / 635_1337
Profile/Beam: 2522/78
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 13256 found. This charted dangerous obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-231/635_1337	2522/78	0.00	000.0	Primary
ChartGPs - ENC US5NY1BM	Danger 3	5.67	120.6	Secondary (grouped)
AWOIS_B310-TJ-07	AWOIS # 13256	7.27	116.0	Secondary
h11709/tj_3102_klein5000_sss100/2007-181/309_1427	0001	10.28	156.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-182/222_1844	0001	10.57	127.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

45ft (12324_1, 12327_1, 12326_1)

7 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

13.8m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 13.825 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

AWOIS 13256 found. Chart 45 Obstrn.

Feature Images

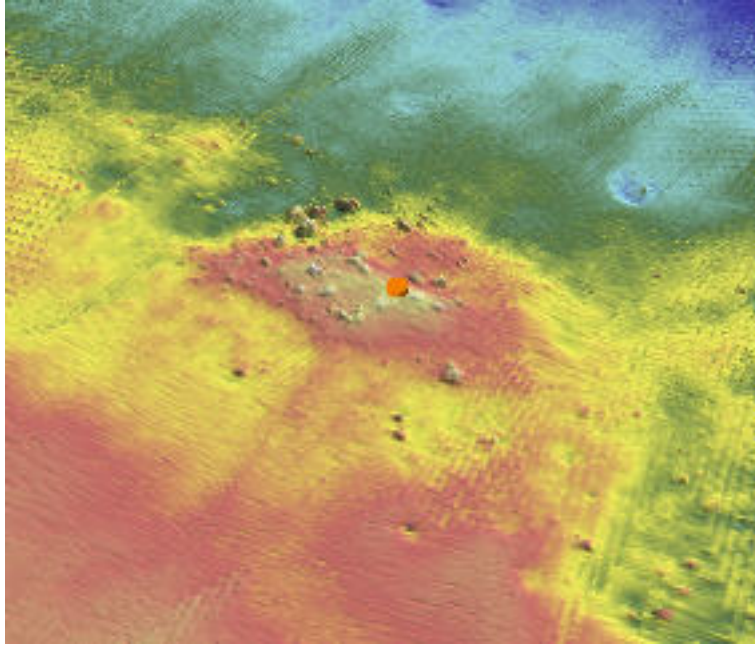


Figure 1.29.1

1.30) Profile/Beam - 2240/98 from h11709 / tj_3102_reson8101 / 2007-221 / 557_1608

Primary Feature for AWOIS Item #7511

Search Position: 40° 29' 30.3" N, 073° 55' 14.2" W
Historical Depth: 14.94 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

FE312SS/88--OPR-C121-WH-88; WHILE SEARCHING FOR AWOIS ITEM 1634, A SIDE SCAN SONAR CONTACT (NO. 355.3P) WAS LOCATED IN LAT 40-29-29.91N, LONG 73-55-15.73W (NAD27); DIVER INVESTIGATION REVEALED A FIBERGLASS FLYING BRIDGE WITH THE CONTROLS MISSING BUT THE SEAT STANCHIONS AND A VHF OR LORAN C ANTENNA WERE STILL ATTACHED; FLYING BRIDGE MEASURED 8 FT. WIDE AND 9 FT. LONG AND STOOD 3 FT. OFF THE BOTTOM; THE FLYING BRIDGE APPEARS TO STILL BE ATTACHED TO THE REST OF THE BOAT WHICH IS COVERED WITH SAND; DIVER LEAST DEPTH OF 49 FT.; EVALUATOR RECOMMENDED CHARTING A DANGEROUS SUNKEN WRECK WITH A LEAST DEPTH OF 49 FT. (ENTERED MSM 10/89)

Survey Summary

Survey Position: 40° 29' 30.1" N, 073° 55' 15.5" W
Least Depth: 18.79 m (= 61.64 ft = 10.273 fm = 10 fm 1.64 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.018 m ; TVU (TPEv) ± 0.528 m
Timestamp: 2007-221.16:16:14.694 (08/09/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-221 / 557_1608
Profile/Beam: 2240/98
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-221/557_1608	2240/98	0.00	000.0	Primary
h11709/tj_3102_reson8101/2007-221/557_1608	2236/99	6.16	230.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-231/236_1426	0002	7.73	218.6	Secondary

AWOIS_B310-TJ-07	AWOIS # 7511	30.03	260.9	Secondary
h11709/tj_3102_klein5000_sss200/2007-231/236_1426	0004	51.74	314.6	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CONVIS - 2:not visual conspicuous
 QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 18.788 m
 VERDAT - 12:Mean lower low water

Office Notes

AWOIS 7511 found although insignificant. Update AWOIS database with least depth = 61 ft.

Feature Images

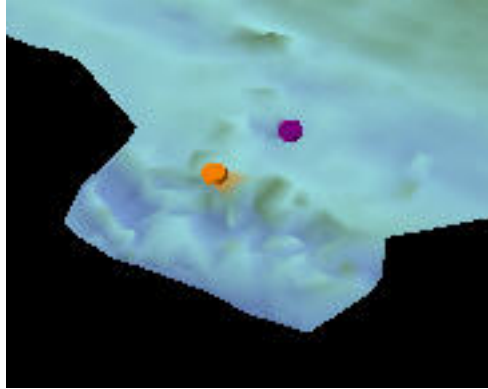


Figure 1.30.1

1.31) Contact/Point - 0001/1 from h11709 / tj_3102_klein5000_sss200 / 2007-231 / 633_1530

Primary Feature for AWOIS Item #7513

Search Position: 40° 29' 24.0" N, 073° 55' 06.2" W
Historical Depth: 14.94 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

FE312SS/88--OPR-C121-WH-88; WHILE SEARCHING FOR AWOIS ITEM 1634, AN OBSTRUCTION IDENTIFIED AS WRECKAGE WAS FOUND IN LAT 40-29-23.65N, LONG 73-55-07.70W (NAD27); DIVER INVESTIGATION FOUND RUSTED AND DETERIORATED WRECKAGE WITHIN A SCOUR AREA; WRECKAGE WAS 20 FT. LONG AND 10 FT. WIDE; LYING A 2-3 FT. DEEP SCOUR AND PROTRUDING 2-3 FT. ABOVE THE SURROUNDING BOTTOM; DIVER LEAST DEPTH OF 49 FT.; EVALUATOR RECOMMENDED CHARTING AN OBSTRUCTION (WRECKAGE) WITH 49 FT. SNDG. (ENTERED MSM 10/89)

Survey Summary

Survey Position: 40° 29' 23.7" N, 073° 55' 07.1" W
Least Depth: [None]
TPU (±1.96σ): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2007-339.06:18:47 (12/05/2007)
Survey Line: h11709 / tj_3102_klein5000_sss200 / 2007-231 / 633_1530
Contact/Point: 0001/1
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 7513 disproved. The entire search radius was investigated with 200% Klein 5000 Side Scan Sonar and object detection Reson multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. No wreckage or obstruction found.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_klein5000_sss200/2007-231/633_1530	0001	0.00	000.0	Primary
AWOIS_B310-TJ-07	AWOIS # 7513	24.87	242.8	Secondary (grouped)

h11709/tj_3102_klein5000_sss100/2007-221/557_1608	0002	60.57	225.4	Secondary (grouped)
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Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

There was no search radius given for this item. However, sidescan showed no evidence of item. Item is disproved.

Feature Images

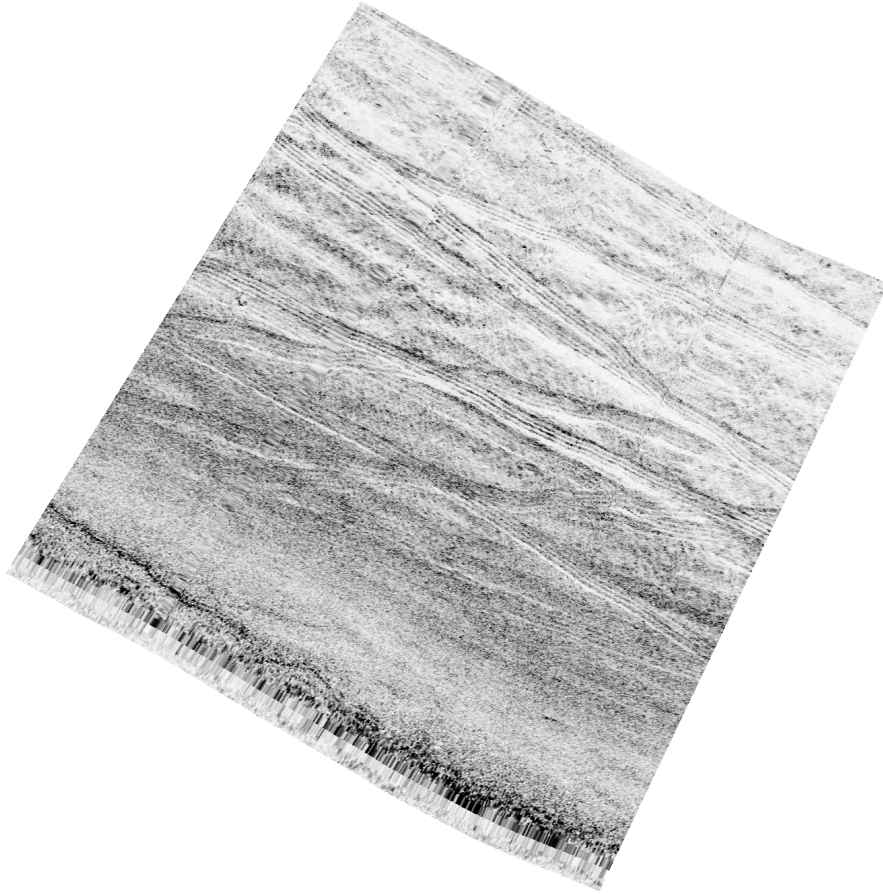


Figure 1.31.1

1.32) Profile/Beam - 153/94 from h11709 / tj_3102_reson8101 / 2007-234 / 121_1559

Primary Feature for AWOIS Item #54

Search Position: 40° 28' 13.6" N, 074° 01' 35.0" W
Historical Depth: 4.27 m
Search Radius: 0
Search Technique: [None]
Technique Notes: [None]

History Notes:

LNM30/76--A 15 FT. SPOT HAS BEEN LOCATED AT POS. 40-28-12N, 074-01-31.5W ■ LNM30/76--BUOY TEMPORARILY RELOCATED TO 40-28-06N, 74-01-18W TO MARK OBSTR. ■ CL1749/78--CES 12330, OPR-B408, ITEM 2; SEARCHED FOR WITH ECHO SOUNDER AT ■ 50 METER LINE SPACING NOT FOUND; DEPTHS 3-5 FT. DEEPER THAN CHARTED. ■ MAR--8/82, OPR-B139-WH-82; 14 FT FOUND (UNCORRECTED) ■ H10031/82--OPR-B139-WH-82; 1:10,000 SCALE; DELNORTE (R/R), DELNORTE-■ THEODOLITE (R/A); 40 M LINE SPACING; RADIAL PATTERN; LEAST DEPTH OF 14 FT ■ LOCATED AT LAT 40-28-132N LONG 74-01-365W; SEA BOTTOM GRAY MUD AND SAND; ■ HYDROGRAPHER AND EVALUATOR RECOMMENDED CHARTING NEW SURVEY DEPTH. (ENTERED ■ 1/4/84 MSM)

Survey Summary

Survey Position: 40° 28' 13.4" N, 074° 01' 35.5" W
Least Depth: 4.71 m (= 15.46 ft = 2.577 fm = 2 fm 3.46 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.982 m ; TVU (TPEv) ± 0.395 m
Timestamp: 2007-234.15:59:10.899 (08/22/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-234 / 121_1559
Profile/Beam: 153/94
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

AWOIS 54 disproved. Entire search radius was investigated with object detection Reson 8125 multibeam and 200% Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Surrounding soundings and the charted depths support the shoal sounding reported in database.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-234/121_1559	153/94	0.00	000.0	Primary
AWOIS_B310-TJ-07	AWOIS # 54	13.02	238.1	Secondary (grouped)

h11709/tj_3102_reson8101/2007-234/121_1559	111/23	17.51	329.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-186/377_1307	0009	18.64	327.3	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

There was no search radius associated with this item. 15-ft sounding is in line with surrounding soundings. Chart current surveyed soundings.

H11709 Charted Features

Registry Number: H11709
State: New York
Locality: New York Harbor and Approaches, NY+NJ
Sub-locality: 2 NM Northeast of Sandy Hook
Project Number: OPR-B310-TJ-07
Survey Dates: 06/30/2007 - 01/18/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	10th	05/01/2006	1:15,000 (12402_1)	USCG LNM: 04/29/2008 (10/14/2008) NGA NTM: 11/15/1997 (10/18/2008)
12401	9th	07/01/2007	1:15,000 (12401_1)	USCG LNM: 04/29/2008 (10/14/2008) CHS NTM: None (08/29/2008) NGA NTM: 11/15/1997 (10/18/2008)
12327	101st	04/01/2008	1:40,000 (12327_1)	USCG LNM: 09/02/2008 (10/14/2008) NGA NTM: 06/17/2006 (10/18/2008)
12324	32nd	03/01/2006	1:40,000 (12324_1)	[L]NTM: ?
12326	50th	05/01/2006	1:80,000 (12326_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	33rd	04/01/2006	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	W Or C "J" buoy	Open buoy	[None]	40° 27' 34.6" N	074° 02' 24.8" W	---
1.2	Obstruction	Obstruction	8.51 m	40° 31' 22.3" N	073° 56' 10.9" W	---
1.3	Rks	Rock	9.58 m	40° 27' 27.2" N	073° 56' 21.6" W	---
1.4	Rks	Rock	13.18 m	40° 28' 11.0" N	073° 55' 48.5" W	---
1.5	Charted Rk Disproval	Shoal	11.38 m	40° 27' 28.8" N	073° 56' 14.0" W	---

1.6	Rks	Rock	11.50 m	40° 27' 27.4" N	073° 56' 06.9" W	---
1.7	Coast Guard Groyne 0013	Stationary structure, floating or fixed	[None]	40° 28' 01.3" N	074° 00' 36.8" W	---
1.8	Obstn	Obstruction	6.12 m	40° 31' 36.9" N	073° 57' 29.4" W	---
1.9	Obstn - Retain as charted	Obstruction	8.66 m	40° 31' 44.1" N	074° 02' 25.7" W	---

1 - DR_Charted

1.1) Contact/Point - 0001/1 from h11709 / tj_3102_klein5000_sss200 / 2007-221 / 603_1755

Survey Summary

Survey Position: 40° 27' 34.6" N, 074° 02' 24.8" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2007-228.12:20:33 (08/16/2007)
Survey Line: h11709 / tj_3102_klein5000_sss200 / 2007-221 / 603_1755
Contact/Point: 0001/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

W Or - C"J" Buoy block NE of charted Restricted Zone .

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_klein5000_sss200/2007-221/603_1755	0001	0.00	000.0	Primary
ChartGPs - ENC US5NY18M	AToN 57	13.14	170.1	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Buoy, special purpose/general (BOYSPP)
Attributes: COLOUR - 1,11:white,orange

Office Notes

Chart W Or C "J" at surveyed position.

1.2) Profile/Beam - 442/204 from h11709 / tj_3101_reson8125 / 2007-231 / 025_1320

Survey Summary

Survey Position: 40° 31' 22.3" N, 073° 56' 10.9" W
Least Depth: 8.51 m (= 27.91 ft = 4.652 fm = 4 fm 3.91 ft)
TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.151 m
Timestamp: 2007-231.13:21:01.011 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 025_1320
Profile/Beam: 442/204
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This charted obstruction was found with Klein 5000 SSS and Reson 8125 MBES. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Obstruction least depth is deeper than charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/025_1320	442/204	0.00	000.0	Primary
ChartGPs - ENC US5NY1BM	Danger 7	10.27	067.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

28ft (12327_1, 12326_1)
 4 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 8.5m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.508 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Change charted 23 "Obstn" to 28 "Obstn"

Feature Images

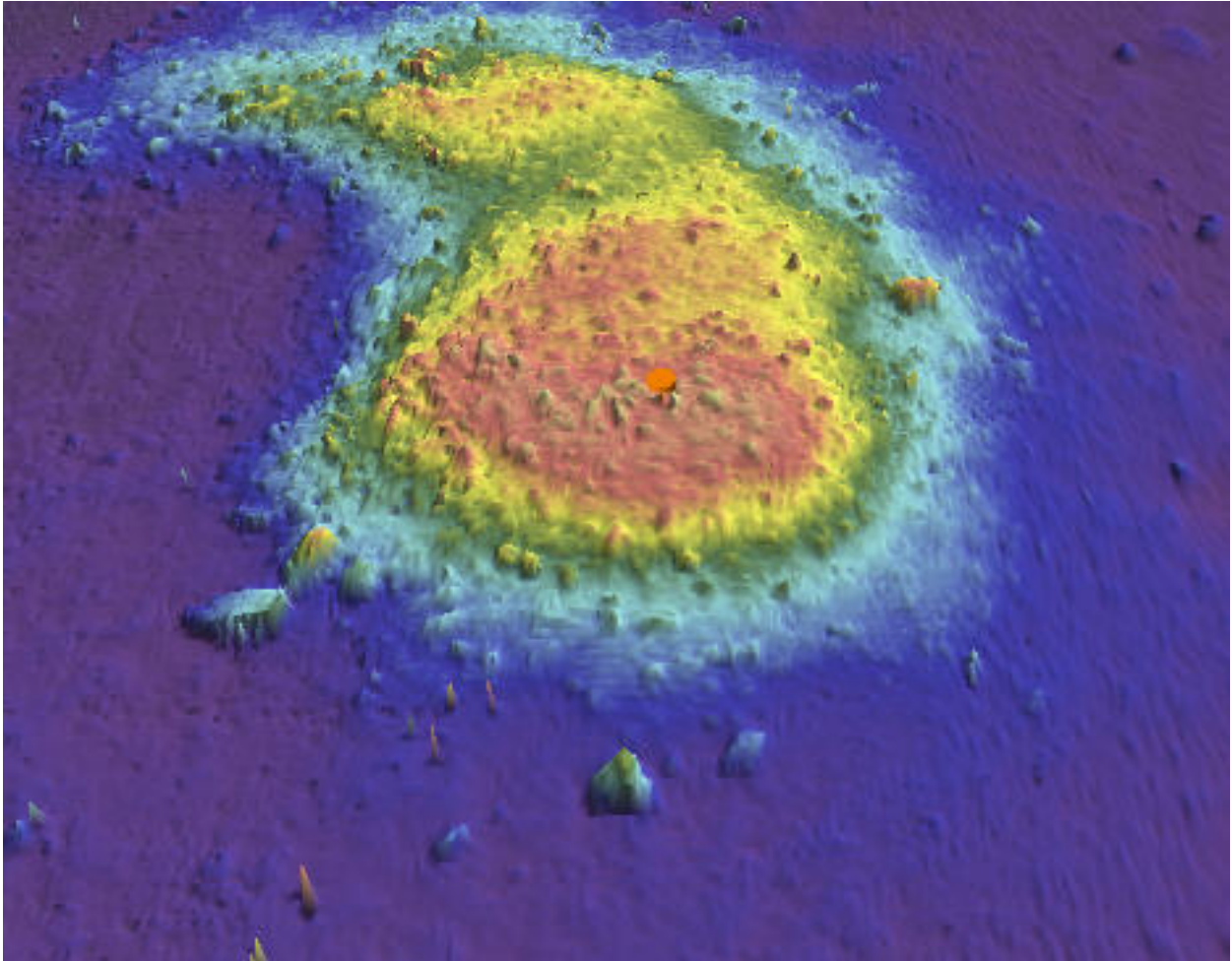


Figure 1.2.1

1.3) Profile/Beam - 326/233 from h11709 / tj_3101_reson8125 / 2007-226 / 132_1401

Survey Summary

Survey Position: 40° 27' 27.2" N, 073° 56' 21.6" W
Least Depth: 9.58 m (= 31.43 ft = 5.239 fm = 5 fm 1.43 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.982 m ; TVU (TPEv) ± 0.161 m
Timestamp: 2007-226.14:02:03.001 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 132_1401
Profile/Beam: 326/233
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/132_1401	326/233	0.00	000.0	Primary
ChartGPs - ENC US5NY18M	Danger 7	2.49	343.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-228/516_1911	0001	7.91	049.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/349_1832	0001	34.77	311.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-184/252_1808	0013	37.95	155.5	Secondary (grouped)
h11709/tj_3101_reson8125/2007-226/143_1448	74/237	45.38	158.9	Secondary (grouped)
h11709/tj_3101_reson8125/2007-226/142_1444	531/77	50.88	312.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-228/516_1911	0004	51.85	311.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-216/010_1333	0001	52.33	310.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-184/251_1751	0001	55.24	310.0	Secondary (grouped)
h11709/tj_3101_reson8125/2007-226/142_1442	247/165	69.41	327.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/349_1832	0002	70.25	327.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-228/516_1911	0002	90.24	309.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/348_1810	0001	92.96	307.1	Secondary (grouped)
h11709/tj_3101_reson8125/2007-226/137_1434	6846/228	95.50	307.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

31ft (12401_1, 12324_1, 12327_1, 12326_1)

5 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

9.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 9.581 m
WATLEV - 3:always under water/submerged

Office Notes

Change to 31 "Rks"

Feature Images

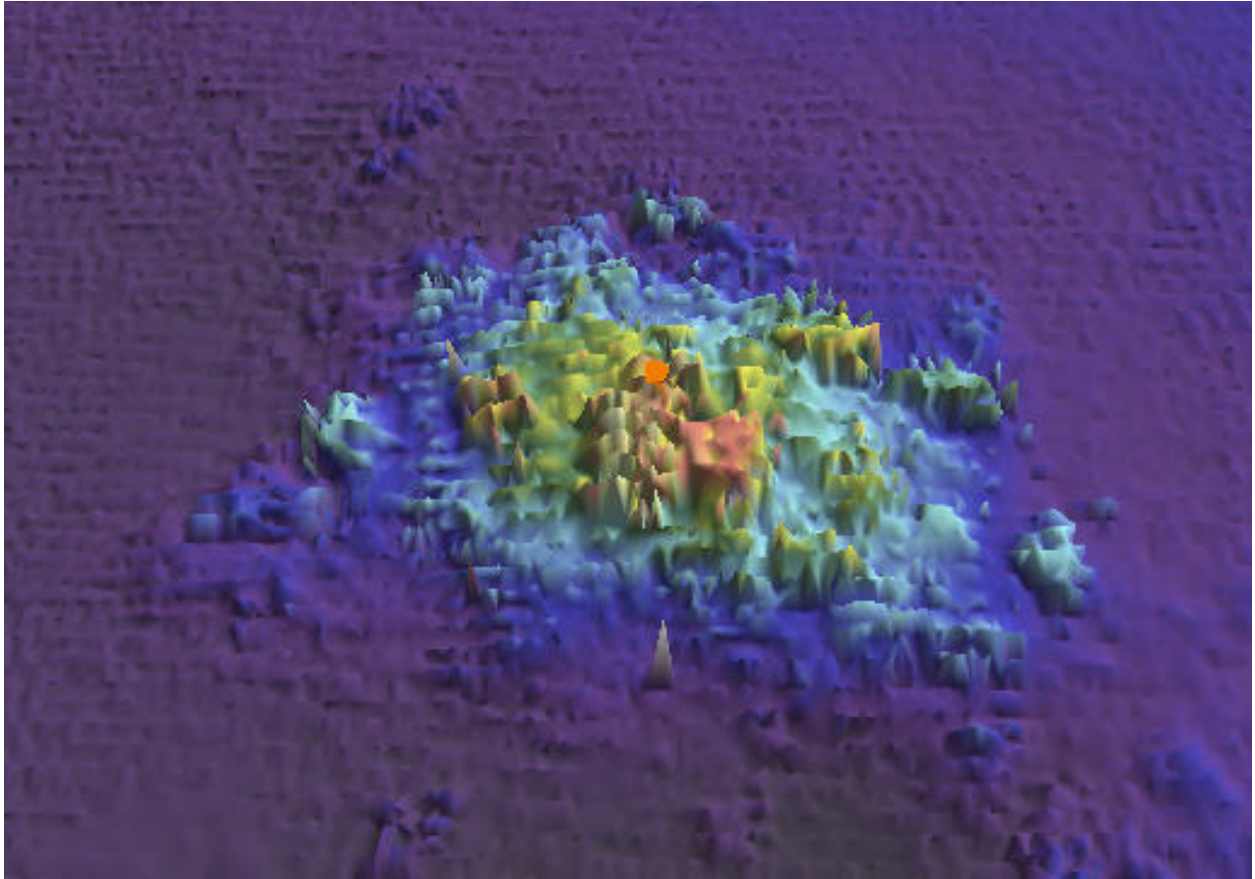


Figure 1.3.1

1.4) Profile/Beam - 1661/69 from h11709 / tj_3102_reson8101 / 2007-181 / 328_1652

Survey Summary

Survey Position: 40° 28' 11.0" N, 073° 55' 48.5" W
Least Depth: 13.18 m (= 43.25 ft = 7.209 fm = 7 fm 1.25 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.397 m
Timestamp: 2007-181.16:58:27.570 (06/30/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-181 / 328_1652
Profile/Beam: 1661/69
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This charted dangerous rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The least depth on this rock is deeper than charted. Also, some minor position discrepancy for this feature exists between affected charts.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-181/328_1652	1661/69	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-181/328_1652	0003	2.78	208.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-182/231_1519	0002	19.33	234.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-182/232_1502	0001	19.97	084.6	Secondary (grouped)
ChartGPs - ENC US5NY1BM	Danger 11	44.62	030.7	Secondary (grouped)
h11709/tj_3101_reson8125/2007-226/171_1544	428/238	61.78	287.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/327_1637	0002	72.64	281.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

43ft (12324_1, 12327_1, 12326_1)

7 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

13.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 13.183 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

The surrounding area is deeper than charted. Chart 43 "Rks"

Feature Images

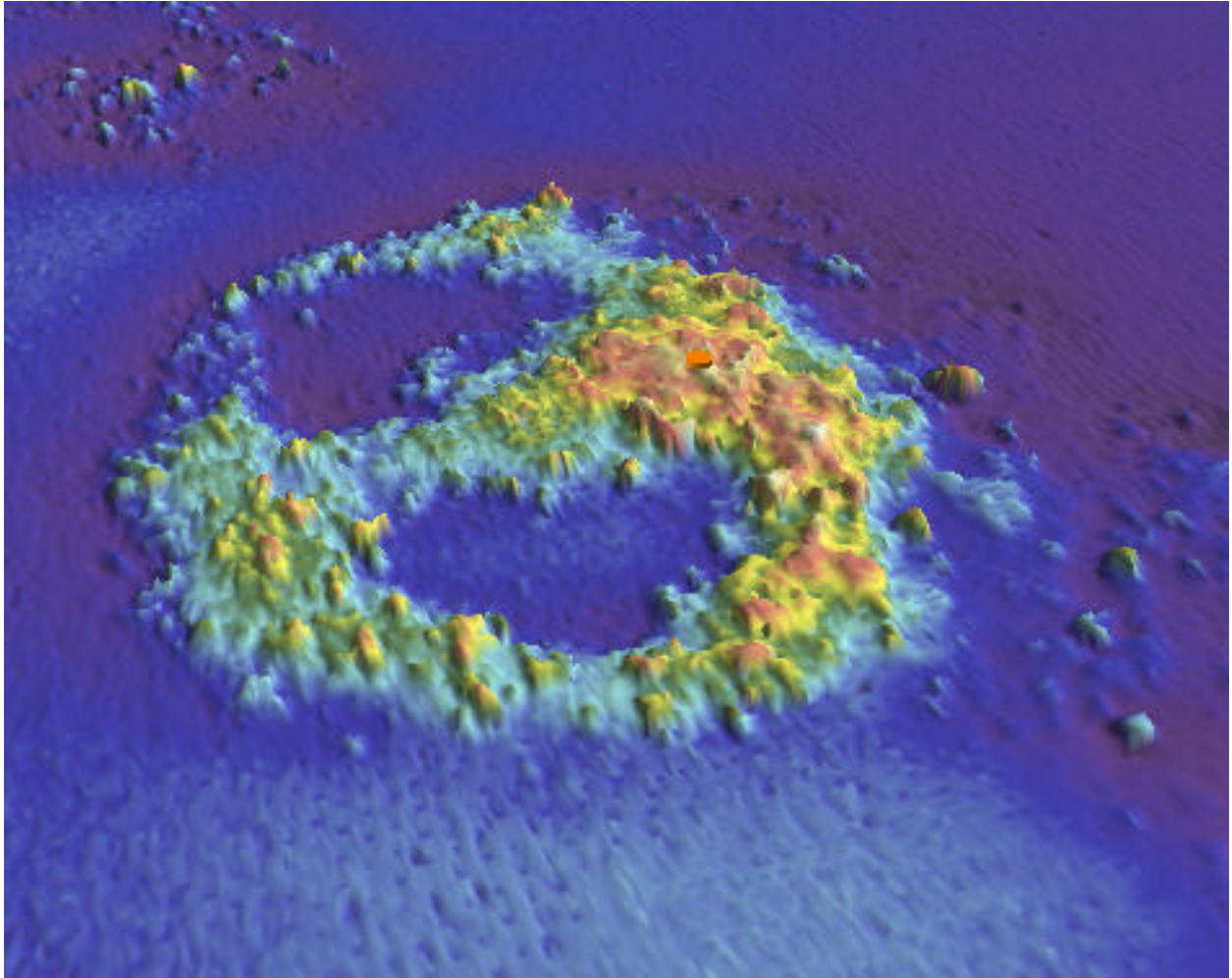


Figure 1.4.1

1.5) Profile/Beam - 574/17 from h11709 / tj_3102_reson8101 / 2007-182 / 235_1355

Survey Summary

Survey Position: 40° 27' 28.8" N, 073° 56' 14.0" W
Least Depth: 11.38 m (= 37.34 ft = 6.223 fm = 6 fm 1.34 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.984 m ; **TVU (TPEv)** ± 0.399 m
Timestamp: 2007-182.13:56:06.087 (07/01/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-182 / 235_1355
Profile/Beam: 574/17
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This charted 38-ft rock was not found with Klein 5000 SSS and Reson 8101 MBES. Disproval of 38 ft RK from Chart 12401 and ENC. Chart 12327 and 12326 have the 38 ft Rock located approximately 100m east of this position.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-182/235_1355	574/17	0.00	000.0	Primary
ChartGPs - ENC US5NY18M	Danger 8	2.11	294.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-182/235_1355	0009	2.41	324.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

37ft (12401_1, 12324_1, 12327_1, 12326_1)

6 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

11.4m (5161_1)

S-57 Data

[None]

Office Notes

Concur. Remove 38 Rk from chart.

1.6) Profile/Beam - 114/85 from h11709 / tj_3101_reson8125 / 2007-269 / 019_1356

Survey Summary

Survey Position: 40° 27' 27.4" N, 073° 56' 06.9" W
Least Depth: 11.50 m (= 37.72 ft = 6.287 fm = 6 fm 1.72 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2007-269.13:57:21.530 (09/26/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-269 / 019_1356
Profile/Beam: 114/85
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-269/019_1356	114/85	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-216/009_1416	0002	1.85	212.0	Secondary
h11709/tj_3102_klein5000_sss200/2007-182/234_1424	0002	12.46	108.6	Secondary
h11709/tj_3101_reson8125/2007-226/164_1457	188/142	29.69	116.6	Secondary
h11709/tj_3102_klein5000_sss100/2007-181/347_1753a	0004	32.21	122.6	Secondary
h11709/tj_3102_reson8101/2007-182/234_1424	904/20	38.99	219.5	Secondary
ChartGPs - ENC US5NY1BM	Danger 10	39.10	066.7	Secondary
h11709/tj_3102_klein5000_sss100/2007-181/332_1734	0002	39.53	218.2	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 11.497 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 37 "Rks"

Feature Images

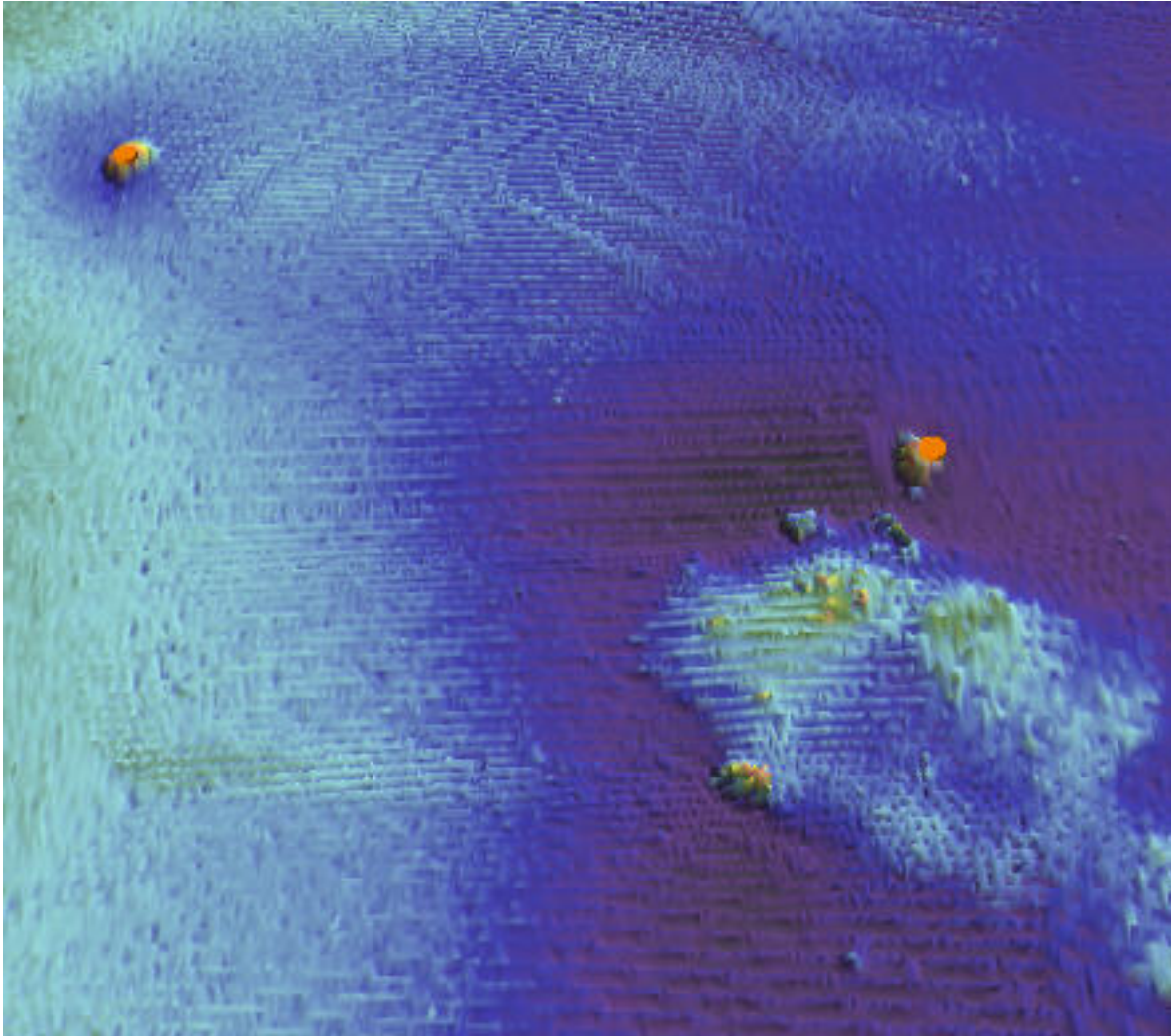


Figure 1.6.1

1.7) Contact/Point - 0013/1 from h11709 / tj_3102_klein5000_sss100 / 2007-185 / 384_1357

Survey Summary

Survey Position: 40° 28' 01.3" N, 074° 00' 36.8" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2008-018.06:44:53 (01/18/2008)
Survey Line: h11709 / tj_3102_klein5000_sss100 / 2007-185 / 384_1357
Contact/Point: 0013/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Edge of groin next to charted Coast Guard Pier acquired with Klein 5000 SSS. Shoreline position of pier should be verified.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_klein5000_sss100/2007-185/384_1357	0013	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Shoreline Construction (SLCONS)
Attributes: CATSLC - 2:groyne (groin)
 STATUS - 1:permanent
 WATLEV - 2:always dry

Office Notes

Retain as charted. RSD verify.

Feature Images

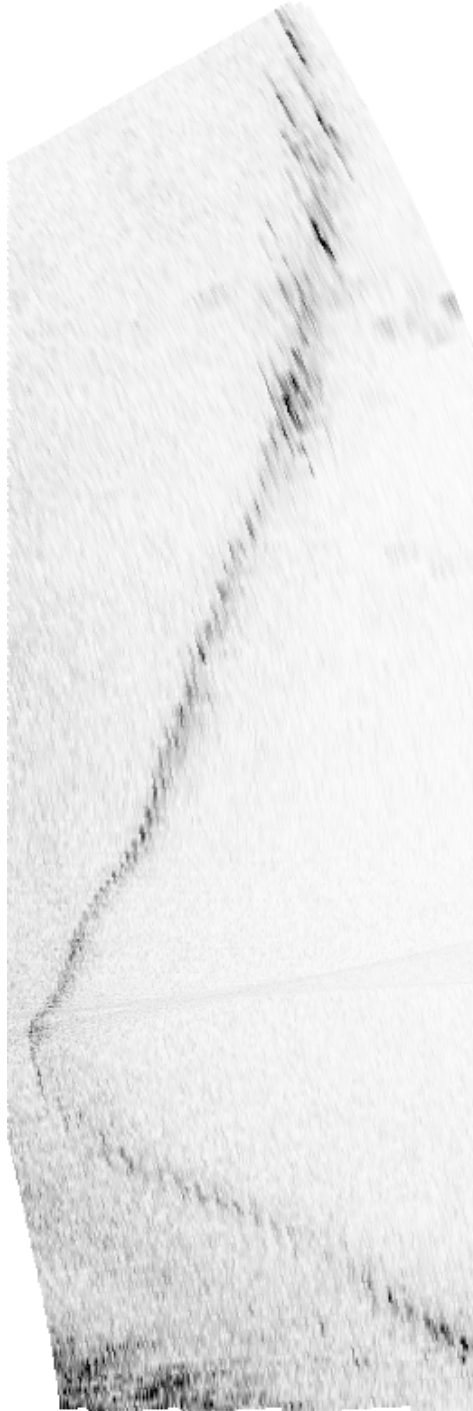


Figure 1.7.1

1.8) Profile/Beam - 8488/32 from h11709 / tj_3101_reson8125 / 2007-184 / 833_1553

Survey Summary

Survey Position: 40° 31' 36.9" N, 073° 57' 29.4" W
Least Depth: 6.12 m (= 20.07 ft = 3.344 fm = 3 fm 2.07 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-184.16:02:53.260 (07/03/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-184 / 833_1553
Profile/Beam: 8488/32
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

These charted obstructions were found with Klein 5000 SSS and Reson 8125 MBES. Obstns go beyond the danger circle at the larger scale chart. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-184/833_1553	8488/32	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-229/262_1329	0002	3.02	119.3	Secondary
h11709/tj_3102_klein5000_sss100/2007-226/521_1749	0002	32.41	097.0	Secondary (grouped)
h11709/tj_3101_reson8125/2007-236/656_1833	346/158	32.81	093.8	Secondary (grouped)
h11709/tj_3101_reson8125/2007-184/833_1553	8323/46	48.95	067.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-229/262_1329	0003	49.45	066.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/519_1740	0008	49.91	070.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-229/262_1329	0001	77.00	064.6	Secondary (grouped)
h11709/tj_3101_reson8125/2007-184/833_1553	8233/175	77.48	062.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-267/938_1922	0003	82.95	066.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/521_1749	0003	245.84	289.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/517_1721	0012	325.31	005.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12402_1, 12327_1, 12326_1)

3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

6.1m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.116 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20 Obstrn.

Feature Images

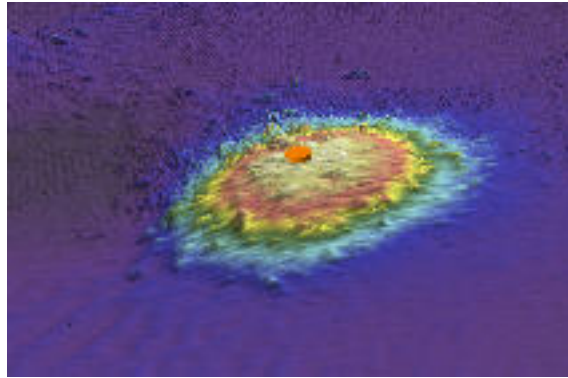


Figure 1.8.1

1.9) Profile/Beam - 129/102 from h11709 / tj_3101_reson8125 / 2007-269 / 010_2052

Survey Summary

Survey Position: 40° 31' 44.1" N, 074° 02' 25.7" W
Least Depth: 8.66 m (= 28.40 ft = 4.734 fm = 4 fm 4.40 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-269.20:53:01.950 (09/26/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-269 / 010_2052
Profile/Beam: 129/102
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This charted obstruction was found with Klein 5000 Side Scan Sonar and Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-269/010_2052	129/102	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-237/129_1745	0001	2.06	311.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-227/558_1909	0001	2.07	126.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-237/473_1825	0002	8.24	351.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

28ft (12402_1, 12327_1, 12326_1)

4 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

8.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

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

VALSOU - 8.657 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Retain as charted.

Feature Images

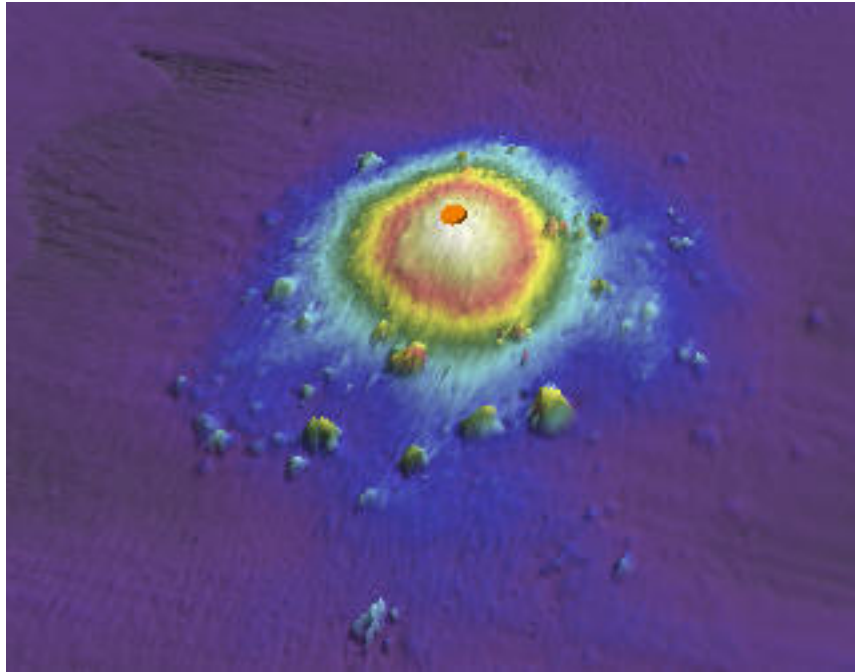


Figure 1.9.1

H11709 Uncharted Features

Registry Number: H11709
State: New York
Locality: New York Harbor and Approaches, NY+NJ
Sub-locality: 2 NM Northeast of Sandy Hook
Project Number: OPR-B310-TJ-07
Survey Dates: 06/29/2007 - 02/11/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	10th	05/01/2006	1:15,000 (12402_1)	USCG LNM: 04/29/2008 (10/14/2008) NGA NTM: 11/15/1997 (10/18/2008)
12401	9th	07/01/2007	1:15,000 (12401_1)	USCG LNM: 04/29/2008 (10/14/2008) CHS NTM: None (08/29/2008) NGA NTM: 11/15/1997 (10/18/2008)
12327	101st	04/01/2008	1:40,000 (12327_1)	USCG LNM: 09/02/2008 (10/14/2008) NGA NTM: 06/17/2006 (10/18/2008)
12324	32nd	03/01/2006	1:40,000 (12324_1)	[L]NTM: ?
12326	50th	05/01/2006	1:80,000 (12326_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	33rd	04/01/2006	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	BOATS KEEP OUT BUOY OR/WHITE	Marker (privately maintained)	-0.36 m	40° 27' 34.5" N	073° 59' 13.3" W	---
1.2	BOATS KEEP OUT ORANGE/WHT BUOY	Marker (privately maintained)	-0.35 m	40° 27' 28.4" N	073° 59' 11.1" W	---
1.3	BOATS KEEP OUT ORANGE/WHT BUOY	Marker (privately maintained)	-0.36 m	40° 27' 31.0" N	073° 59' 12.8" W	---
1.4	BOATS KEEP OUT ORANGE/WHT BUOY	Marker (privately maintained)	-0.34 m	40° 27' 40.0" N	073° 59' 14.1" W	---
1.5	BOATS KEEP OUT ORANGE/WHT BUOY	Marker (privately maintained)	-0.34 m	40° 27' 51.8" N	073° 59' 19.0" W	---

1.6	Non DtoN Rock 99/14	Rock	6.41 m	40° 31' 16.7" N	074° 02' 17.5" W	---
1.7	Obstruction	Obstruction	4.03 m	40° 31' 30.5" N	074° 01' 29.5" W	---
1.8	Rks	Rock	8.41 m	40° 31' 28.3" N	073° 55' 44.9" W	---
1.9	Obstruction	Rock	8.03 m	40° 31' 19.0" N	073° 55' 55.4" W	---
1.10	Rock 317/230	Rock	7.03 m	40° 31' 30.4" N	073° 56' 19.9" W	---
1.11	Rock	Rock	6.65 m	40° 31' 26.5" N	073° 56' 25.7" W	---
1.12	Obstruction	Obstruction	6.54 m	40° 31' 08.5" N	073° 56' 25.9" W	---
1.13	Rks	Rock	6.08 m	40° 31' 37.0" N	073° 56' 40.1" W	---
1.14	Rock	Rock	5.86 m	40° 31' 17.6" N	073° 56' 51.6" W	---
1.15	Non Dton Rock 2611/74	Rock	6.12 m	40° 28' 16.0" N	073° 57' 26.7" W	---
1.16	Obstruction	Rock	6.35 m	40° 28' 26.6" N	073° 57' 33.5" W	---
1.17	Rks	Rock	6.61 m	40° 28' 30.7" N	073° 57' 46.4" W	---
1.18	Obstruction	Rock	6.42 m	40° 28' 29.8" N	073° 57' 29.4" W	---
1.19	rky	Rock	6.17 m	40° 27' 51.1" N	073° 57' 34.3" W	---
1.20	Obstruction	Obstruction	5.79 m	40° 28' 14.9" N	073° 57' 25.0" W	---
1.21	Rks	Rock	5.96 m	40° 28' 54.1" N	073° 58' 04.3" W	---
1.22	Rks	Rock	5.62 m	40° 28' 45.8" N	073° 57' 11.7" W	---
1.23	Rock	Rock	5.93 m	40° 28' 42.7" N	073° 57' 24.8" W	---
1.24	Rks	Rock	5.95 m	40° 28' 49.4" N	073° 57' 53.8" W	---
1.25	Rk	Rock	7.11 m	40° 29' 07.1" N	073° 58' 11.5" W	---
1.26	Rks	Rock	6.01 m	40° 28' 55.1" N	073° 57' 44.9" W	---
1.27	Rks	Rock	5.40 m	40° 28' 52.8" N	073° 57' 30.7" W	---
1.28	Rks	Rock	5.37 m	40° 28' 55.7" N	073° 57' 31.5" W	---
1.29	Rk	Rock	7.22 m	40° 29' 20.1" N	073° 58' 45.6" W	---
1.30	Rks	Rock	5.87 m	40° 29' 05.6" N	073° 57' 24.9" W	---
1.31	Rks	Rock	6.35 m	40° 29' 00.6" N	073° 57' 50.6" W	---
1.32	Rks	Rock	8.17 m	40° 28' 56.9" N	073° 58' 24.9" W	---
1.33	Rks	Rock	8.63 m	40° 28' 60.0" N	073° 58' 38.0" W	---
1.34	Rks	Rock	7.80 m	40° 28' 48.2" N	073° 58' 14.2" W	---
1.35	Rks	Rock	8.65 m	40° 29' 10.2" N	073° 58' 38.7" W	---
1.36	Rks	Rock	5.57 m	40° 29' 01.7" N	073° 57' 34.6" W	---
1.37	Rk	Rock	6.89 m	40° 29' 25.4" N	073° 58' 32.4" W	---
1.38	Rks	Rock	6.20 m	40° 31' 28.1" N	074° 00' 59.4" W	---
1.39	Rks	Rock	5.03 m	40° 31' 27.0" N	074° 01' 05.8" W	---
1.40	Rks	Rock	4.94 m	40° 30' 36.9" N	074° 01' 16.7" W	---
1.41	Rks	Rock	6.77 m	40° 31' 24.5" N	074° 02' 38.5" W	---

1.42	Part of chain of Rks	Rock	6.87 m	40° 31' 43.7" N	073° 57' 01.8" W	---
1.43	Rk	Rock	6.29 m	40° 31' 08.4" N	074° 02' 03.1" W	---
1.44	Rks	Rock	6.54 m	40° 28' 18.0" N	073° 56' 56.9" W	---
1.45	Rk	Rock	6.05 m	40° 28' 06.5" N	073° 56' 52.8" W	---
1.46	Rks	Rock	5.76 m	40° 28' 25.0" N	073° 57' 02.5" W	---
1.47	Rks	Rock	5.34 m	40° 28' 15.1" N	073° 56' 27.6" W	---
1.48	Rks	Rock	7.34 m	40° 28' 30.4" N	073° 56' 15.0" W	---
1.49	Rks	Rock	6.64 m	40° 28' 22.1" N	073° 56' 10.8" W	---
1.50	Rk	Rock	7.20 m	40° 29' 28.0" N	073° 56' 31.5" W	---
1.51	Rks	Rock	13.84 m	40° 29' 17.5" N	073° 55' 24.6" W	---
1.52	Rk	Rock	7.47 m	40° 27' 34.7" N	073° 56' 26.4" W	---
1.53	Rks	Rock	11.65 m	40° 27' 28.3" N	073° 55' 58.7" W	---
1.54	Rks	Rock	13.27 m	40° 27' 43.9" N	073° 55' 31.3" W	---
1.55	Rk	Rock	17.37 m	40° 27' 50.3" N	073° 54' 35.0" W	---
1.56	Obstns 2425/218	Obstruction	5.71 m	40° 28' 12.2" N	073° 57' 21.5" W	---
1.57	Obstns	Obstruction	6.09 m	40° 28' 11.3" N	073° 57' 19.9" W	---
1.58	Obstn	Obstruction	6.74 m	40° 28' 10.0" N	073° 57' 06.2" W	---
1.59	Obstn	Obstruction	6.86 m	40° 28' 14.1" N	073° 57' 16.8" W	---
1.60	Rks	Rock	6.78 m	40° 28' 17.9" N	073° 57' 20.9" W	---
1.61	Rks	Rock	7.44 m	40° 29' 04.7" N	073° 58' 20.9" W	---
1.62	Obstn	Obstruction	5.68 m	40° 28' 39.9" N	073° 57' 38.6" W	---
1.63	Rks	Rock	7.69 m	40° 29' 34.9" N	073° 59' 12.9" W	---
1.64	Rk	Rock	8.65 m	40° 29' 25.2" N	073° 59' 21.9" W	---
1.65	Rks	Rock	8.76 m	40° 31' 28.9" N	073° 55' 54.8" W	---
1.66	Rks	Rock	7.02 m	40° 31' 21.3" N	073° 56' 28.1" W	---
1.67	Rks	Rock	6.96 m	40° 31' 21.3" N	073° 56' 28.1" W	---
1.68	Rks	Rock	6.11 m	40° 31' 14.8" N	073° 56' 34.6" W	---
1.69	Rks	Rock	6.13 m	40° 31' 11.2" N	073° 56' 39.5" W	---
1.70	Rk	Rock	7.88 m	40° 30' 52.2" N	073° 55' 58.5" W	---
1.71	Rk	Rock	5.37 m	40° 31' 05.2" N	073° 56' 41.8" W	---
1.72	Rk	Rock	5.79 m	40° 31' 23.5" N	073° 56' 45.2" W	---
1.73	Rk	Rock	5.42 m	40° 31' 11.4" N	073° 56' 48.0" W	---
1.74	Rks	Rock	5.22 m	40° 30' 47.3" N	073° 56' 50.8" W	---
1.75	Rks	Rock	5.06 m	40° 30' 50.4" N	073° 56' 54.7" W	---
1.76	Rks	Rock	6.18 m	40° 31' 40.9" N	073° 57' 02.2" W	---
1.77	Rks	Rock	4.80 m	40° 30' 57.1" N	073° 57' 03.9" W	---

1.78	Rks	Rock	5.75 m	40° 31' 31.9" N	073° 57' 07.3" W	---
1.79	Obstn	Obstruction	6.58 m	40° 28' 06.5" N	074° 01' 08.9" W	---
1.80	Obstn Ruins	Obstruction	5.32 m	40° 27' 57.8" N	074° 00' 41.4" W	---
1.81	Rks	Rock	6.38 m	40° 31' 42.1" N	073° 57' 09.1" W	---
1.82	Rks	Rock	6.00 m	40° 31' 36.0" N	073° 57' 43.2" W	---
1.83	Rks	Rock	7.20 m	40° 30' 56.5" N	073° 58' 22.1" W	---
1.84	Obstn	Obstruction	5.51 m	40° 31' 02.0" N	074° 00' 12.6" W	---
1.85	Rks	Rock	5.03 m	40° 30' 42.5" N	073° 57' 13.9" W	---
1.86	Rk	Rock	5.55 m	40° 30' 55.5" N	073° 56' 34.1" W	---
1.87	Obstn	Obstruction	4.74 m	40° 31' 01.9" N	073° 56' 33.9" W	---
1.88	Rks	Rock	6.23 m	40° 31' 39.8" N	073° 56' 28.9" W	---
1.89	Rks	Rock	6.86 m	40° 29' 34.9" N	073° 59' 26.7" W	---
1.90	Obstn	Obstruction	6.87 m	40° 29' 36.6" N	073° 59' 43.2" W	---
1.91	Rks	Rock	6.58 m	40° 29' 41.0" N	073° 59' 31.6" W	---
1.92	Rks	Rock	6.34 m	40° 29' 43.1" N	074° 00' 04.1" W	---
1.93	Rk	Rock	3.87 m	40° 29' 60.0" N	074° 00' 46.6" W	---
1.94	Rks	Rock	8.28 m	40° 29' 14.6" N	073° 59' 12.1" W	---
1.95	Rks	Rock	8.13 m	40° 29' 22.9" N	073° 59' 18.7" W	---
1.96	Shoal Sounding	Shoal	9.29 m	40° 29' 12.2" N	074° 00' 00.9" W	---
1.97	Rk	Rock	6.47 m	40° 30' 10.7" N	074° 00' 30.2" W	---
1.98	Rks	Rock	5.70 m	40° 30' 12.8" N	074° 00' 40.8" W	---
1.99	Rk	Rock	5.48 m	40° 30' 13.9" N	074° 01' 03.0" W	---
1.100	Obstn	Obstruction	5.93 m	40° 30' 17.6" N	074° 00' 50.5" W	---
1.101	Obstn	Obstruction	6.88 m	40° 30' 11.7" N	074° 00' 21.5" W	---
1.102	Obstn	Obstruction	5.73 m	40° 28' 37.2" N	073° 57' 16.3" W	---
1.103	Obstn	Obstruction	6.59 m	40° 28' 14.8" N	073° 57' 08.4" W	---
1.104	Rk	Rock	5.23 m	40° 31' 27.3" N	074° 02' 05.8" W	---
1.105	Rk	Rock	10.08 m	40° 28' 38.6" N	073° 58' 20.2" W	---
1.106	Rks	Rock	7.25 m	40° 31' 28.7" N	074° 02' 16.7" W	---
1.107	Rks	Rock	6.58 m	40° 31' 27.7" N	074° 02' 39.4" W	---
1.108	Rks	Rock	7.18 m	40° 29' 32.1" N	073° 59' 29.0" W	---
1.109	Obstn	Obstruction	4.00 m	40° 29' 49.4" N	074° 01' 23.8" W	---
1.110	Rks	Rock	6.24 m	40° 27' 44.1" N	073° 56' 24.1" W	---
1.111	Rks	Rock	5.31 m	40° 27' 59.8" N	073° 56' 28.1" W	---
1.112	Rks	Rock	3.77 m	40° 30' 58.5" N	074° 00' 32.7" W	---
1.113	Obstn	Obstruction	7.18 m	40° 31' 27.6" N	074° 02' 10.4" W	---

1.114	Rks	Rock	6.22 m	40° 29' 45.0" N	073° 59' 43.3" W	---
1.115	Rks	Rock	6.06 m	40° 31' 24.8" N	073° 56' 59.0" W	---
1.116	Rks	Rock	8.45 m	40° 31' 07.6" N	073° 55' 48.8" W	---
1.117	Rks	Rock	7.74 m	40° 31' 35.6" N	073° 56' 02.6" W	---
1.118	Rks	Rock	4.78 m	40° 30' 55.4" N	073° 56' 47.1" W	---
1.119	Rks	Rock	5.75 m	40° 31' 14.4" N	073° 57' 24.7" W	---
1.120	Rks	Rock	6.28 m	40° 29' 32.9" N	073° 57' 07.4" W	---
1.121	Obstn	Obstruction	8.58 m	40° 29' 49.0" N	073° 58' 10.7" W	---
1.122	Sounding	Shoal	5.17 m	40° 30' 40.7" N	074° 01' 58.3" W	---
1.123	Rks	Rock	5.39 m	40° 30' 48.2" N	074° 01' 53.7" W	---
1.124	Rks	Rock	6.93 m	40° 29' 47.4" N	074° 00' 13.8" W	---
1.125	Rks - not fully developed	Rock	2.29 m	40° 30' 54.0" N	074° 00' 48.8" W	---
1.126	Obstn 75/160	Obstruction	12.00 m	40° 27' 45.2" N	073° 57' 05.0" W	---
1.127	AWOIS 1646 disproval	GP	[None]	40° 31' 42.4" N	074° 01' 08.3" W	---
1.128	AWOIS 1645 Disproval	GP	[None]	40° 31' 42.4" N	074° 00' 58.7" W	---
1.129	Rks	Rock	4.43 m	40° 31' 03.6" N	073° 57' 25.0" W	---
1.130	Rk	Rock	5.35 m	40° 28' 09.2" N	073° 56' 43.3" W	---
1.131	Rks	Rock	11.69 m	40° 27' 49.5" N	073° 55' 54.4" W	---
1.132	---	Rock	4.68 m	40° 31' 03.7" N	073° 57' 25.1" W	---

1 - DR_UnCharted

1.1) Profile/Beam - 5/1 from h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp

Survey Summary

Survey Position: 40° 27' 34.5" N, 073° 59' 13.3" W
Least Depth: -0.36 m (= -1.19 ft = -0.198 fm = 0 fm 4.81 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.389 m
Timestamp: 2007-183.15:33:46.000 (07/02/2007)
DP Dataset: h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp
Profile/Beam: 5/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Gunnison Beach National Park (clothing optional). BOATS KEEP OUT ORANGE/WHT BUOY. PVT

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-183/3102_07022007_dp	5/1	0.00	000.0	Primary
h11709/tj_3102_reson8101/2007-183/3102_07022007_dp	8/1	5.37	027.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

-1ft (12401_1, 12324_1, 12327_1, 12326_1)
 0 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 -.4m (5161_1)

S-57 Data

Geo object 1: Buoy, special purpose/general (BOYSPP)
Attributes: BOYSHP - 2:can (cylindrical)
 CATSPM - 13:private mark
 COLOUR - 1,11:white,orange
 COLPAT - 1:horizontal stripes

Office Notes

Chart buoy at surveyed position.

Feature Images



Figure 1.1.1

1.2) Profile/Beam - 6/1 from h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp

Survey Summary

Survey Position: 40° 27' 28.4" N, 073° 59' 11.1" W
Least Depth: -0.35 m (= -1.16 ft = -0.193 fm = 0 fm 4.84 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.389 m
Timestamp: 2007-183.15:36:58.000 (07/02/2007)
DP Dataset: h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp
Profile/Beam: 6/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Gunnison Beach National Park (clothing optional). BOATS KEEP OUT ORANGE/WHT BUOY. PVT

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-183/3102_07022007_dp	6/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

-1ft (12401_1, 12324_1, 12327_1, 12326_1)
 0 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 -.4m (5161_1)

S-57 Data

Geo object 1: Buoy, special purpose/general (BOYSPP)
Attributes: BOYSHP - 2:can (cylindrical)
 CATSPM - 13:private mark
 COLOUR - 1,11:white,orange
 COLPAT - 1:horizontal stripes

Office Notes

Chart buoy at surveyed position.

Feature Images



Figure 1.2.1

1.3) Profile/Beam - 7/1 from h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp

Survey Summary

Survey Position: 40° 27' 31.0" N, 073° 59' 12.8" W
Least Depth: -0.36 m (= -1.17 ft = -0.195 fm = 0 fm 4.83 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.389 m
Timestamp: 2007-183.15:37:40.000 (07/02/2007)
DP Dataset: h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp
Profile/Beam: 7/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Gunnison Beach National Park (clothing optional). BOATS KEEP OUT ORANGE/WHT BUOY. PVT

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-183/3102_07022007_dp	7/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

-1ft (12401_1, 12324_1, 12327_1, 12326_1)
 0 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 -.4m (5161_1)

S-57 Data

Geo object 1: Buoy, special purpose/general (BOYSPP)
Attributes: BOYSHP - 2:can (cylindrical)
 CATSPM - 13:private mark
 COLOUR - 1,11:white,orange
 COLPAT - 1:horizontal stripes

Office Notes

Chart buoy at surveyed position.

Feature Images



Figure 1.3.1

1.4) Profile/Beam - 9/1 from h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp

Survey Summary

Survey Position: 40° 27' 40.0" N, 073° 59' 14.1" W
Least Depth: -0.34 m (= -1.13 ft = -0.188 fm = 0 fm 4.87 ft)
TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.389 m
Timestamp: 2007-183.15:39:56.000 (07/02/2007)
DP Dataset: h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp
Profile/Beam: 9/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Gunnison Beach National Park (clothing optional). BOATS KEEP OUT ORANGE/WHT BUOY. PVT

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-183/3102_07022007_dp	9/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

-1ft (12401_1, 12324_1, 12327_1, 12326_1)
 0 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 -.3m (5161_1)

S-57 Data

Geo object 1: Buoy, special purpose/general (BOYSPP)
Attributes: BOYSHP - 2:can (cylindrical)
 CATSPM - 13:private mark
 COLOUR - 1,11:white,orange

Office Notes

Chart buoy at surveyed position.

Feature Images



Figure 1.4.1

1.5) Profile/Beam - 10/1 from h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp

Survey Summary

Survey Position: 40° 27' 51.8" N, 073° 59' 19.0" W
Least Depth: -0.34 m (= -1.11 ft = -0.185 fm = 0 fm 4.89 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.389 m
Timestamp: 2007-183.15:42:31.000 (07/02/2007)
DP Dataset: h11709 / tj_3102_reson8101 / 2007-183 / 3102_07022007_dp
Profile/Beam: 10/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Gunnison Beach National Park (clothing optional). BOATS KEEP OUT ORANGE/WHT BUOY. PVT

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-183/3102_07022007_dp	10/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

-1ft (12401_1, 12324_1, 12327_1, 12326_1)

0fm (12300_1, 13006_1, 13003_1, 14500_1)

-.3m (5161_1)

S-57 Data

Geo object 1: Buoy, special purpose/general (BOYSPP)

Attributes: BOYSHP - 2:can (cylindrical)

CATSPM - 13:private mark

COLOUR - 1,11:white,orange

Office Notes

Chart buoy at surveyed position.

Feature Images



Figure 1.5.1

1.6) Profile/Beam - 99/14 from h11709 / tj_3102_reson8101 / 2007-270 / 142_1408

Survey Summary

Survey Position: 40° 31' 16.7" N, 074° 02' 17.5" W
Least Depth: 6.41 m (= 21.01 ft = 3.502 fm = 3 fm 3.01 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.395 m
Timestamp: 2007-270.14:08:37.934 (09/27/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-270 / 142_1408
Profile/Beam: 99/14
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Evaluated by the hydrographer as not a DTON. This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-270/142_1408	99/14	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-231/410_2023	0003	2.26	007.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-267/942_2033	0004	3.89	148.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-267/943_2030	0001	7.30	350.4	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 6.405 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Chart Rks with danger circle, least depth 21 ft.

Feature Images

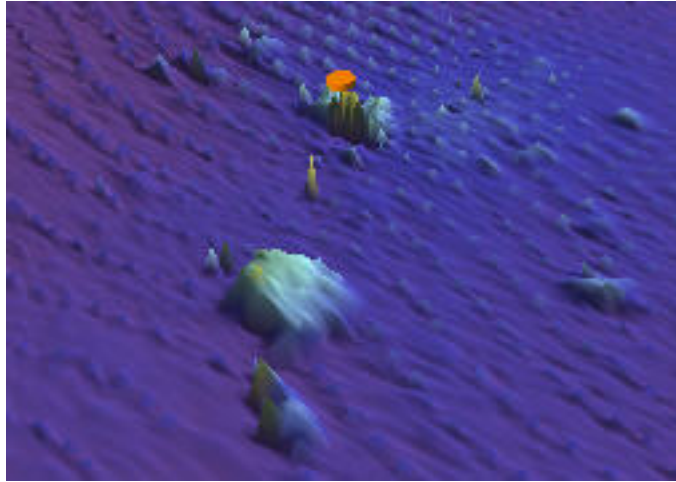


Figure 1.6.1

1.7) Profile/Beam - 513/80 from h11709 / tj_3102_reson8101 / 2007-270 / 018_1701

Survey Summary

Survey Position: 40° 31' 30.5" N, 074° 01' 29.5" W
Least Depth: 4.03 m (= 13.21 ft = 2.201 fm = 2 fm 1.21 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.391 m
Timestamp: 2007-270.17:02:09.740 (09/27/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-270 / 018_1701
Profile/Beam: 513/80
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Evaluated by the hydrographer as not a DTON - vicinity to 12-ft obstruction (Dton).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-270/018_1701	513/80	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-231/404_1813	0003	3.79	156.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-227/527_1349	0002	5.19	099.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-187/527_1605	0001	6.76	117.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

13ft (12402_1, 12327_1, 12326_1)

2 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

4.0m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 4.025 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 13 ft Obstm

Feature Images

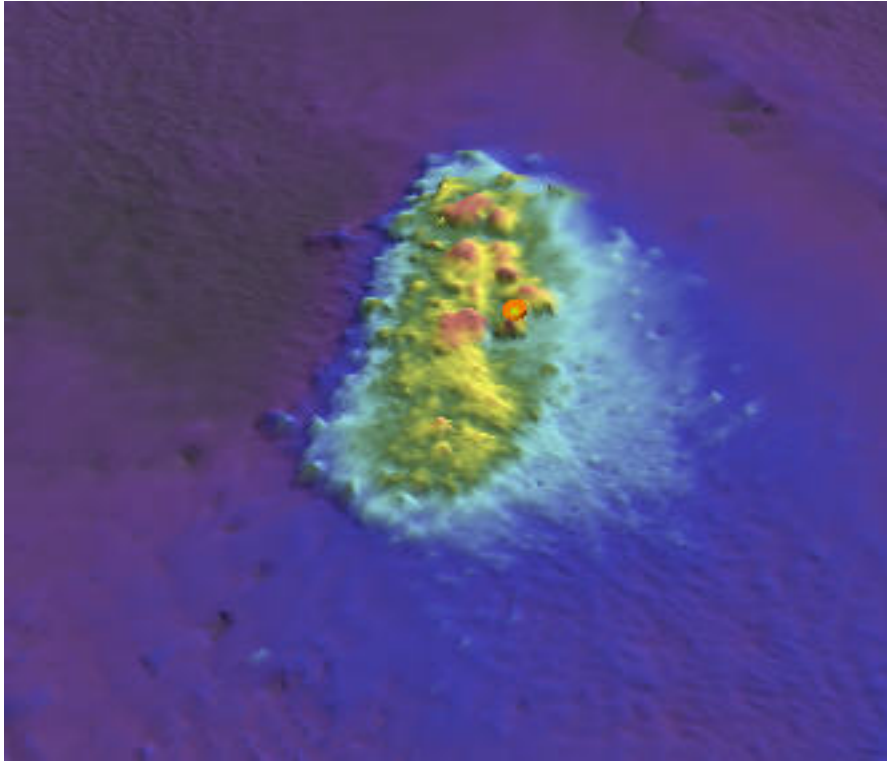


Figure 1.7.1

1.8) Profile/Beam - 5180/85 from h11709 / tj_3102_reson8101 / 2007-218 / 329_1701

Survey Summary

Survey Position: 40° 31' 28.3" N, 073° 55' 44.9" W
Least Depth: 8.41 m (= 27.58 ft = 4.597 fm = 4 fm 3.58 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.983 m ; **TVU (TPEv)** ± 0.396 m
Timestamp: 2007-218.17:12:34.565 (08/06/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-218 / 329_1701
Profile/Beam: 5180/85
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Evaluated by the hydrographer as not a DTON (surrounding charted depths). This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-218/329_1701	5180/85	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-267/977_1505	0002	1.71	115.1	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

27ft (12327_1, 12326_1)

4 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

8.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 8.407 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rks least depth 27 ft

Feature Images

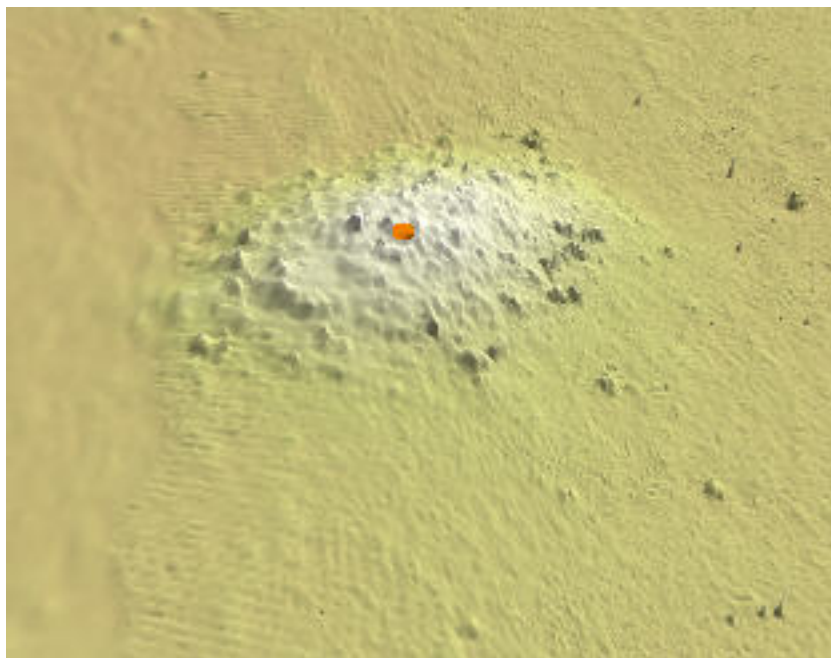


Figure 1.8.1

1.9) Profile/Beam - 4784/87 from h11709 / tj_3102_reson8101 / 2007-220 / 215_1545

Survey Summary

Survey Position: 40° 31' 19.0" N, 073° 55' 55.4" W
Least Depth: 8.03 m (= 26.36 ft = 4.393 fm = 4 fm 2.36 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.983 m ; **TVU (TPEv)** ± 0.395 m
Timestamp: 2007-220.15:56:06.545 (08/08/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-220 / 215_1545
Profile/Beam: 4784/87
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-220/215_1545	4784/87	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-220/215_1545	0002	2.10	256.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-218/331_1644	0003	14.53	265.0	Secondary (grouped)
h11709/tj_3101_reson8125/2007-231/015_1358	469/191	35.31	252.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/215_1545	0003	44.44	254.7	Secondary (grouped)
h11709/tj_3102_reson8101/2007-218/331_1644	1578/19	83.88	255.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

26ft (12327_1, 12326_1)

4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

8.0m (5161_1)

S-57 Data

[None]

Office Notes

Chart 26-ft Obstn

Feature Images

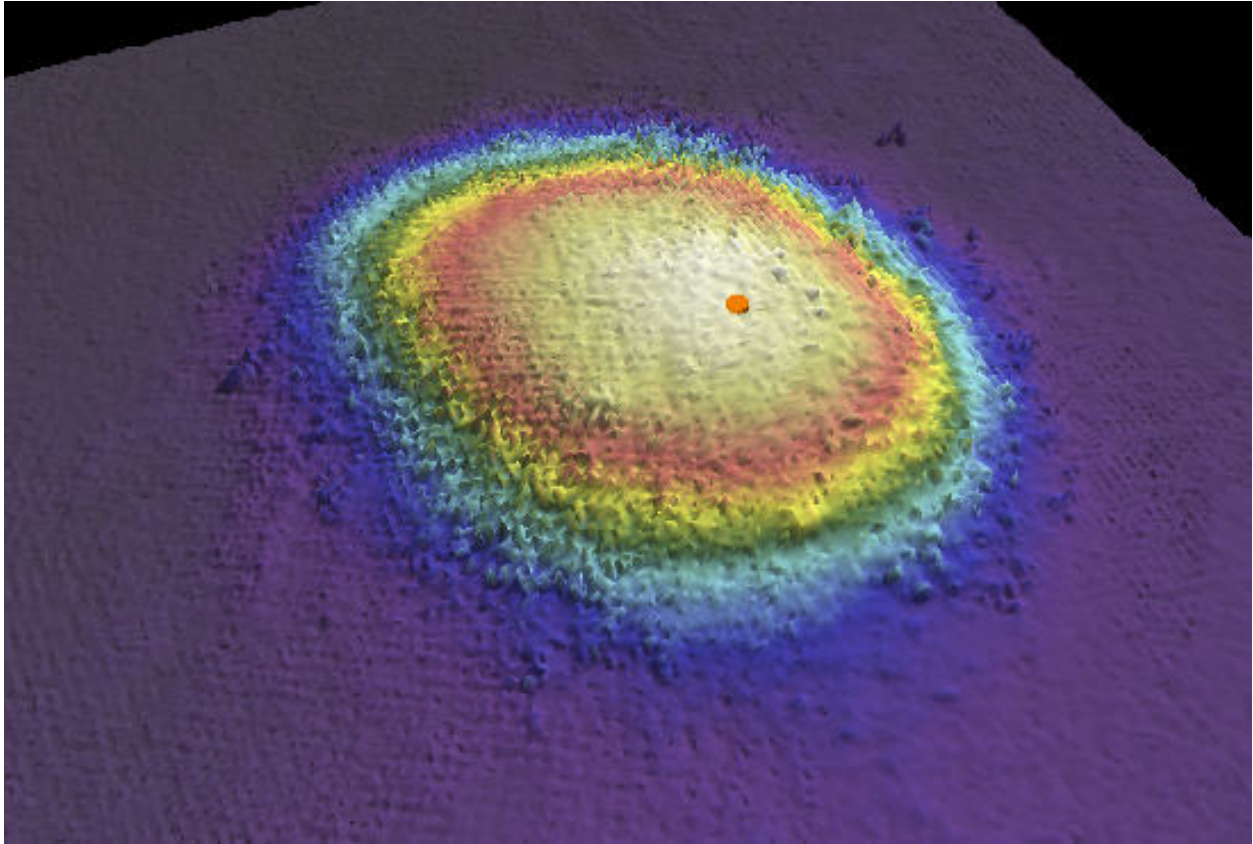


Figure 1.9.1

1.10) Profile/Beam - 317/230 from h11709 / tj_3101_reson8125 / 2007-229 / 031_1753

Survey Summary

Survey Position: 40° 31' 30.4" N, 073° 56' 19.9" W
Least Depth: 7.03 m (= 23.07 ft = 3.846 fm = 3 fm 5.07 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.153 m
Timestamp: 2007-229.17:54:24.671 (08/17/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-229 / 031_1753
Profile/Beam: 317/230
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation. Evaluated by the hydrographer as not a DTON due to surrounding charted depths.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-229/031_1753	317/230	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/336_1537	0003	10.74	189.4	Secondary
h11709/tj_3102_klein5000_sss100/2007-218/337_1524	0004	76.03	048.4	Secondary (grouped)

Hydrographer Recommendations

S-57 Data

Geo object 1: Unsurveyed area (UNSARE)
Geo object 2: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 7.033 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Chart Rk least depth 23 ft

Feature Images

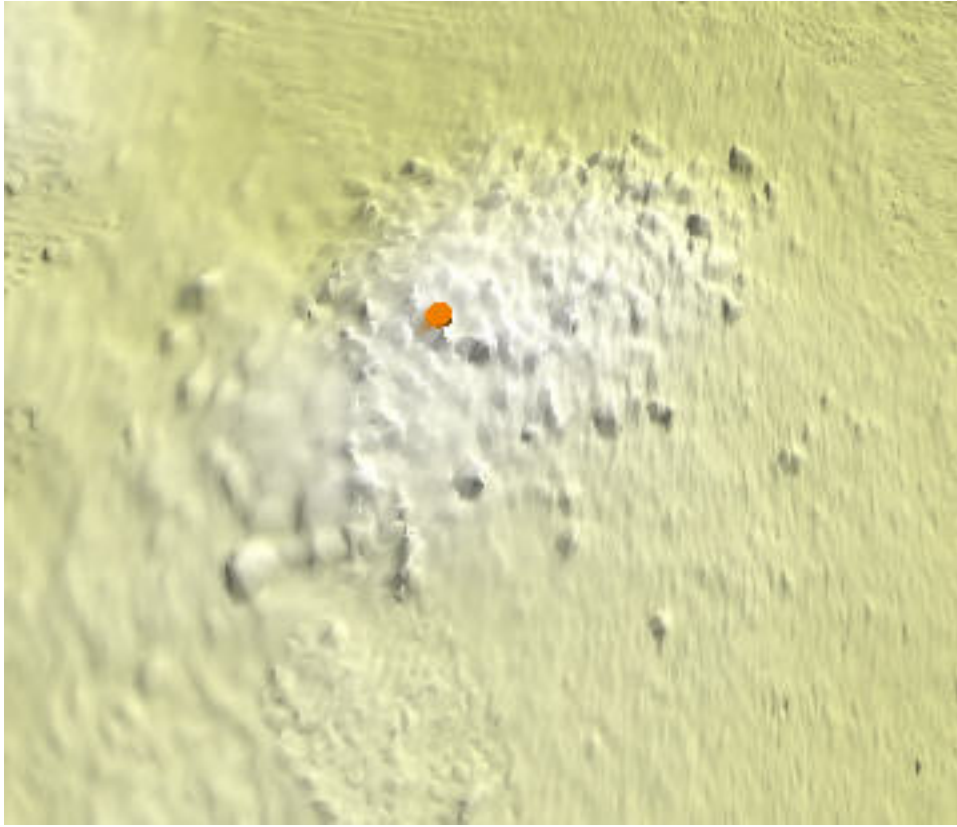


Figure 1.10.1

1.11) Profile/Beam - 1112/79 from h11709 / tj_3102_reson8101 / 2007-220 / 243_1432

Survey Summary

Survey Position: 40° 31' 26.5" N, 073° 56' 25.7" W
Least Depth: 6.65 m (= 21.82 ft = 3.637 fm = 3 fm 3.82 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.393 m
Timestamp: 2007-220.14:34:08.123 (08/08/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-220 / 243_1432
Profile/Beam: 1112/79
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-220/243_1432	1112/79	0.00	000.0	Primary

Hydrographer Recommendations

Chart a Rock in current survey position with a least depth of 6.65 meters (22 feet).

Cartographically-Rounded Depth (Affected Charts):

22ft (12402_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.7m (5161_1)

S-57 Data

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

Office Notes

Concur.

Feature Images

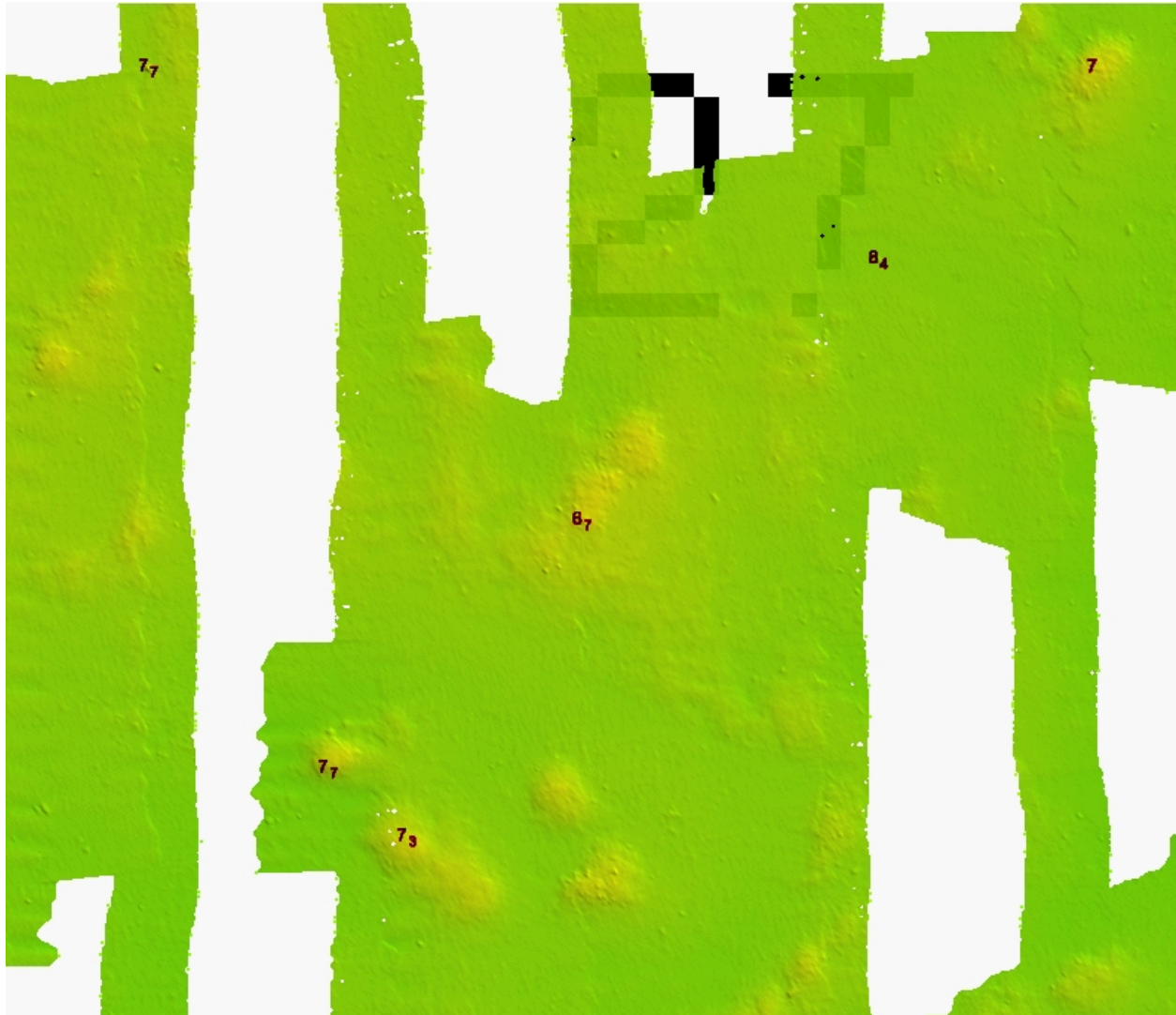


Figure 1.11.1

1.12) Profile/Beam - 2382/69 from h11709 / tj_3102_reson8101 / 2007-220 / 243_1432

Survey Summary

Survey Position: 40° 31' 08.5" N, 073° 56' 25.9" W
Least Depth: 6.54 m (= 21.46 ft = 3.576 fm = 3 fm 3.46 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.393 m
Timestamp: 2007-220.14:36:13.427 (08/08/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-220 / 243_1432
Profile/Beam: 2382/69
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-220/243_1432	2382/69	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-237/148_1515	206/118	36.59	241.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-218/337_1524	0002	36.99	239.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12402_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.5m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.540 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 21 Obstn

Feature Images

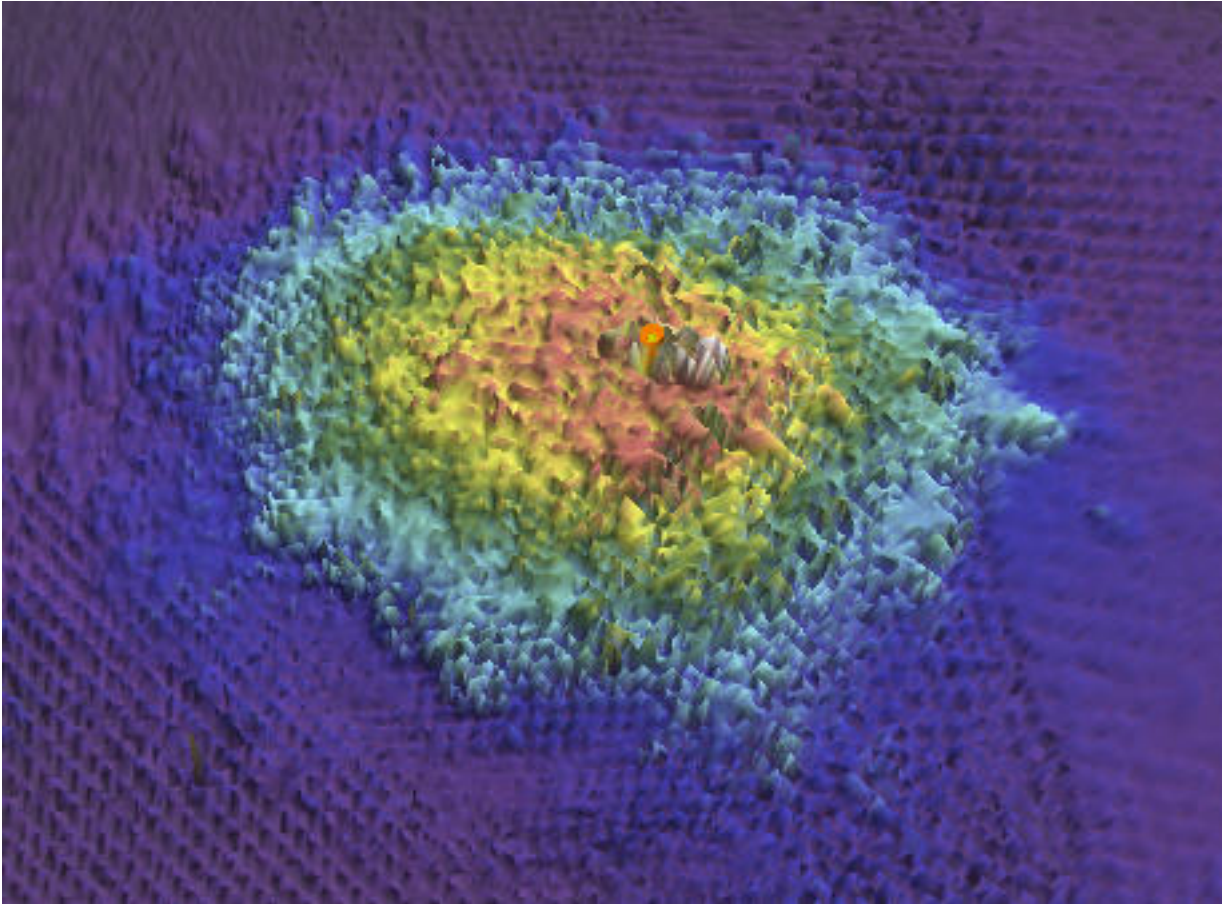


Figure 1.12.1

1.13) Profile/Beam - 6533/98 from h11709 / tj_3102_reson8101 / 2007-220 / 246_1352

Survey Summary

Survey Position: 40° 31' 37.0" N, 073° 56' 40.1" W
Least Depth: 6.08 m (= 19.95 ft = 3.325 fm = 3 fm 1.95 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.983 m ; **TVU (TPEv)** ± 0.401 m
Timestamp: 2007-220.14:03:32.371 (08/08/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-220 / 246_1352
Profile/Beam: 6533/98
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-220/246_1352	6533/98	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/340_1423	0001	0.76	058.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/246_1352	0007	4.30	358.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12402_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.1m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 STATUS - 1:permanent
 TECSOU - 3:found by multi-beam

VALSOU - 6.080 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20-ft "Rks"

Feature Images

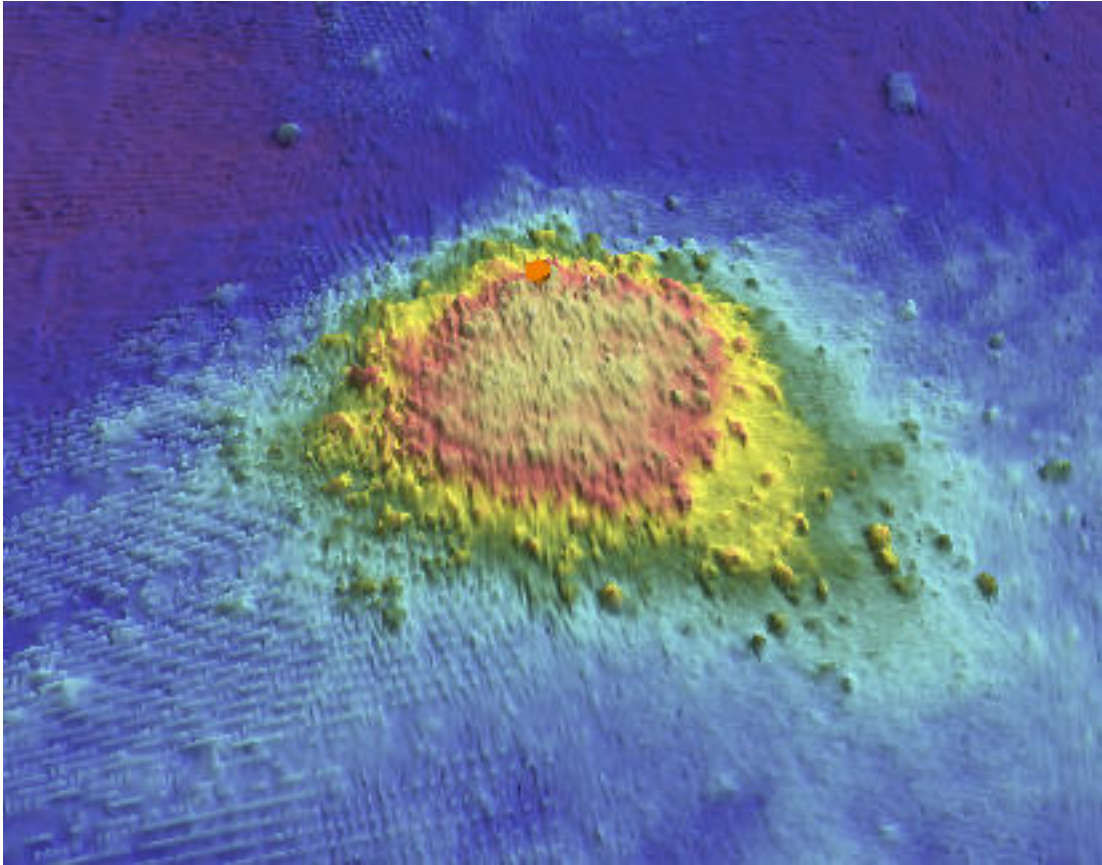


Figure 1.13.1

1.14) Profile/Beam - 5292/7 from h11709 / tj_3102_reson8101 / 2007-220 / 248_1326

Survey Summary

Survey Position: 40° 31' 17.6" N, 073° 56' 51.6" W
Least Depth: 5.86 m (= 19.23 ft = 3.205 fm = 3 fm 1.23 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.983 m ; **TVU (TPEv)** ± 0.396 m
Timestamp: 2007-220.13:35:20.369 (08/08/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-220 / 248_1326
Profile/Beam: 5292/7
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-220/248_1326	5292/7	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/343_1335	0005	5.22	172.8	Secondary
h11709/tj_3101_reson8125/2007-231/084_1659	4005/200	23.86	342.1	Secondary (grouped)
h11709/tj_3101_reson8125/2007-231/083_1650	4285/181	68.31	210.4	Secondary (grouped)

Hydrographer Recommendations

Chart a Rock in current survey position with a least depth of 5.86 meters (19 feet).

Cartographically-Rounded Depth (Affected Charts):

19ft (12402_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.9m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: HORACC - 10 m

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.861 m

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

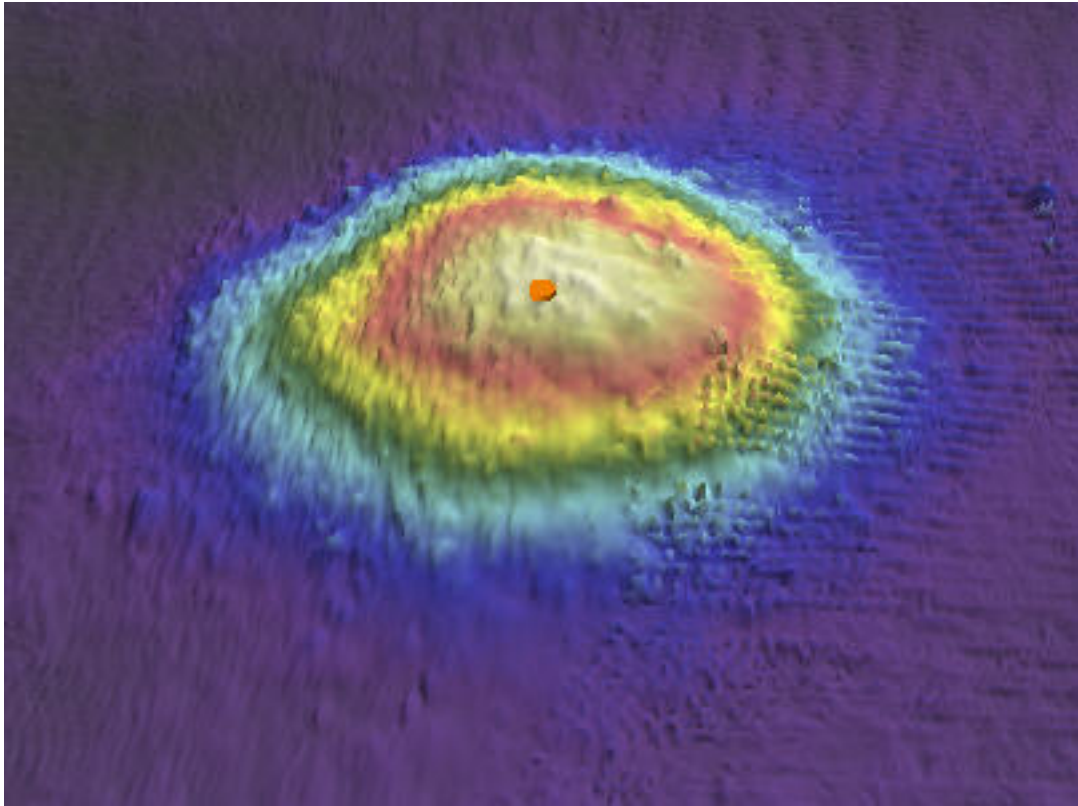


Figure 1.14.1

1.15) Profile/Beam - 2611/74 from h11709 / tj_3101_reson8125 / 2007-227 / 068_1509

Survey Summary

Survey Position: 40° 28' 16.0" N, 073° 57' 26.7" W
Least Depth: 6.12 m (= 20.09 ft = 3.348 fm = 3 fm 2.09 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-227.15:12:37.443 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 068_1509
Profile/Beam: 2611/74
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/068_1509	2611/74	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-183/512_1712	0005	4.33	347.0	Secondary
h11709/tj_3102_klein5000_sss200/2007-266/287_1657	0006	4.51	076.7	Secondary (grouped)

Hydrographer Recommendations

Chart a Rock in current survey position with a least depth of 6.12 meters (20 feet).

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 6.122 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Concur.

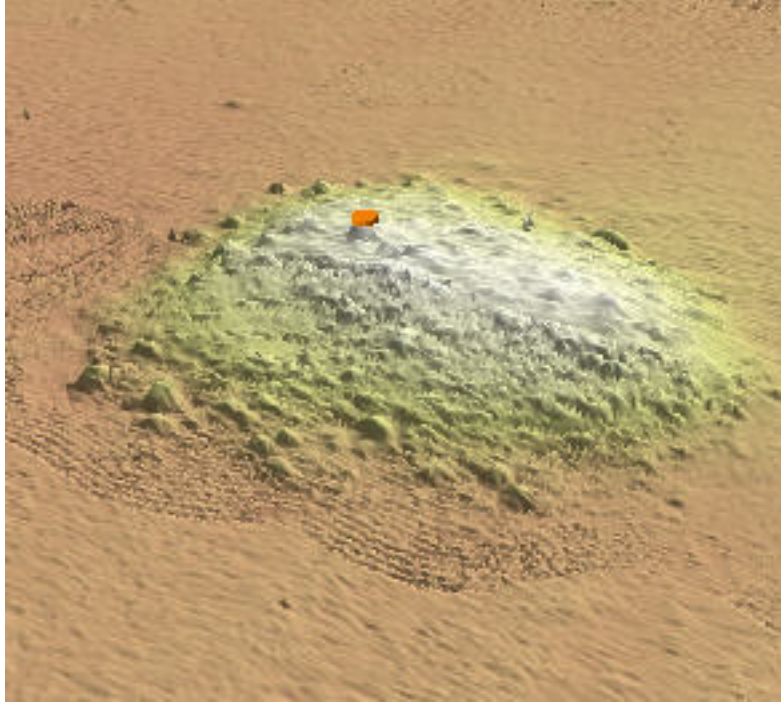


Figure 1.15.2

1.16) Profile/Beam - 2611/41 from h11709 / tj_3101_reson8125 / 2007-227 / 080_1408

Survey Summary

Survey Position: 40° 28' 26.6" N, 073° 57' 33.5" W
Least Depth: 6.35 m (= 20.84 ft = 3.474 fm = 3 fm 2.84 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-227.14:11:15.984 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 080_1408
Profile/Beam: 2611/41
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/080_1408	2611/41	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/298_1807	0003	7.18	242.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-236/297_1843	0002	10.69	074.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.4m (5161_1)

S-57 Data

[None]

Office Notes

Chart 20-ft Obstn.

Feature Images

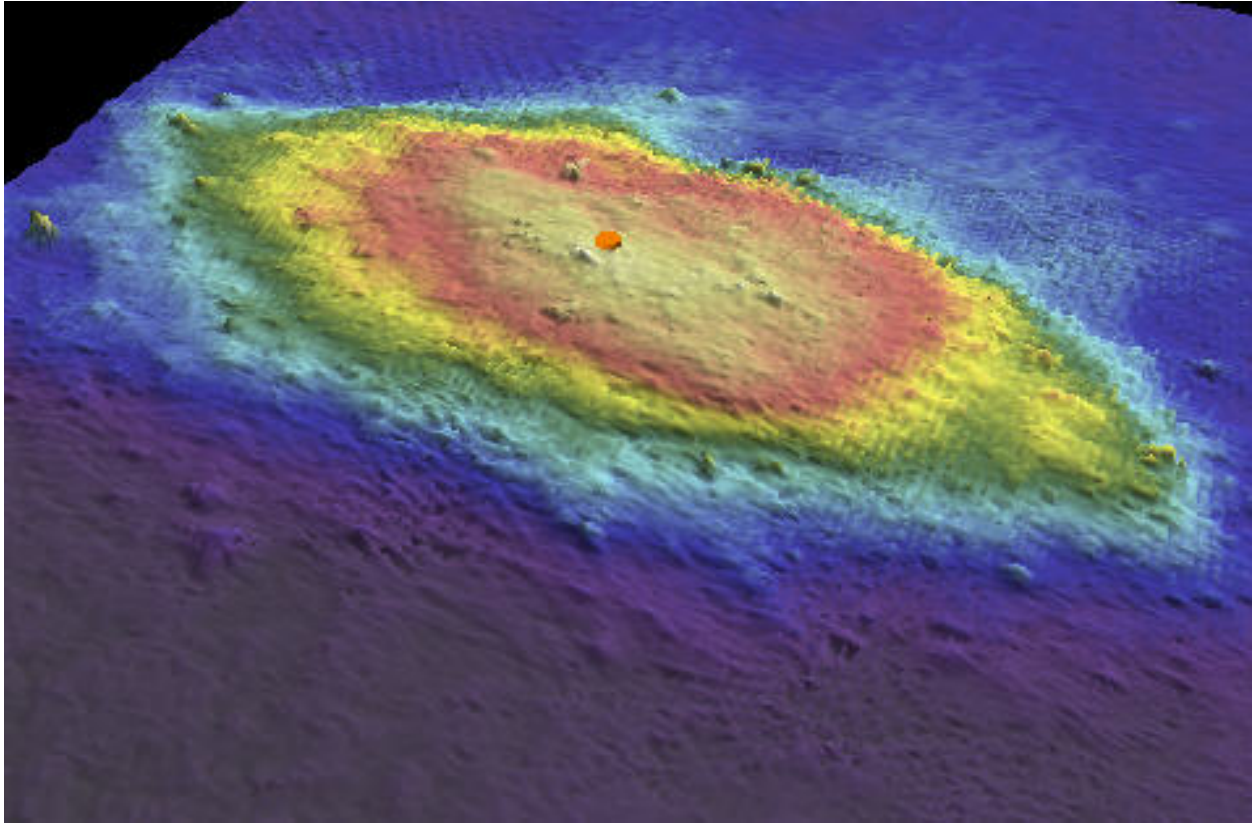


Figure 1.16.1

1.17) Profile/Beam - 4037/173 from h11709 / tj_3101_reson8125 / 2007-227 / 080_1408

Survey Summary

Survey Position: 40° 28' 30.7" N, 073° 57' 46.4" W
Least Depth: 6.61 m (= 21.68 ft = 3.613 fm = 3 fm 3.68 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-227.14:12:39.825 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 080_1408
Profile/Beam: 4037/173
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Evaluated by the hydrographer as not a DtoN (insignificant compared to charted depth).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/080_1408	4037/173	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/297_1851	0001	2.69	350.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-236/297_1843	0003	4.24	046.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 6.607 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 21-ft least depth

Feature Images



Figure 1.17.1

1.18) Profile/Beam - 84/238 from h11709 / tj_3101_reson8125 / 2007-266 / 480_1525

Survey Summary

Survey Position: 40° 28' 29.8" N, 073° 57' 29.4" W
Least Depth: 6.42 m (= 21.05 ft = 3.508 fm = 3 fm 3.05 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2007-266.15:25:52.425 (09/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-266 / 480_1525
Profile/Beam: 84/238
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-266/480_1525	84/238	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/299_1727	0003	7.33	153.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-266/963_1933	0009	26.76	166.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.4m (5161_1)

S-57 Data

[None]

Office Notes

Chart 21-ft Obstn.

Feature Images

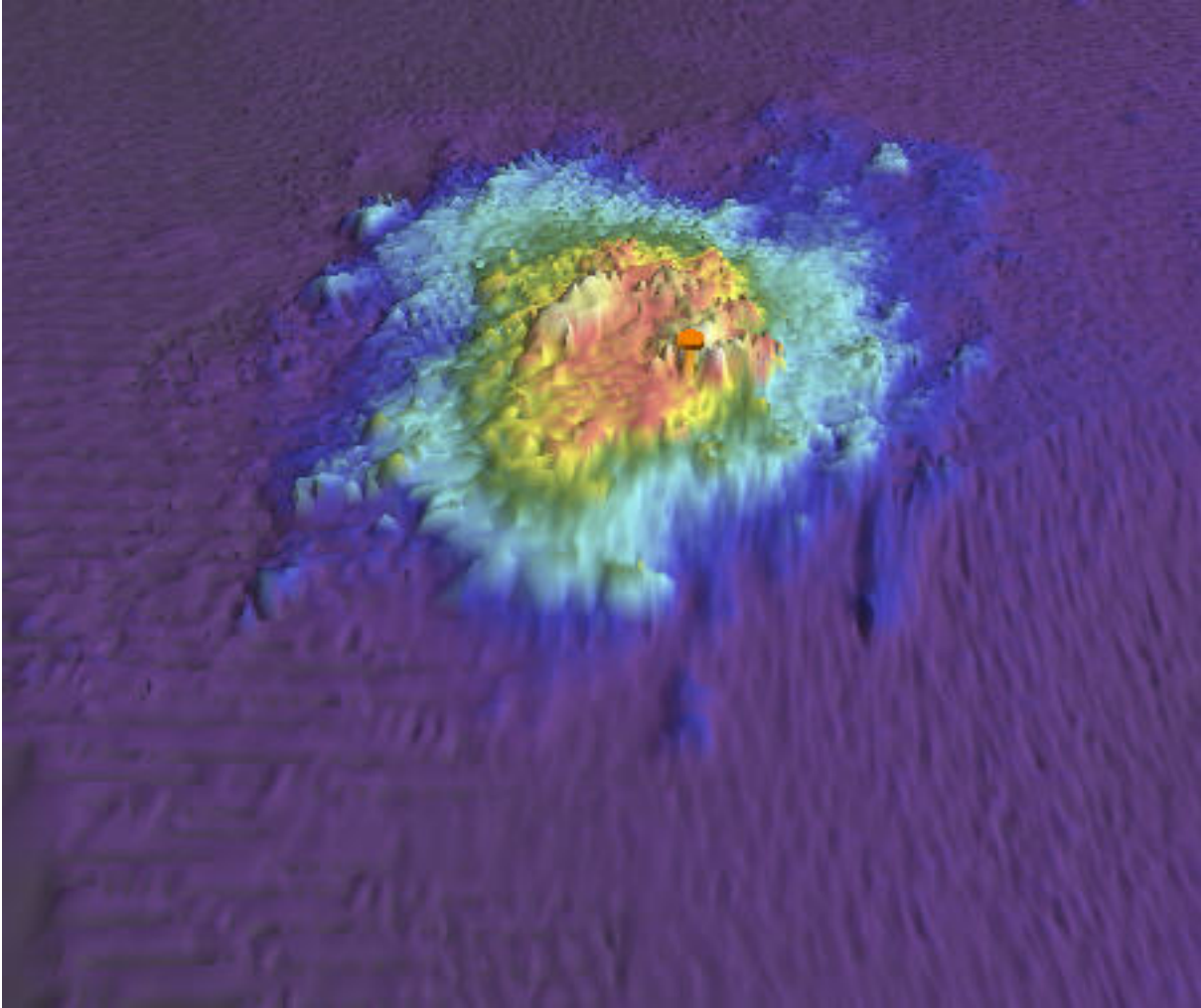


Figure 1.18.1

1.19) Profile/Beam - 274/1 from h11709 / tj_3101_reson8125 / 2007-270 / 119_1443

Survey Summary

Survey Position: 40° 27' 51.1" N, 073° 57' 34.3" W
Least Depth: 6.17 m (= 20.24 ft = 3.373 fm = 3 fm 2.24 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-270.14:44:35.979 (09/27/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-270 / 119_1443
Profile/Beam: 274/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-270/119_1443	274/1	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-265/490_1504	0003	8.10	334.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-266/904_1716	0002	8.85	337.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-228/511_1754	0001	12.04	088.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.168 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart rky least depth = 20 ft

Feature Images

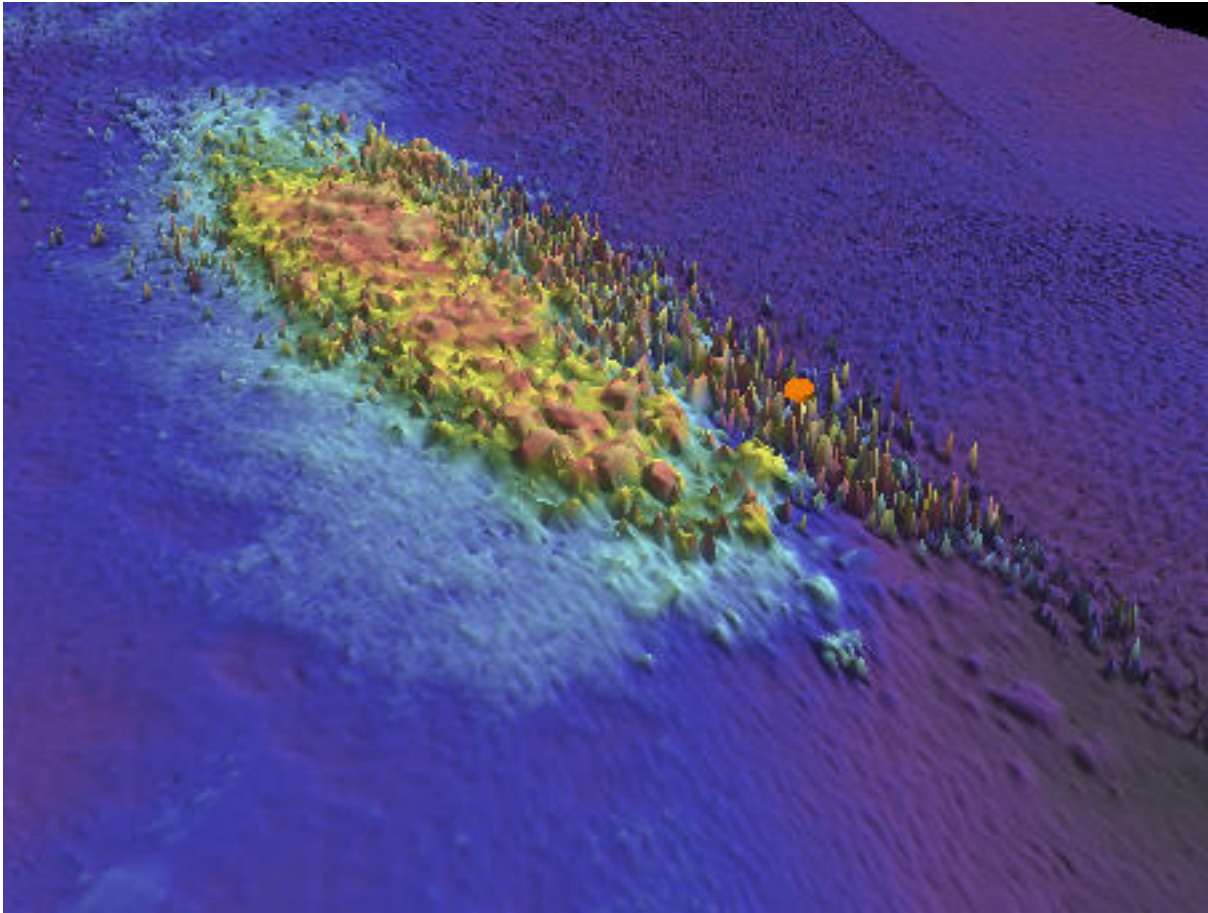


Figure 1.19.1

1.20) Profile/Beam - 2371/14 from h11709 / tj_3102_reson8101 / 2007-183 / 512_1712

Survey Summary

Survey Position: 40° 28' 14.9" N, 073° 57' 25.0" W
Least Depth: 5.79 m (= 19.01 ft = 3.168 fm = 3 fm 1.01 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.394 m
Timestamp: 2007-183.17:17:43.545 (07/02/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-183 / 512_1712
Profile/Beam: 2371/14
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Evaluated by the hydrographer as not a DtoN due to location in charted shoal.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-183/512_1712	2371/14	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-183/512_1712	0006	4.16	016.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-266/287_1657	0005	5.63	069.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-266/289_1640	0005	6.90	324.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-266/289_1640	0007	87.43	016.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12324_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.8m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: NATCON - 2,3:concreted,loose boulders
QUASOU - 1:depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 5.794 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart 19 ft Obstn.

Feature Images

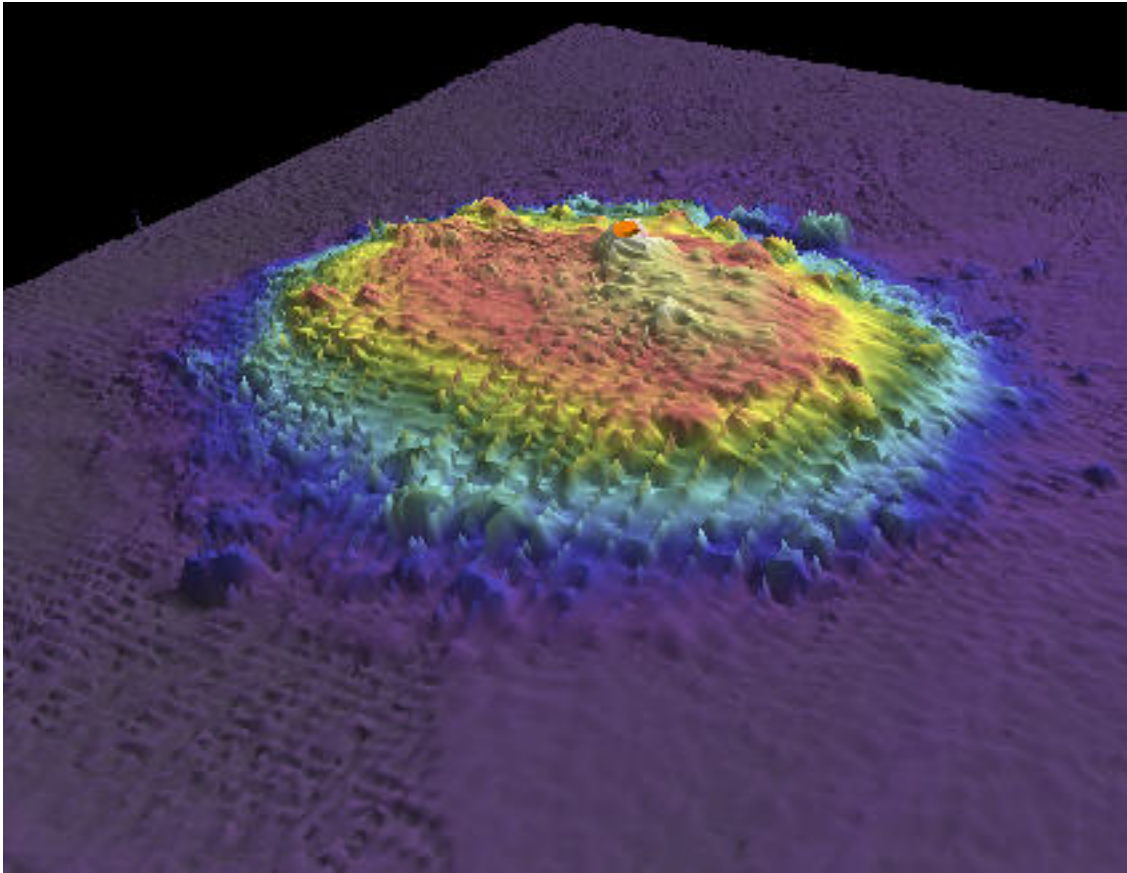


Figure 1.20.1

1.21) Profile/Beam - 242/12 from h11709 / tj_3101_reson8125 / 2007-227 / 088_1852

Survey Summary

Survey Position: 40° 28' 54.1" N, 073° 58' 04.3" W
Least Depth: 5.96 m (= 19.56 ft = 3.260 fm = 3 fm 1.56 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-227.18:53:01.258 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 088_1852
Profile/Beam: 242/12
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/088_1852	242/12	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/401_1911	0003	2.31	171.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/520_1449	0002	5.70	216.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/518_1310	0007	9.01	340.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.0m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.962 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 19 ft

Feature Images

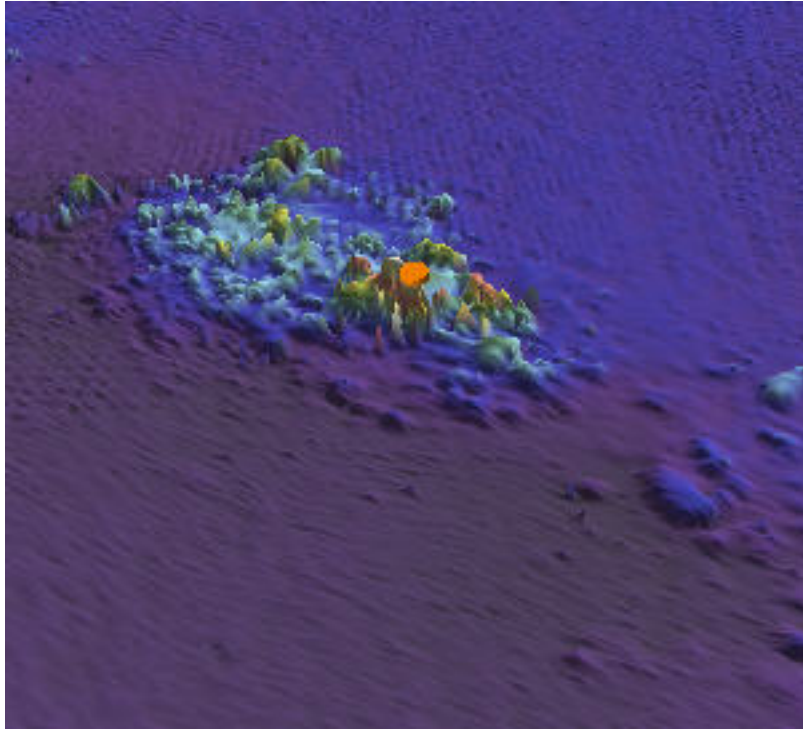


Figure 1.21.1

1.22) Profile/Beam - 196/33 from h11709 / tj_3101_reson8125 / 2007-227 / 097_1743

Survey Summary

Survey Position: 40° 28' 45.8" N, 073° 57' 11.7" W
Least Depth: 5.62 m (= 18.42 ft = 3.070 fm = 3 fm 0.42 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-227.17:44:12.073 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 097_1743
Profile/Beam: 196/33
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/097_1743	196/33	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-266/928_1955	0001	0.24	180.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/408_1644	0015	5.67	097.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/530_1622	0006	6.23	105.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12401_1, 12324_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.6m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.615 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 18 ft

Feature Images

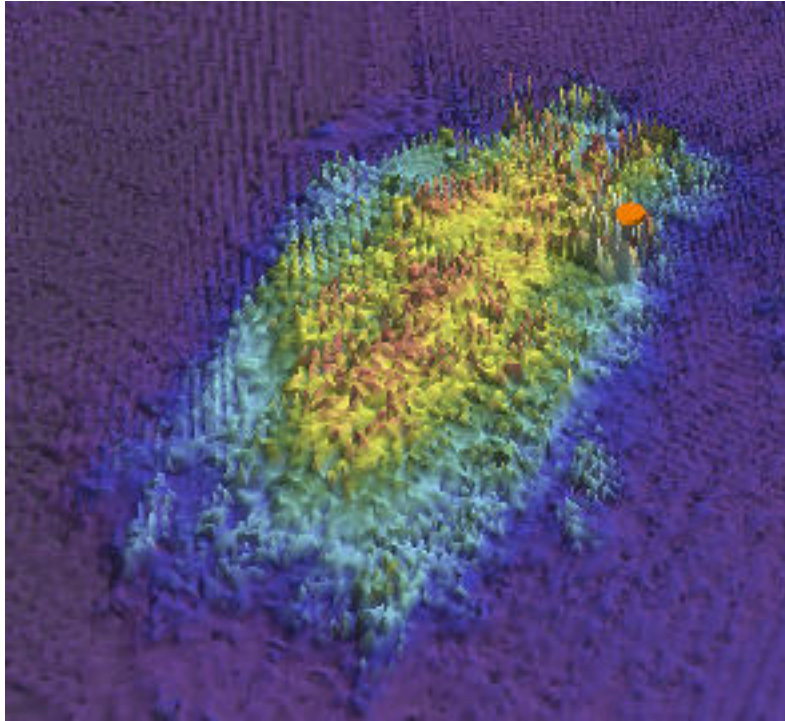


Figure 1.22.1

1.23) Profile/Beam - 1731/112 from h11709 / tj_3101_reson8125 / 2007-227 / 097_1743

Survey Summary

Survey Position: 40° 28' 42.7" N, 073° 57' 24.8" W
Least Depth: 5.93 m (= 19.47 ft = 3.244 fm = 3 fm 1.47 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-227.17:45:43.404 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 097_1743
Profile/Beam: 1731/112
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/097_1743	1731/112	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/520_1449	0001	1.67	052.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/406_1801	0011	2.68	163.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.9m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.933 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 19 Rk

Feature Images



Figure 1.23.1

1.24) Profile/Beam - 102/187 from h11709 / tj_3101_reson8125 / 2007-227 / 205_1900

Survey Summary

Survey Position: 40° 28' 49.4" N, 073° 57' 53.8" W
Least Depth: 5.95 m (= 19.51 ft = 3.251 fm = 3 fm 1.51 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-227.19:00:45.765 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 205_1900
Profile/Beam: 102/187
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/205_1900	102/187	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-266/929_1946	0004	1.05	001.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/401_1911	0008	3.23	157.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/518_1310	0009	11.67	068.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-266/929_1946	0003	21.82	206.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.9m (5161_1)

S-57 Data

[None]

Office Notes

Chart "Rks" 19 ft

Feature Images

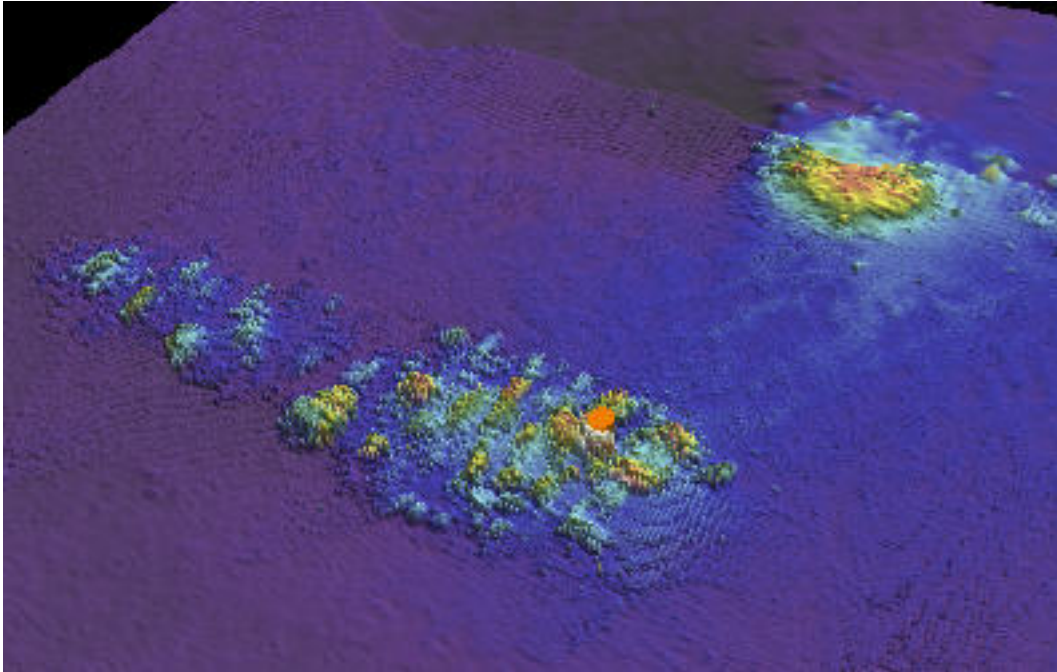


Figure 1.24.1

1.25) Profile/Beam - 256/49 from h11709 / tj_3101_reson8125 / 2007-228 / 092_1456

Survey Summary

Survey Position: 40° 29' 07.1" N, 073° 58' 11.5" W
Least Depth: 7.11 m (= 23.34 ft = 3.890 fm = 3 fm 5.34 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-228.14:57:16.475 (08/16/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-228 / 092_1456
Profile/Beam: 256/49
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-228/092_1456	256/49	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-266/928_1955	0012	2.90	247.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/407_1723	0007	4.53	108.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/530_1622	0004	5.71	163.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12401_1, 12324_1, 12327_1, 12326_1)

3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

7.1m (5161_1)

S-57 Data

[None]

Office Notes

Chart 23 Rk

Feature Images

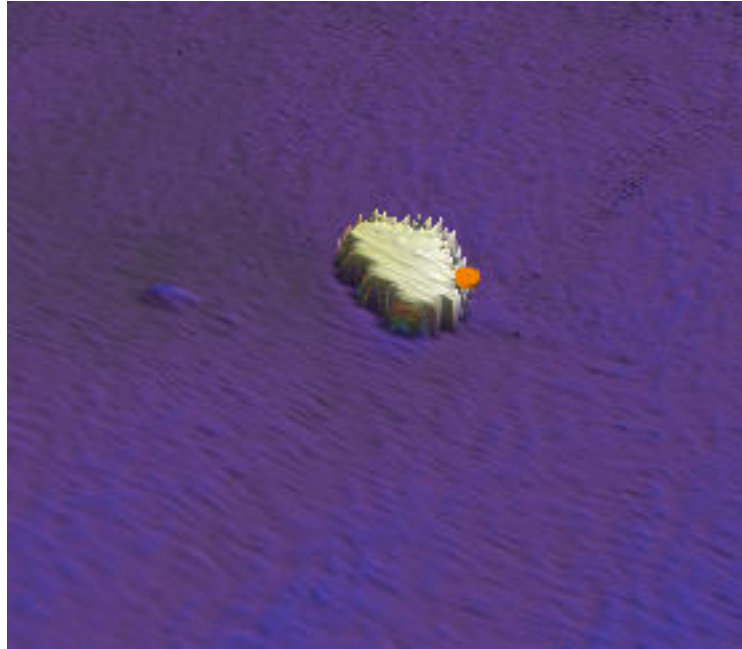


Figure 1.25.1

1.26) Profile/Beam - 1659/213 from h11709 / tj_3101_reson8125 / 2007-228 / 093_1504

Survey Summary

Survey Position: 40° 28' 55.1" N, 073° 57' 44.9" W
Least Depth: 6.01 m (= 19.71 ft = 3.285 fm = 3 fm 1.71 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-228.15:05:52.115 (08/16/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-228 / 093_1504
Profile/Beam: 1659/213
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-228/093_1504	1659/213	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/529_1530	0001	1.23	027.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/530_1622	0002	7.94	239.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/407_1723	0009	49.06	090.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.0m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 6.008 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 19 ft

Feature Images

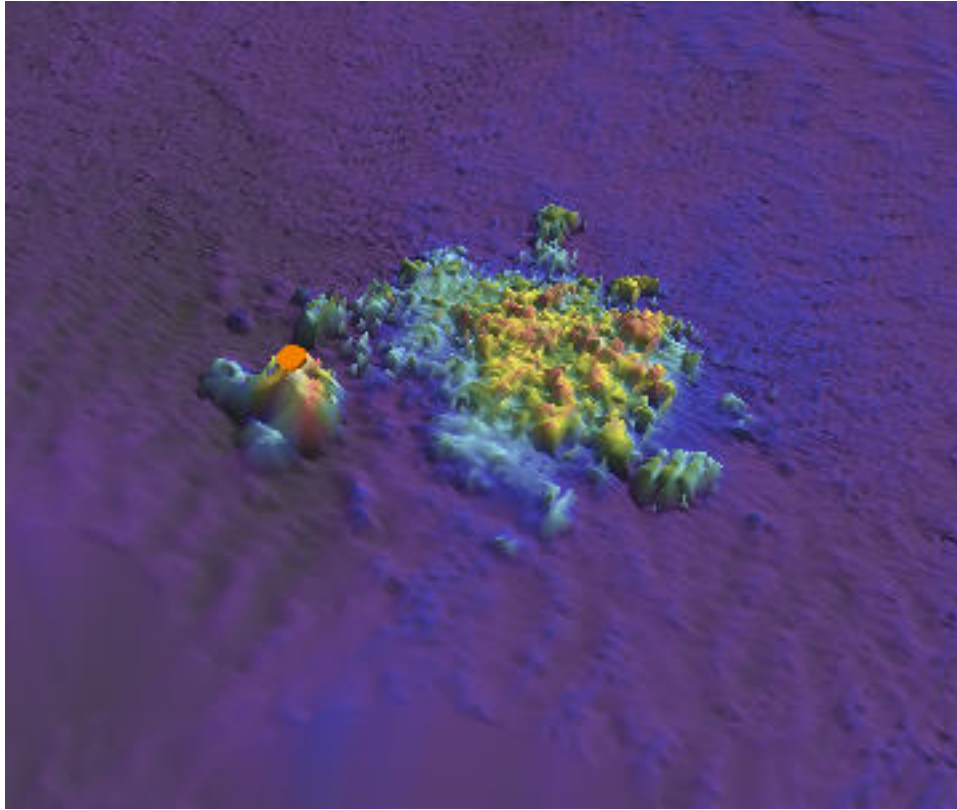


Figure 1.26.1

1.27) Profile/Beam - 385/234 from h11709 / tj_3101_reson8125 / 2007-228 / 095_1507

Survey Summary

Survey Position: 40° 28' 52.8" N, 073° 57' 30.7" W
Least Depth: 5.40 m (= 17.70 ft = 2.951 fm = 2 fm 5.70 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2007-228.15:07:30.521 (08/16/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-228 / 095_1507
Profile/Beam: 385/234
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-228/095_1507	385/234	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-266/928_1955	0004	1.74	290.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-266/964_1941	0003	3.89	298.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/408_1644	0004	5.92	253.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/530_1622	0001	6.59	204.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/408_1644	0003	40.93	288.6	Secondary (grouped)
h11709/tj_3101_reson8125/2007-228/095_1507	561/176	41.36	289.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/530_1622	0009	43.92	291.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-266/964_1941	0002	46.47	292.0	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known

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

VALSOU - 5.396 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rks least depth 17 ft

Feature Images

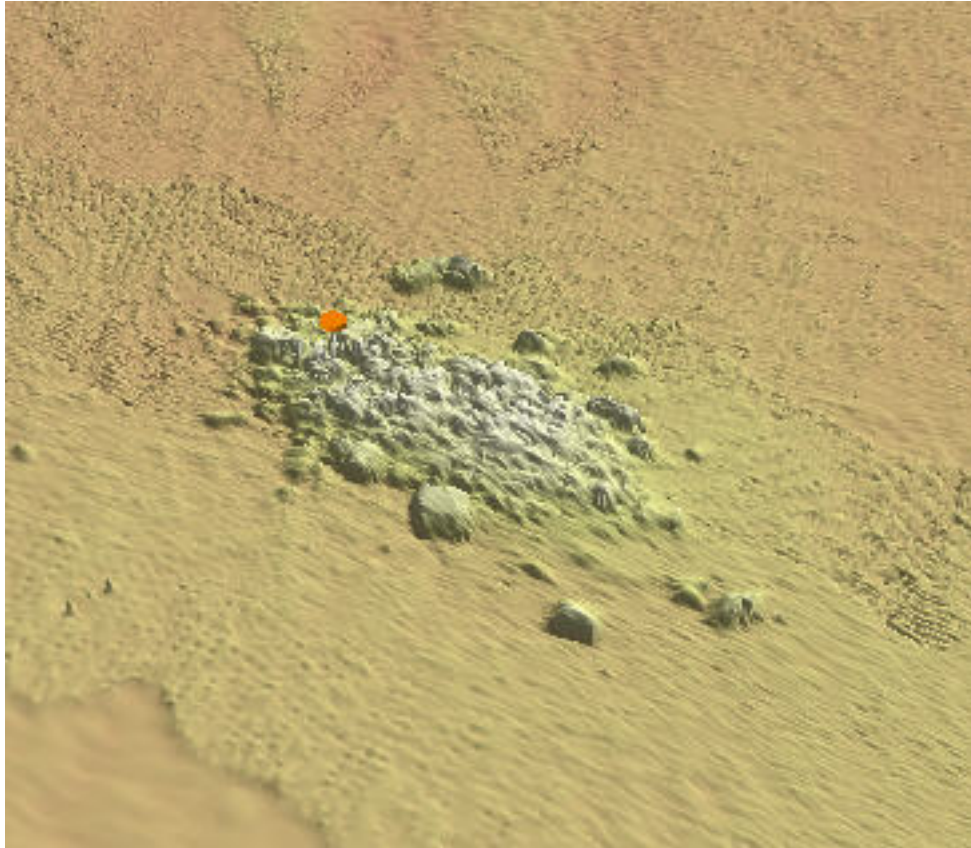


Figure 1.27.1

1.28) Profile/Beam - 579/82 from h11709 / tj_3101_reson8125 / 2007-228 / 101_1514

Survey Summary

Survey Position: 40° 28' 55.7" N, 073° 57' 31.5" W
Least Depth: 5.37 m (= 17.62 ft = 2.937 fm = 2 fm 5.62 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-228.15:15:10.977 (08/16/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-228 / 101_1514
Profile/Beam: 579/82
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-228/101_1514	579/82	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-228/101_1514	589/114	3.34	149.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/408_1644	0006	6.05	153.2	Secondary
h11709/tj_3102_klein5000_sss100/2007-217/514_1657	0001	6.38	216.2	Secondary
h11709/tj_3102_klein5000_sss300/2007-266/928_1955	0006	6.86	262.6	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12401_1, 12324_1, 12327_1, 12326_1)
 2 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.372 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 17 ft

Feature Images

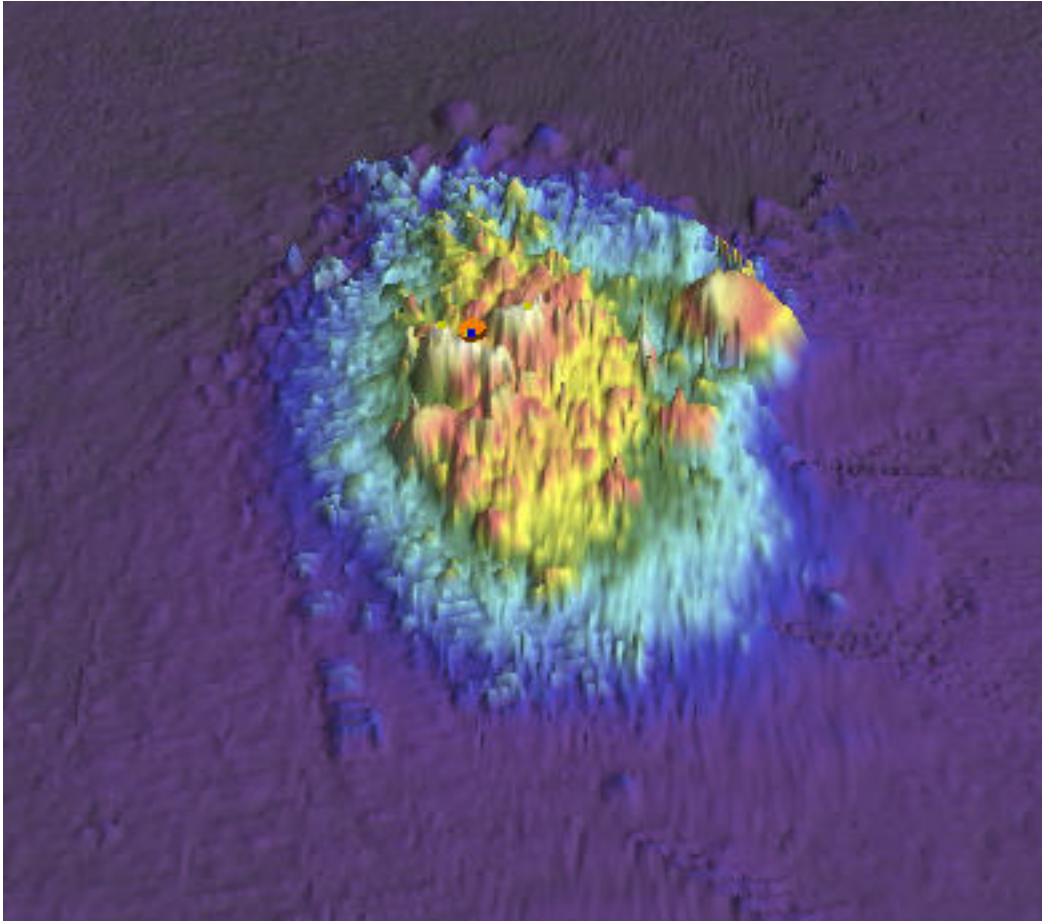


Figure 1.28.1

1.29) Profile/Beam - 324/157 from h11709 / tj_3101_reson8125 / 2007-228 / 108_1534

Survey Summary

Survey Position: 40° 29' 20.1" N, 073° 58' 45.6" W
Least Depth: 7.22 m (= 23.70 ft = 3.951 fm = 3 fm 5.70 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-228.15:34:53.916 (08/16/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-228 / 108_1534
Profile/Beam: 324/157
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-228/108_1534	324/157	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/407_1723	0006	4.27	028.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12401_1, 12324_1, 12327_1, 12326_1)

4fm (12300_1, 13006_1, 13003_1, 14500_1)

7.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.225 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 23 Rk

Feature Images



Figure 1.29.1

1.30) Profile/Beam - 120/232 from h11709 / tj_3101_reson8125 / 2007-265 / 521_1817

Survey Summary

Survey Position: 40° 29' 05.6" N, 073° 57' 24.9" W
Least Depth: 5.87 m (= 19.27 ft = 3.211 fm = 3 fm 1.27 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.151 m
Timestamp: 2007-265.18:17:58.724 (09/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-265 / 521_1817
Profile/Beam: 120/232
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-265/521_1817	120/232	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-266/132_2021	0001	1.47	265.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/411_1352	0001	5.73	045.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.9m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.873 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 19 ft

1.31) Profile/Beam - 157/214 from h11709 / tj_3101_reson8125 / 2007-266 / 642_1632

Survey Summary

Survey Position: 40° 29' 00.6" N, 073° 57' 50.6" W
Least Depth: 6.35 m (= 20.83 ft = 3.472 fm = 3 fm 2.83 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-266.16:32:49.832 (09/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-266 / 642_1632
Profile/Beam: 157/214
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-266/642_1632	157/214	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/408_1644	0008	3.31	219.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.350 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 21 ft

Feature Images

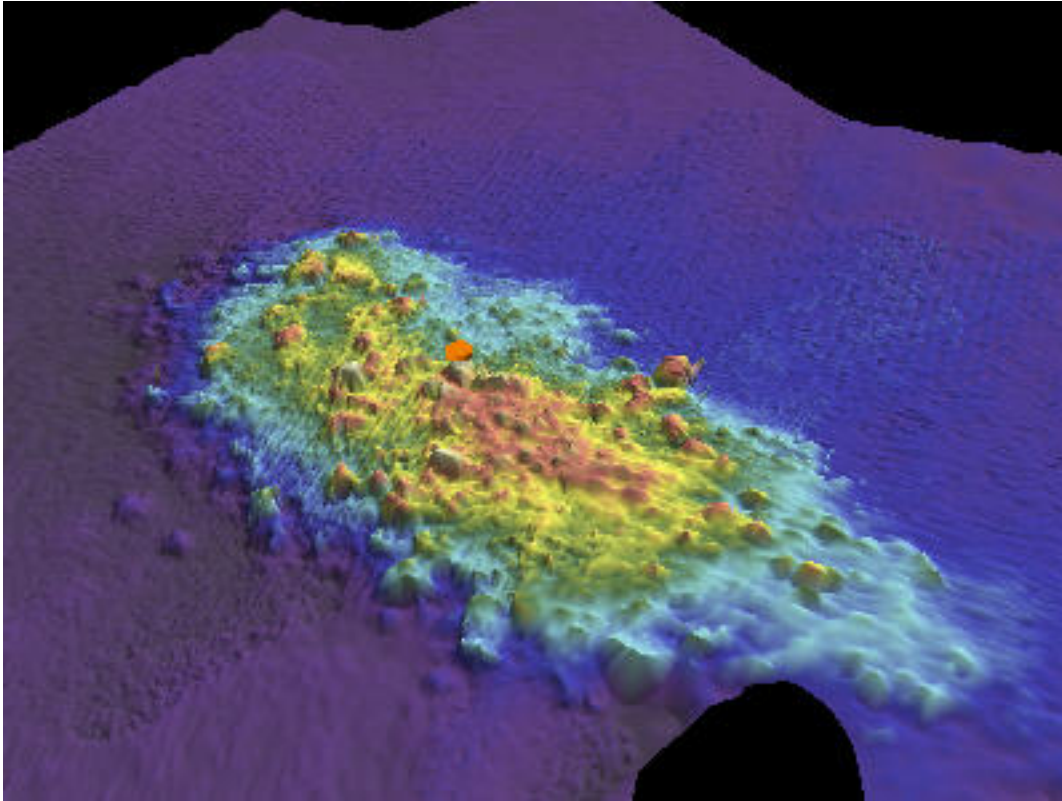


Figure 1.31.1

1.32) Profile/Beam - 285/21 from h11709 / tj_3101_reson8125 / 2007-227 / 085_1904

Survey Summary

Survey Position: 40° 28' 56.9" N, 073° 58' 24.9" W
Least Depth: 8.17 m (= 26.82 ft = 4.470 fm = 4 fm 2.82 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.151 m
Timestamp: 2007-227.19:04:44.297 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 085_1904
Profile/Beam: 285/21
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/085_1904	285/21	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/400_2013	0001	6.31	065.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/503_1352	0003	12.17	351.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

27ft (12401_1, 12324_1, 12327_1, 12326_1)

4 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

8.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.174 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 27 ft

Feature Images

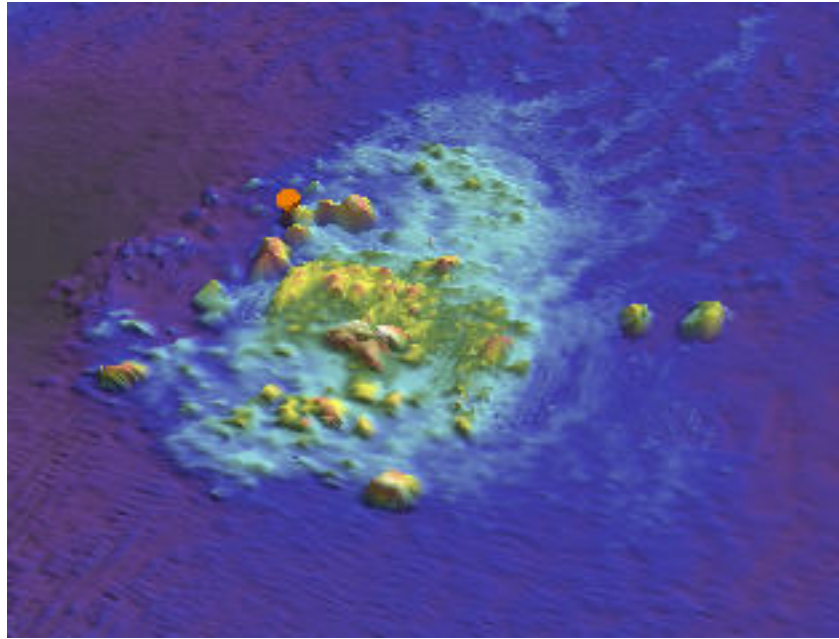


Figure 1.32.1

1.33) Profile/Beam - 1838/20 from h11709 / tj_3101_reson8125 / 2007-227 / 085_1904

Survey Summary

Survey Position: 40° 28' 60.0" N, 073° 58' 38.0" W
Least Depth: 8.63 m (= 28.32 ft = 4.721 fm = 4 fm 4.32 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.153 m
Timestamp: 2007-227.19:06:16.698 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 085_1904
Profile/Beam: 1838/20
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/085_1904	1838/20	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/503_1352	0005	2.09	262.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-236/299_1744	0006	7.15	003.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-236/299_1735	0010	14.90	114.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

28ft (12401_1, 12324_1, 12327_1, 12326_1)
 4 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 8.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 8.633 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 28 ft

Feature Images



Figure 1.33.1

1.34) Profile/Beam - 142/44 from h11709 / tj_3101_reson8125 / 2007-265 / 519_2103

Survey Summary

Survey Position: 40° 28' 48.2" N, 073° 58' 14.2" W
Least Depth: 7.80 m (= 25.60 ft = 4.267 fm = 4 fm 1.60 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.151 m
Timestamp: 2007-265.21:04:05.007 (09/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-265 / 519_2103
Profile/Beam: 142/44
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-265/519_2103	142/44	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/299_1735	0005	2.90	193.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

25ft (12401_1, 12324_1, 12327_1, 12326_1)
 4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 7.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.804 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 25 ft

Feature Images

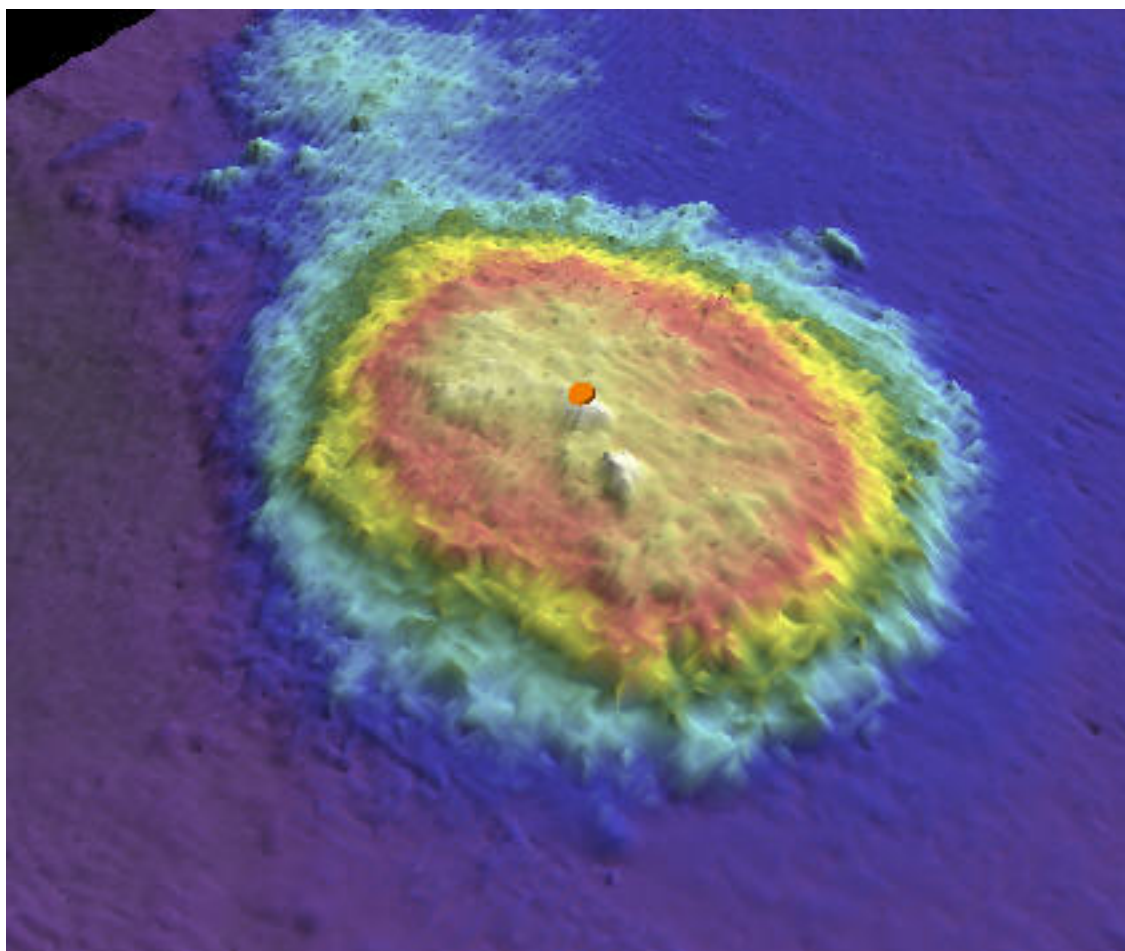


Figure 1.34.1

1.35) Profile/Beam - 155/94 from h11709 / tj_3101_reson8125 / 2007-267 / 728_1253

Survey Summary

Survey Position: 40° 29' 10.2" N, 073° 58' 38.7" W
Least Depth: 8.65 m (= 28.38 ft = 4.729 fm = 4 fm 4.38 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-267.12:54:02.466 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 728_1253
Profile/Beam: 155/94
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted Rock was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and Final TCARI for water level computation. Evaluated by the hydrographer as not a DTON.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/728_1253	155/94	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/401_1910	0010	8.10	279.1	Secondary

Hydrographer Recommendations

Chart a Rock in current survey position with a least depth of 8.65 meters (28 feet).

Cartographically-Rounded Depth (Affected Charts):

28ft (12401_1, 12324_1, 12327_1, 12326_1)
 4 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 8.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.649 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 28 ft

Feature Images

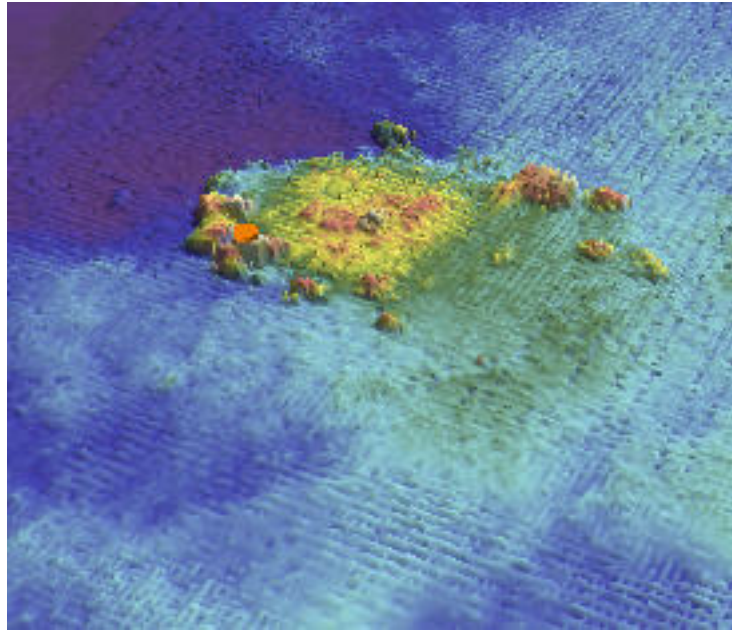


Figure 1.35.1

1.36) Profile/Beam - 2157/12 from h11709 / tj_3102_reson8101 / 2007-217 / 531_1738

Survey Summary

Survey Position: 40° 29' 01.7" N, 073° 57' 34.6" W
Least Depth: 5.57 m (= 18.28 ft = 3.047 fm = 3 fm 0.28 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.394 m
Timestamp: 2007-217.17:42:25.927 (08/05/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-217 / 531_1738
Profile/Beam: 2157/12
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-217/531_1738	2157/12	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/531_1738	0002	5.75	132.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/409_1634	0002	16.55	094.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12401_1, 12324_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.572 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 18 ft

Feature Images

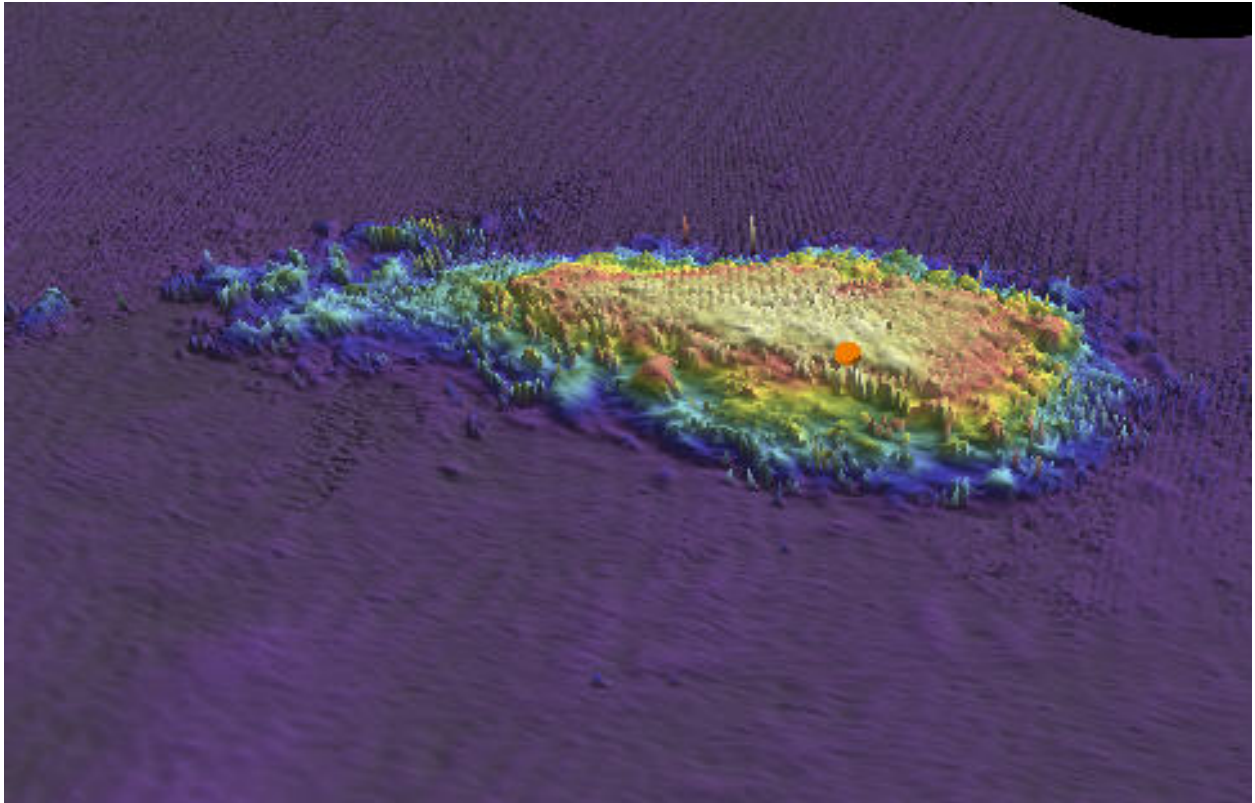


Figure 1.36.1

1.37) Profile/Beam - 5164/60 from h11709 / tj_3102_reson8101 / 2007-217 / 531_1738

Survey Summary

Survey Position: 40° 29' 25.4" N, 073° 58' 32.4" W
Least Depth: 6.89 m (= 22.60 ft = 3.766 fm = 3 fm 4.60 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.394 m
Timestamp: 2007-217.17:48:03.746 (08/05/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-217 / 531_1738
Profile/Beam: 5164/60
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-217/531_1738	5164/60	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/412_1417	0013	2.85	152.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.9m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.888 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rk least depth 22 ft.

Feature Images

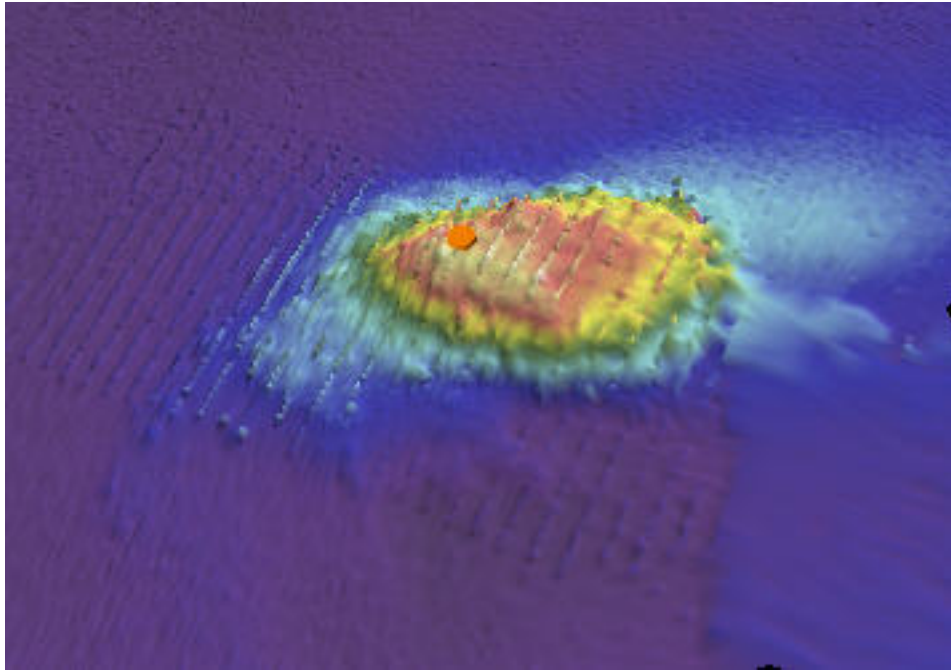


Figure 1.37.1

1.38) Profile/Beam - 402/100 from h11709 / tj_3101_reson8125 / 2007-181 / 064_1715

Survey Summary

Survey Position: 40° 31' 28.1" N, 074° 00' 59.4" W
Least Depth: 6.20 m (= 20.34 ft = 3.390 fm = 3 fm 2.34 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-181.17:15:49.569 (06/30/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-181 / 064_1715
Profile/Beam: 402/100
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-181/064_1715	402/100	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-231/414_1306	0001	2.01	059.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-219/518_1722	0001	2.62	217.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-231/402_1714	0002	3.18	034.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-187/518_1706	0001	4.37	261.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12402_1, 12327_1, 12326_1)

3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

6.2m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

VALSOU - 6.199 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 20 ft

Feature Images

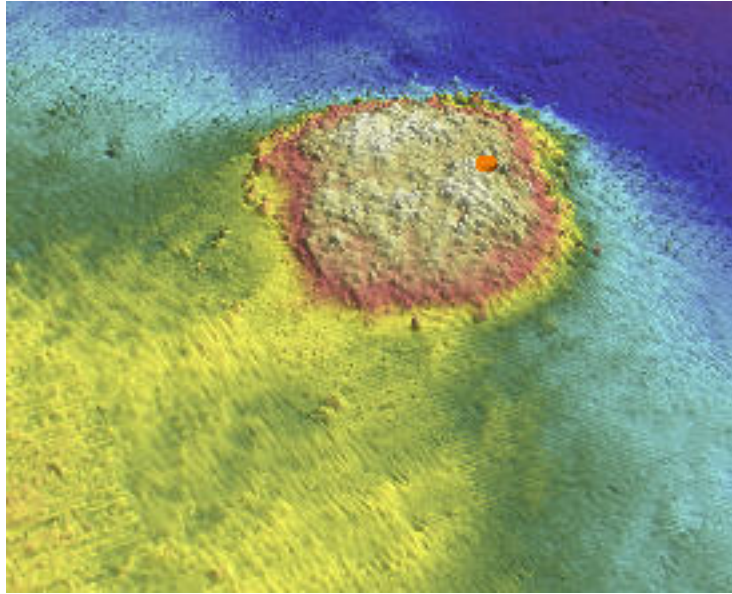


Figure 1.38.1

1.39) Profile/Beam - 160/12 from h11709 / tj_3101_reson8125 / 2007-181 / 071_1553

Survey Summary

Survey Position: 40° 31' 27.0" N, 074° 01' 05.8" W
Least Depth: 5.03 m (= 16.52 ft = 2.753 fm = 2 fm 4.52 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-181.15:53:48.342 (06/30/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-181 / 071_1553
Profile/Beam: 160/12
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-181/071_1553	160/12	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-181/071_1553	163/8	0.74	102.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-219/550_1704	0001	2.29	122.0	Secondary
h11709/tj_3102_klein5000_sss300/2007-267/981_2006	0001	3.13	272.5	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

16ft (12402_1, 12327_1, 12326_1)

2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

5.0m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam

VALSOU - 5.034 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 16 ft

Feature Images

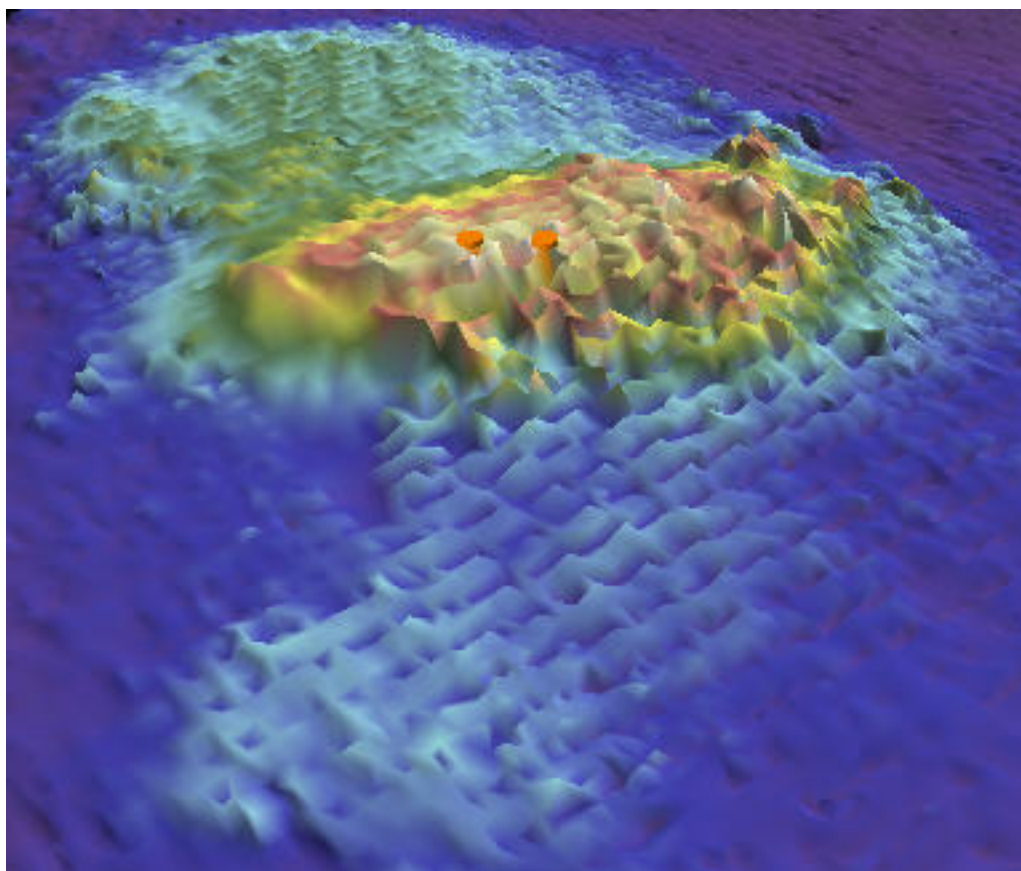


Figure 1.39.1

1.40) Profile/Beam - 335/132 from h11709 / tj_3101_reson8125 / 2007-183 / 225_1844

Survey Summary

Survey Position: 40° 30' 36.9" N, 074° 01' 16.7" W
Least Depth: 4.94 m (= 16.22 ft = 2.703 fm = 2 fm 4.22 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-183.18:44:27.165 (07/02/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-183 / 225_1844
Profile/Beam: 335/132
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-183/225_1844	335/132	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/533_1818	0004	1.56	062.0	Secondary

Hydrographer Recommendations

[None]

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 - 4.944 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" least depth = 16 ft.

Feature Images

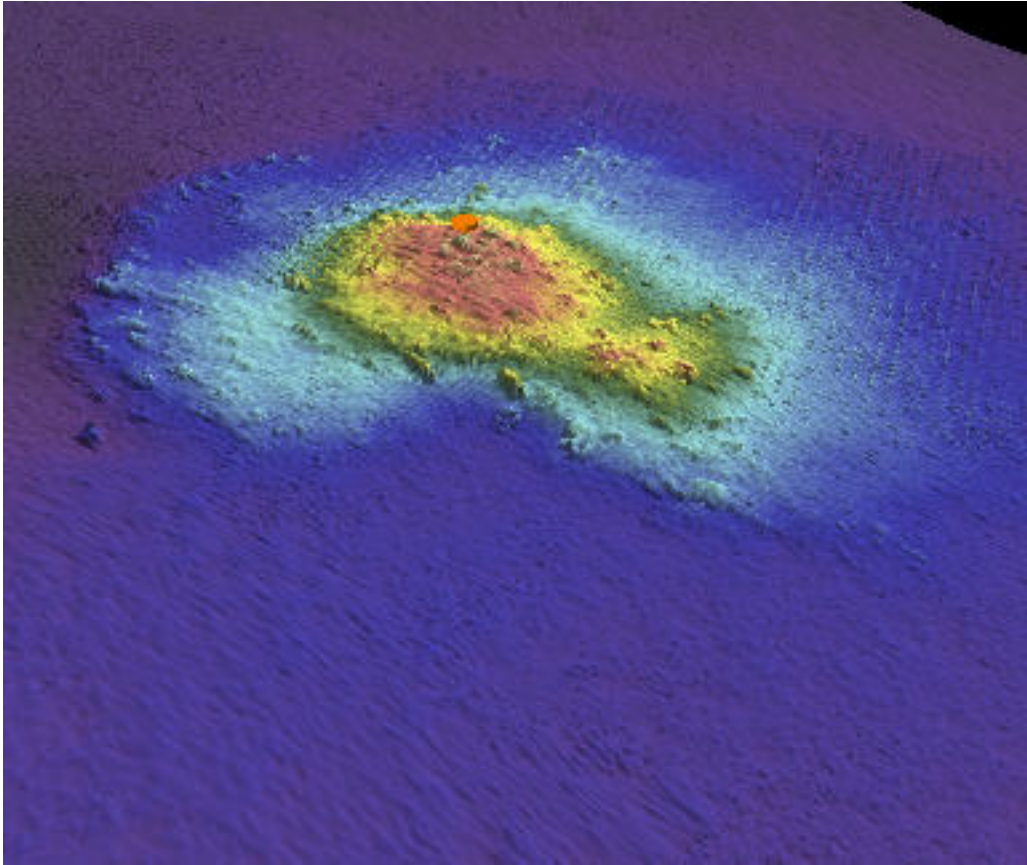


Figure 1.40.1

1.41) Profile/Beam - 1831/138 from h11709 / tj_3101_reson8125 / 2007-184 / 821_1424

Survey Summary

Survey Position: 40° 31' 24.5" N, 074° 02' 38.5" W
Least Depth: 6.77 m (= 22.20 ft = 3.701 fm = 3 fm 4.20 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-184.14:26:13.690 (07/03/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-184 / 821_1424
Profile/Beam: 1831/138
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Shoalest point of several Obstructions. These uncharted dangerous obstructions were found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-184/821_1424	1831/138	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-266/472_1246	0005	4.53	349.8	Secondary
h11709/tj_3102_klein5000_sss200/2007-237/471_1514	0001	8.51	138.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-187/543_1912	0010	20.28	278.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-266/472_1246	0006	31.95	219.0	Secondary (grouped)
h11709/tj_3101_reson8125/2007-269/418_1931	457/102	33.16	340.8	Secondary (grouped)
h11709/tj_3101_reson8125/2007-269/060_1933	180/237	33.61	239.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-187/543_1912	0011	34.57	343.2	Secondary (grouped)
h11709/tj_3101_reson8125/2007-269/418_1931	121/66	56.54	222.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-237/129_1744	0005	62.44	223.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12402_1, 12327_1, 12326_1)

3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

6.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 3:found by multi-beam
VALSOU - 6.768 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart Rks least depth 22 ft

Feature Images

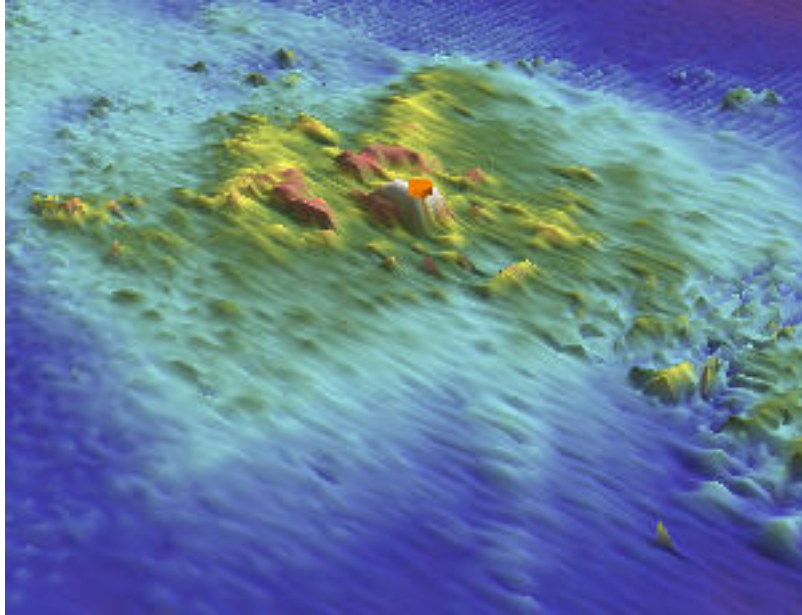


Figure 1.41.1

1.42) Profile/Beam - 10739/124 from h11709 / tj_3101_reson8125 / 2007-184 / 833_1553

Survey Summary

Survey Position: 40° 31' 43.7" N, 073° 57' 01.8" W
Least Depth: 6.87 m (= 22.54 ft = 3.756 fm = 3 fm 4.54 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-184.16:05:35.820 (07/03/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-184 / 833_1553
Profile/Beam: 10739/124
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-184/833_1553	10739/124	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-184/833_1553	10630/237	35.16	050.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12402_1, 12327_1, 12326_1)

3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

6.9m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 STATUS - 1:permanent
 TECSOU - 3:found by multi-beam
 VALSOU - 6.869 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Part of chain of Rks. Chart Least depth = 22 ft

Feature Images

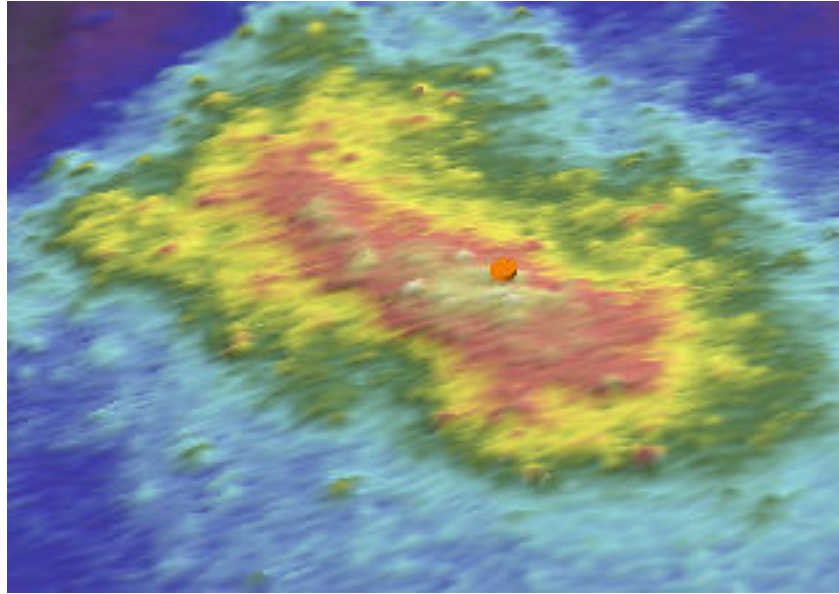


Figure 1.42.1

1.43) Profile/Beam - 4539/180 from h11709 / tj_3101_reson8125 / 2007-184 / 904_1357

Survey Summary

Survey Position: 40° 31' 08.4" N, 074° 02' 03.1" W
Least Depth: 6.29 m (= 20.65 ft = 3.441 fm = 3 fm 2.65 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-184.14:01:48.172 (07/03/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-184 / 904_1357
Profile/Beam: 4539/180
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-184/904_1357	4539/180	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-227/528_1846	0009	0.44	128.6	Secondary
h11709/tj_3102_klein5000_sss200/2007-236/419_1436	0004	3.77	270.1	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12402_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.3m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.293 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20 ft Rk

Feature Images

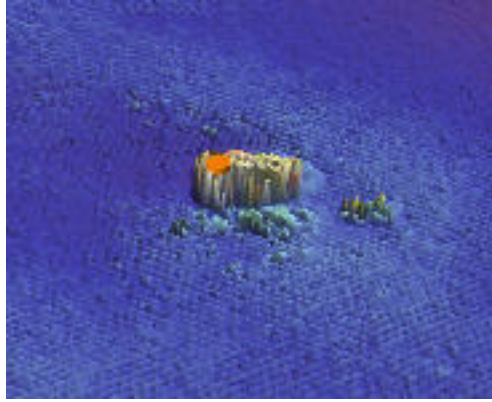


Figure 1.43.1

1.44) Profile/Beam - 1413/26 from h11709 / tj_3101_reson8125 / 2007-221 / 002_1438

Survey Summary

Survey Position: 40° 28' 18.0" N, 073° 56' 56.9" W
Least Depth: 6.54 m (= 21.46 ft = 3.576 fm = 3 fm 3.46 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-221.14:39:41.745 (08/09/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-221 / 002_1438
Profile/Beam: 1413/26
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-221/002_1438	1413/26	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-188/259_1305	0004	3.24	006.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-183/356_1806	0007	4.17	199.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-183/356_1806	0006	23.26	314.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.5m (5161_1)

S-57 Data

[None]

Office Notes

Chart 21 ft Rks

Feature Images

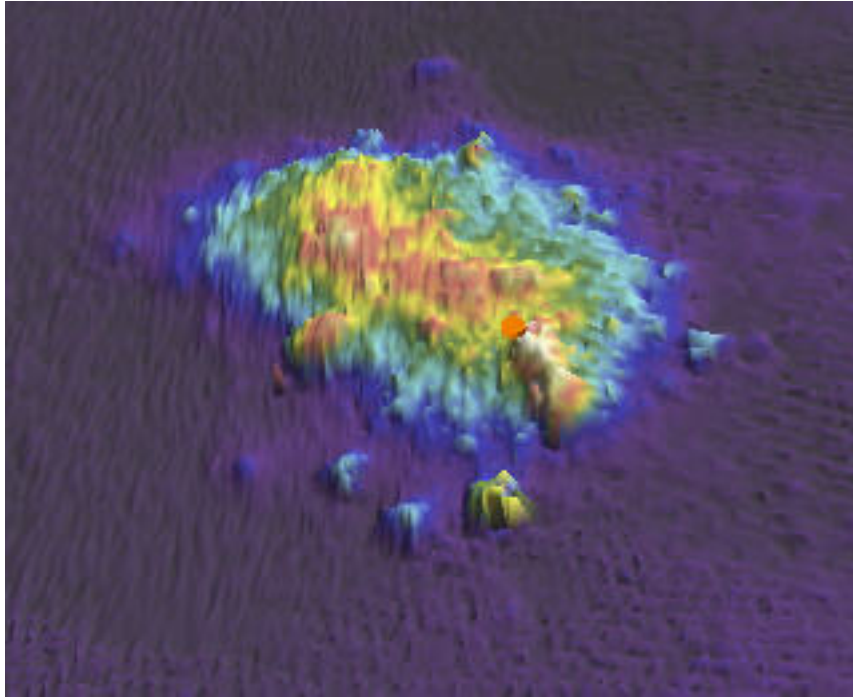


Figure 1.44.1

1.45) Profile/Beam - 281/49 from h11709 / tj_3101_reson8125 / 2007-221 / 031_1507

Survey Summary

Survey Position: 40° 28' 06.5" N, 073° 56' 52.8" W
Least Depth: 6.05 m (= 19.85 ft = 3.309 fm = 3 fm 1.85 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-221.15:07:24.912 (08/09/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-221 / 031_1507
Profile/Beam: 281/49
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-221/031_1507	281/49	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-183/355_1822	0003	2.80	276.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-188/258_1323	0002	5.06	130.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.1m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.051 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20 Rk

Feature Images

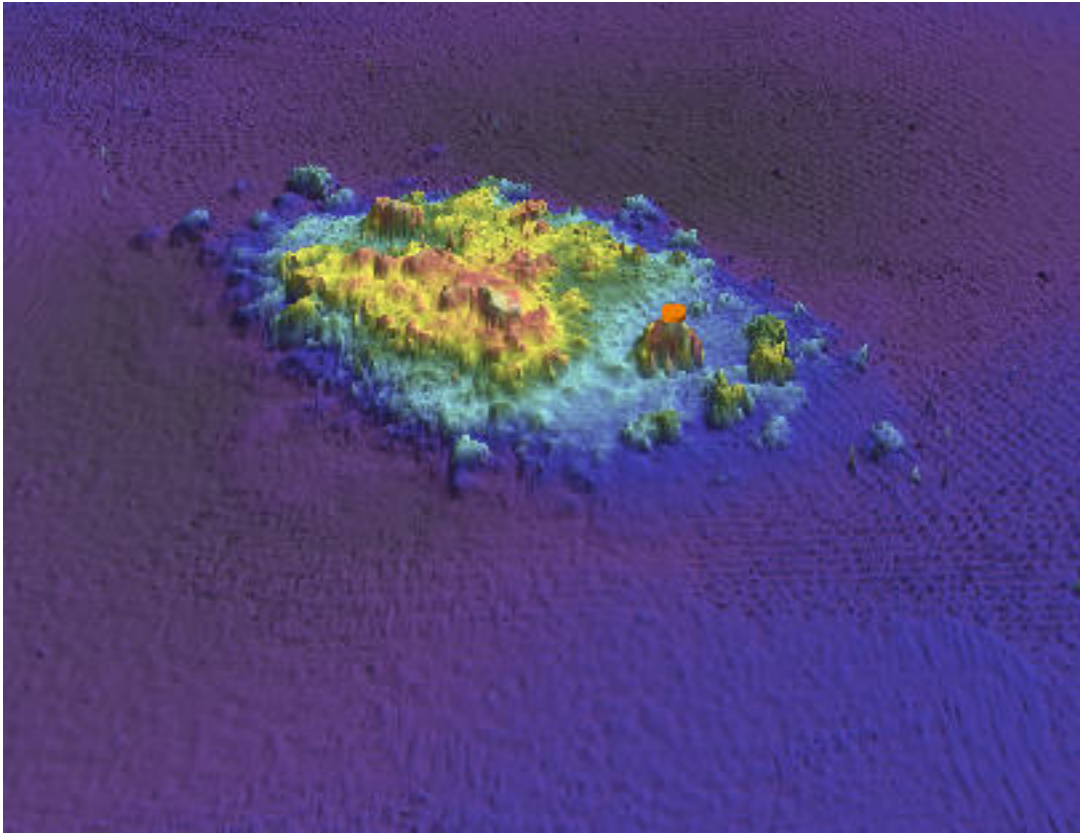


Figure 1.45.1

1.46) Profile/Beam - 834/161 from h11709 / tj_3101_reson8125 / 2007-221 / 125_1355

Survey Summary

Survey Position: 40° 28' 25.0" N, 073° 57' 02.5" W
Least Depth: 5.76 m (= 18.90 ft = 3.151 fm = 3 fm 0.90 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-221.13:56:15.374 (08/09/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-221 / 125_1355
Profile/Beam: 834/161
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Chart 19 "Rks"

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-221/125_1355	834/161	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-188/260_1248	0003	1.19	125.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-183/357_1745	0009	4.78	057.7	Secondary (grouped)

Hydrographer Recommendations

Chart 19 "Rks"

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12324_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.762 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

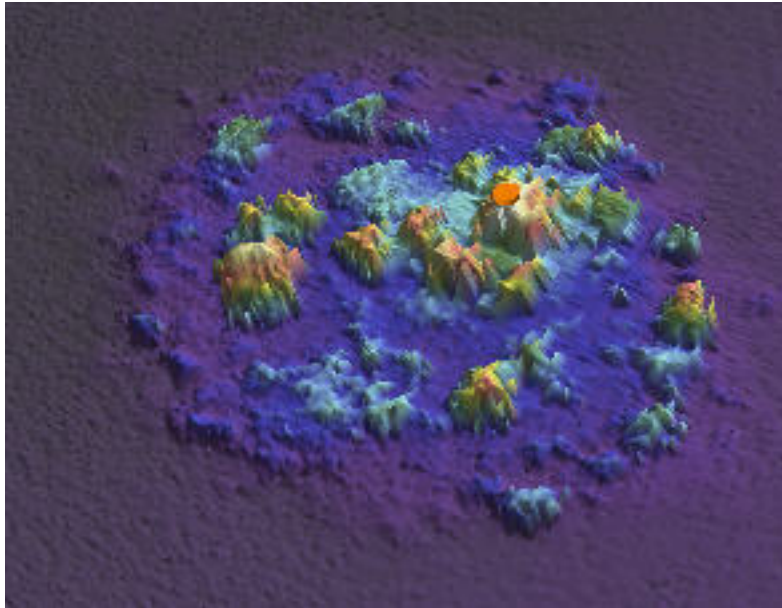


Figure 1.46.1

1.47) Profile/Beam - 2653/130 from h11709 / tj_3101_reson8125 / 2007-225 / 023_1754

Survey Summary

Survey Position: 40° 28' 15.1" N, 073° 56' 27.6" W
Least Depth: 5.34 m (= 17.53 ft = 2.922 fm = 2 fm 5.53 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-225.17:57:41.370 (08/13/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-225 / 023_1754
Profile/Beam: 2653/130
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-225/023_1754	2653/130	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-184/253_1829	0005	11.26	104.0	Secondary (grouped)
h11709/tj_3101_reson8125/2007-225/024_1800	1442/43	26.48	298.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-184/350_1724	0005	33.56	347.6	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12401_1, 12324_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.3m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 5.343 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 17 Rks

Feature Images

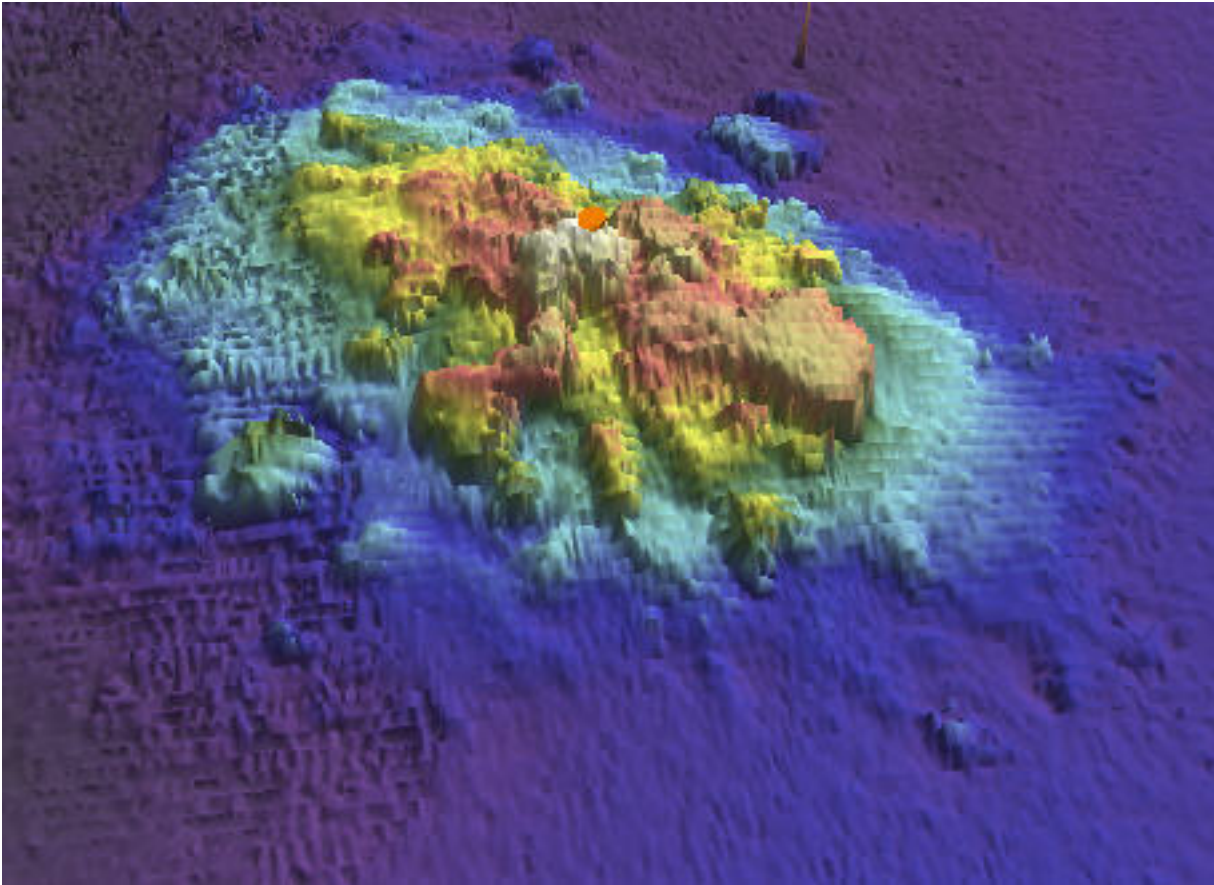


Figure 1.47.1

1.48) Profile/Beam - 580/233 from h11709 / tj_3101_reson8125 / 2007-225 / 084_1835

Survey Summary

Survey Position: 40° 28' 30.4" N, 073° 56' 15.0" W
Least Depth: 7.34 m (= 24.10 ft = 4.016 fm = 4 fm 0.10 ft)
TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.153 m
Timestamp: 2007-225.18:36:38.533 (08/13/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-225 / 084_1835
Profile/Beam: 580/233
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-225/084_1835	580/233	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-182/235_1404	0015	15.90	238.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

24ft (12401_1, 12324_1, 12327_1, 12326_1)
 4fm (12300_1, 13006_1, 13003_1, 14500_1)
 7.3m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.345 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" least depth = 24 ft

Feature Images

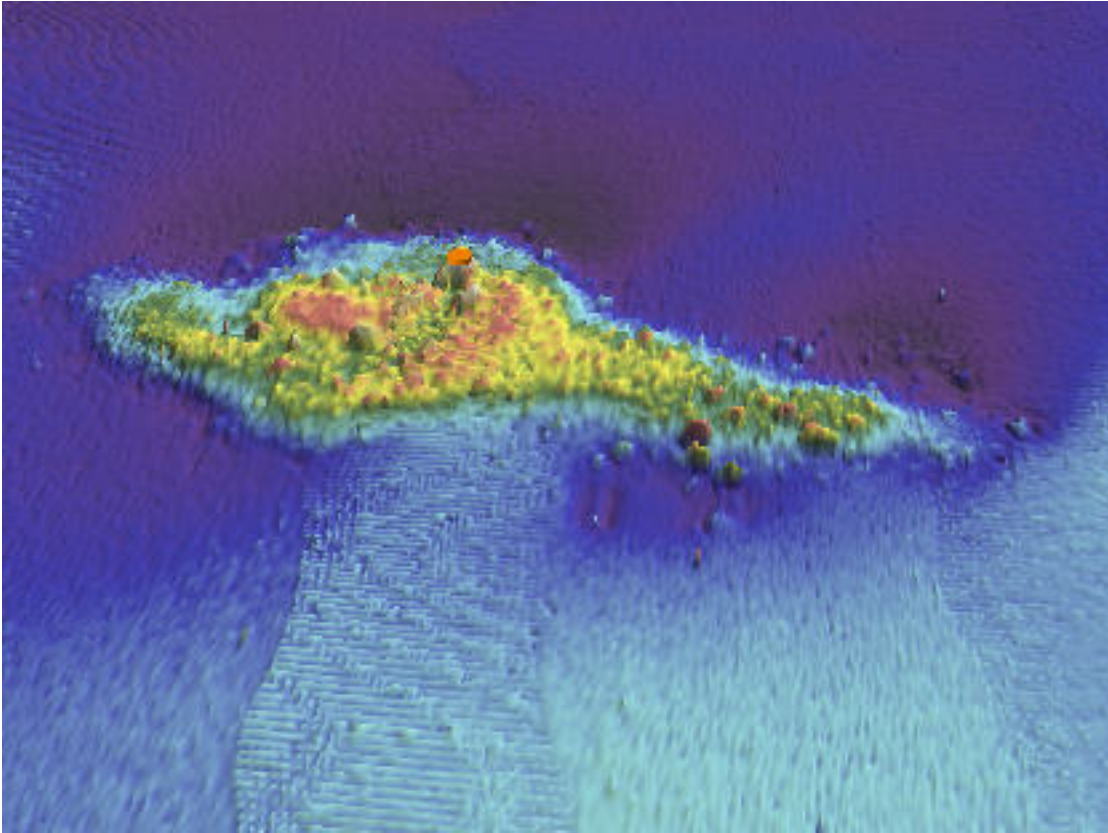


Figure 1.48.1

1.49) Profile/Beam - 459/240 from h11709 / tj_3101_reson8125 / 2007-225 / 151_1854

Survey Summary

Survey Position: 40° 28' 22.1" N, 073° 56' 10.8" W
Least Depth: 6.64 m (= 21.78 ft = 3.631 fm = 3 fm 3.78 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.154 m
Timestamp: 2007-225.18:55:05.492 (08/13/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-225 / 151_1854
Profile/Beam: 459/240
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-225/151_1854	459/240	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-182/235_1404	0013	9.44	060.9	Secondary (grouped)
h11709/tj_3101_reson8125/2007-225/150_1847	716/221	50.42	240.7	Secondary (grouped)
h11709/tj_3101_reson8125/2007-225/150_1847	558/131	63.67	198.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 6.640 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22 Rks

Feature Images

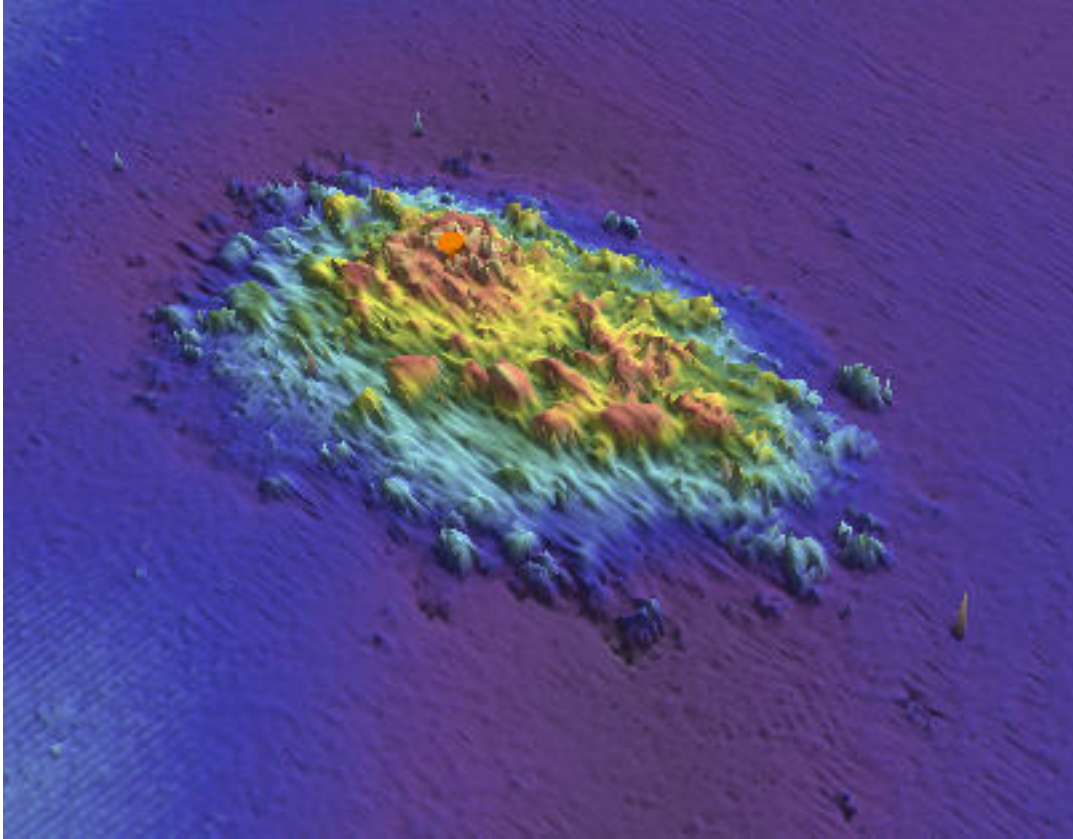


Figure 1.49.1

1.50) Profile/Beam - 152/23 from h11709 / tj_3101_reson8125 / 2007-226 / 003_1925

Survey Summary

Survey Position: 40° 29' 28.0" N, 073° 56' 31.5" W
Least Depth: 7.20 m (= 23.63 ft = 3.939 fm = 3 fm 5.63 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-226.19:25:51.691 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 003_1925
Profile/Beam: 152/23
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/003_1925	152/23	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-184/254_1847	0002	8.62	092.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-184/351_1701	0001	8.64	258.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12401_1, 12324_1, 12327_1, 12326_1)

4fm (12300_1, 13006_1, 13003_1, 14500_1)

7.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.203 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 23 Rk

Feature Images

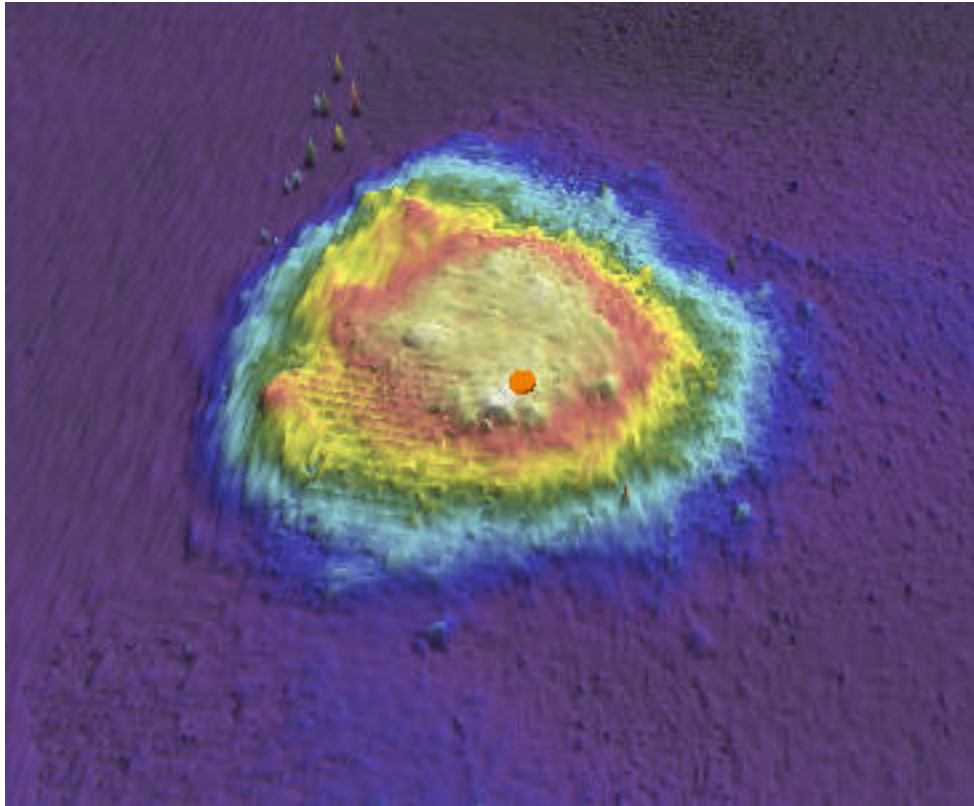


Figure 1.50.1

1.51) Profile/Beam - 148/104 from h11709 / tj_3101_reson8125 / 2007-226 / 041_1851

Survey Summary

Survey Position: 40° 29' 17.5" N, 073° 55' 24.6" W
Least Depth: 13.84 m (= 45.42 ft = 7.570 fm = 7 fm 3.42 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.154 m
Timestamp: 2007-226.18:52:07.812 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 041_1851
Profile/Beam: 148/104
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/041_1851	148/104	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-182/228_1658	0001	4.76	174.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-181/323_1605	0001	20.01	111.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

45ft (12324_1, 12327_1, 12326_1)

7 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

13.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 13.844 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" 45-ft

Feature Images

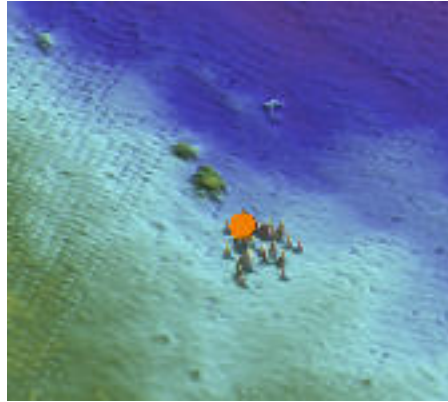


Figure 1.51.1

1.52) Profile/Beam - 3522/217 from h11709 / tj_3101_reson8125 / 2007-226 / 128_1332

Survey Summary

Survey Position: 40° 27' 34.7" N, 073° 56' 26.4" W
Least Depth: 7.47 m (= 24.52 ft = 4.087 fm = 4 fm 0.52 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.151 m
Timestamp: 2007-226.13:35:52.221 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 128_1332
Profile/Beam: 3522/217
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/128_1332	3522/217	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-184/252_1808	0004	9.28	274.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

24ft (12401_1, 12324_1, 12327_1, 12326_1)

4fm (12300_1, 13006_1, 13003_1, 14500_1)

7.5m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.474 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 24 Rk

Feature Images

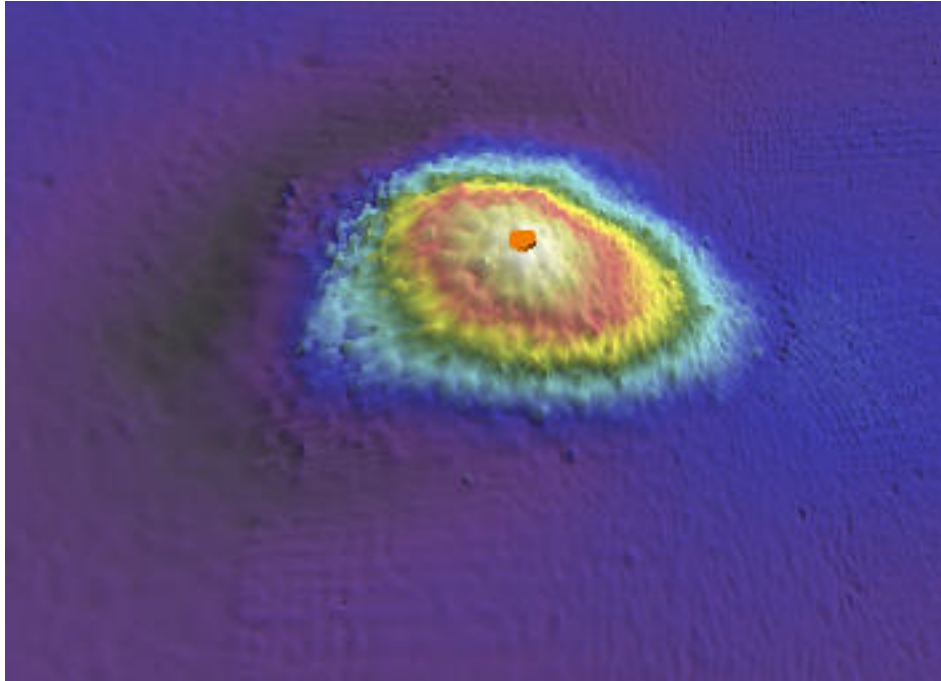


Figure 1.52.1

1.53) Profile/Beam - 614/197 from h11709 / tj_3101_reson8125 / 2007-226 / 162_1459

Survey Summary

Survey Position: 40° 27' 28.3" N, 073° 55' 58.7" W
Least Depth: 11.65 m (= 38.22 ft = 6.370 fm = 6 fm 2.22 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.155 m
Timestamp: 2007-226.15:00:09.508 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 162_1459
Profile/Beam: 614/197
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/162_1459	614/197	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-182/233_1442	0001	9.43	088.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-216/009_1416	0001	155.27	046.7	Secondary (grouped)
h11709/tj_3101_reson8125/2007-226/162_1459	166/107	156.21	046.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

38ft (12324_1, 12327_1, 12326_1)

6 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

11.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 11.649 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 38 "Rks"

Feature Images

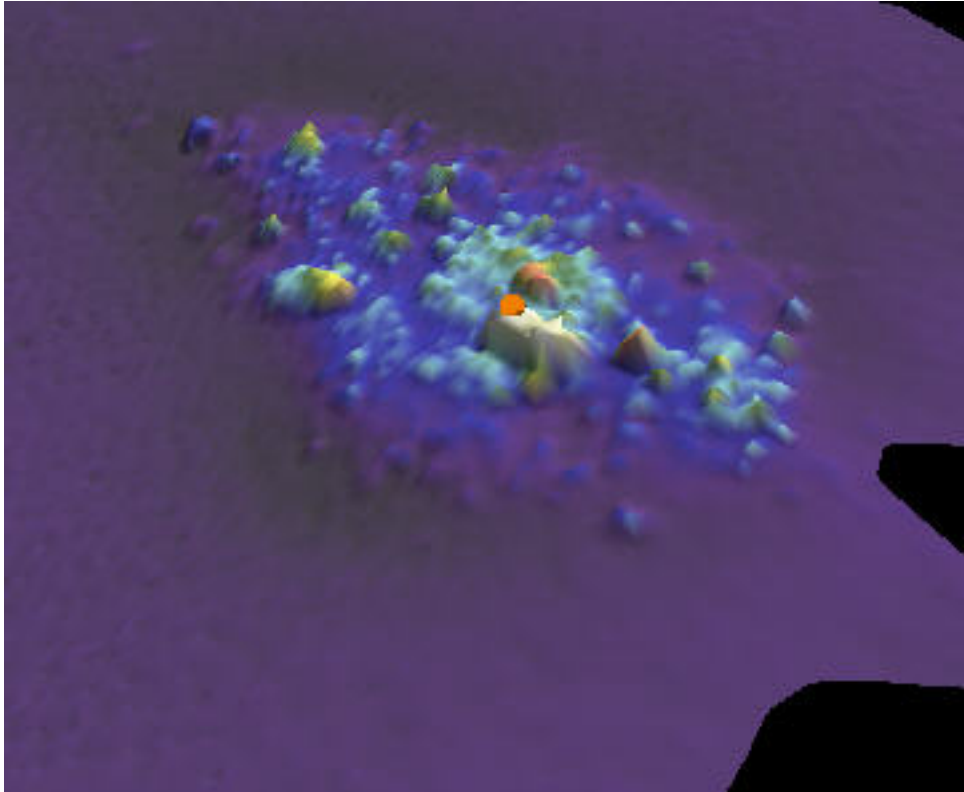


Figure 1.53.1

1.54) Profile/Beam - 1213/214 from h11709 / tj_3101_reson8125 / 2007-226 / 176_1636

Survey Summary

Survey Position: 40° 27' 43.9" N, 073° 55' 31.3" W
Least Depth: 13.27 m (= 43.53 ft = 7.255 fm = 7 fm 1.53 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.160 m
Timestamp: 2007-226.16:38:25.317 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 176_1636
Profile/Beam: 1213/214
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/176_1636	1213/214	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-181/323_1606	0002	10.51	328.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-182/229_1641	0003	16.31	353.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

43ft (12324_1, 12327_1, 12326_1)

7 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

13.3m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam

VALSOU - 13.268 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rks least depth 43 ft.

Feature Images

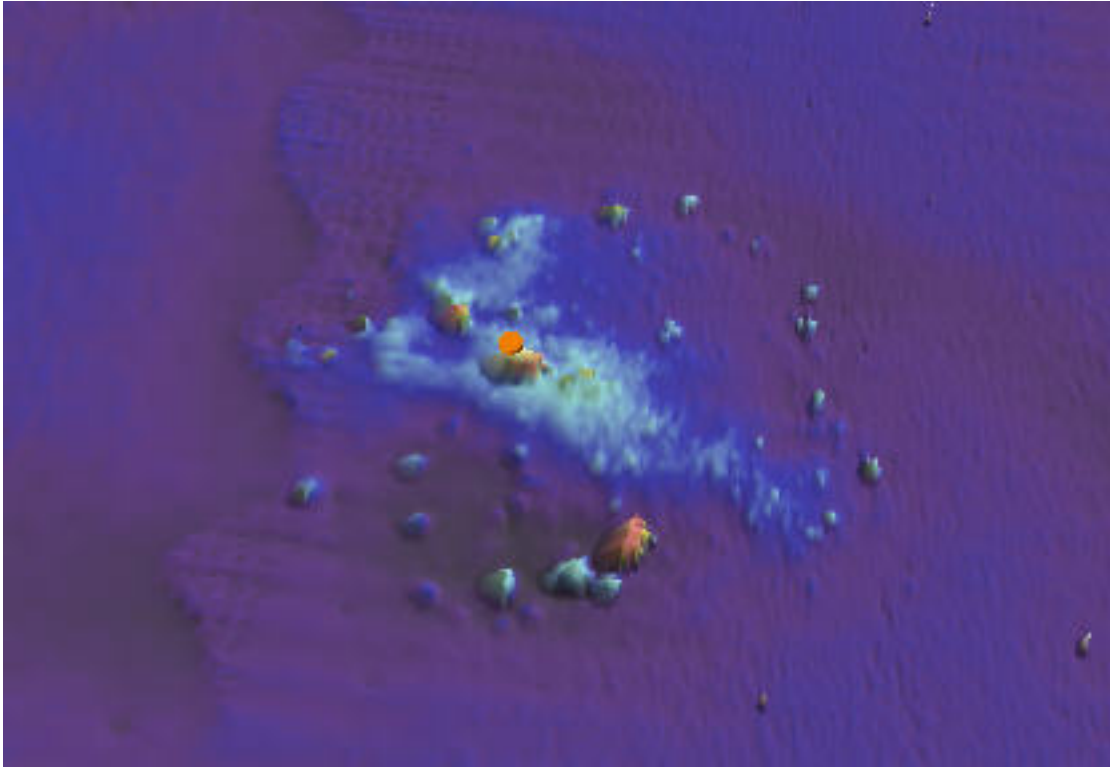


Figure 1.54.1

1.55) Profile/Beam - 211/240 from h11709 / tj_3101_reson8125 / 2007-226 / 195_1742

Survey Summary

Survey Position: 40° 27' 50.3" N, 073° 54' 35.0" W
Least Depth: 17.37 m (= 56.98 ft = 9.497 fm = 9 fm 2.98 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.988 m ; **TVU (TPEv)** ± 0.194 m
Timestamp: 2007-226.17:43:23.299 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 195_1742
Profile/Beam: 211/240
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/195_1742	211/240	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-182/221_1856	0001	3.24	176.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

57ft (12324_1, 12327_1, 12326_1)

9 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

17.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 17.368 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 57 Rk

Feature Images



Figure 1.55.1

1.56) Profile/Beam - 2425/218 from h11709 / tj_3101_reson8125 / 2007-227 / 066_1516

Survey Summary

Survey Position: 40° 28' 12.2" N, 073° 57' 21.5" W
Least Depth: 5.71 m (= 18.75 ft = 3.124 fm = 3 fm 0.75 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-227.15:18:27.037 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 066_1516
Profile/Beam: 2425/218
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This charted shoal area was found to be an area of obstructions and acquired with Klein 5000 SSS and Reson 8125 MBES. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/066_1516	2425/218	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-266/289_1640	0004	6.00	164.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-183/512_1712	0007	10.59	171.5	Secondary (grouped)
h11709/tj_3101_reson8125/2007-227/066_1516	2512/221	20.57	300.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12401_1, 12324_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: NATCON - 3:loose boulders

QUASOU - 6:least depth known

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

VALSOU - 5.714 m

VERDAT - 12:Mean lower low water

WATLEV - 2:always dry

Office Notes

Chart 19 ft Obstrn

Feature Images

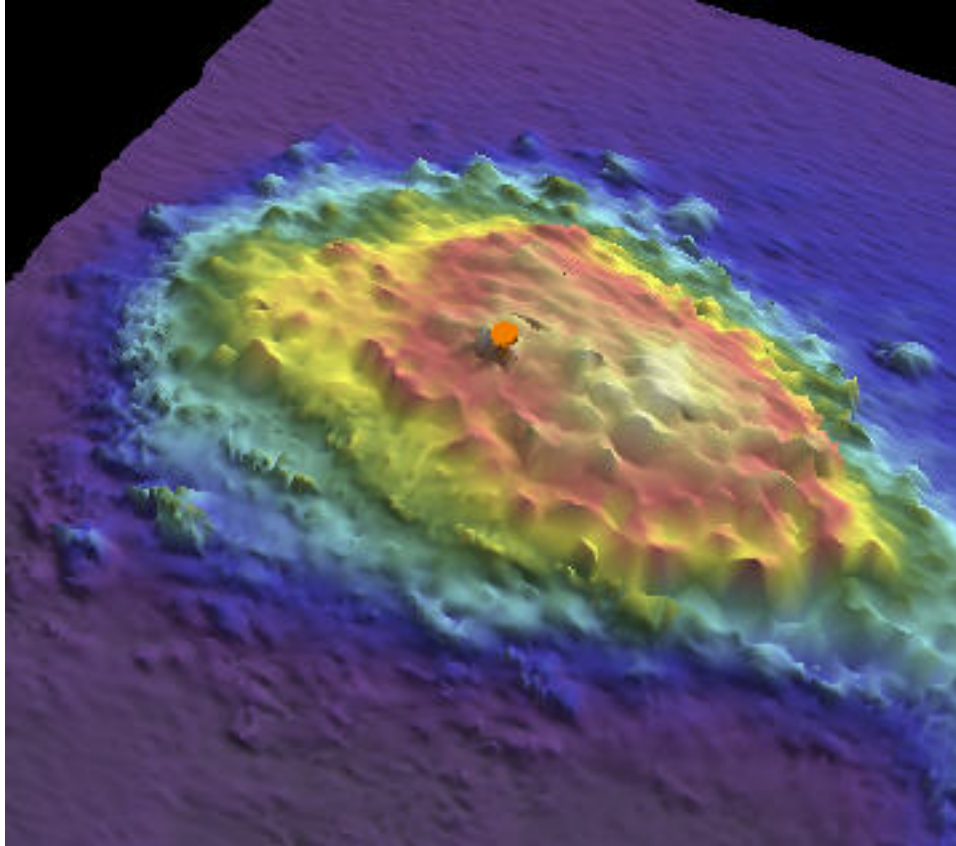


Figure 1.56.1

1.57) Profile/Beam - 2098/232 from h11709 / tj_3101_reson8125 / 2007-227 / 067_1521

Survey Summary

Survey Position: 40° 28' 11.3" N, 073° 57' 19.9" W
Least Depth: 6.09 m (= 20.00 ft = 3.333 fm = 3 fm 2.00 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2007-227.15:23:56.580 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 067_1521
Profile/Beam: 2098/232
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This charted shoal area was found to be an obstruction area and acquired with Klein 5000 Side Scan Sonar and Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. Past charting history indicates buoys were placed in the vicinity.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/067_1521	2098/232	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-227/067_1521	2030/167	15.86	324.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.1m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: NATCON - 2,3:concreted,loose boulders
 QUASOU - 1:depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 6.095 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20 ft Obstm.

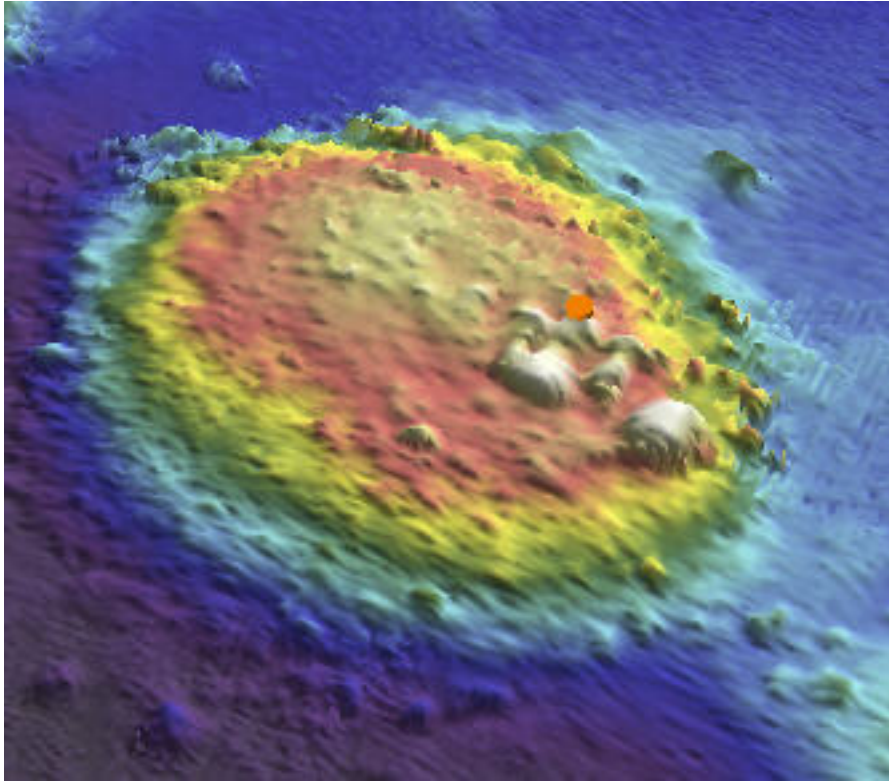


Figure 1.57.2

1.58) Profile/Beam - 356/234 from h11709 / tj_3101_reson8125 / 2007-227 / 070_1458

Survey Summary

Survey Position: 40° 28' 10.0" N, 073° 57' 06.2" W
Least Depth: 6.74 m (= 22.13 ft = 3.688 fm = 3 fm 4.13 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.154 m
Timestamp: 2007-227.14:58:38.912 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 070_1458
Profile/Beam: 356/234
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/070_1458	356/234	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-266/287_1657	0008	4.93	093.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-180/542_1742	0012	37.19	118.6	Secondary (grouped)
h11709/tj_3101_reson8125/2007-227/072_1449	384/43	47.81	138.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)

3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

6.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 6.744 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22 Obstn

Feature Images



Figure 1.58.1

1.59) Profile/Beam - 1963/238 from h11709 / tj_3101_reson8125 / 2007-227 / 071_1453

Survey Summary

Survey Position: 40° 28' 14.1" N, 073° 57' 16.8" W
Least Depth: 6.86 m (= 22.49 ft = 3.748 fm = 3 fm 4.49 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.156 m
Timestamp: 2007-227.14:55:31.177 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 071_1453
Profile/Beam: 1963/238
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/071_1453	1963/238	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-266/287_1657	0007	5.50	091.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-180/542_1742	0004	9.05	232.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

6.9m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.855 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22-ft Obstn

Feature Images

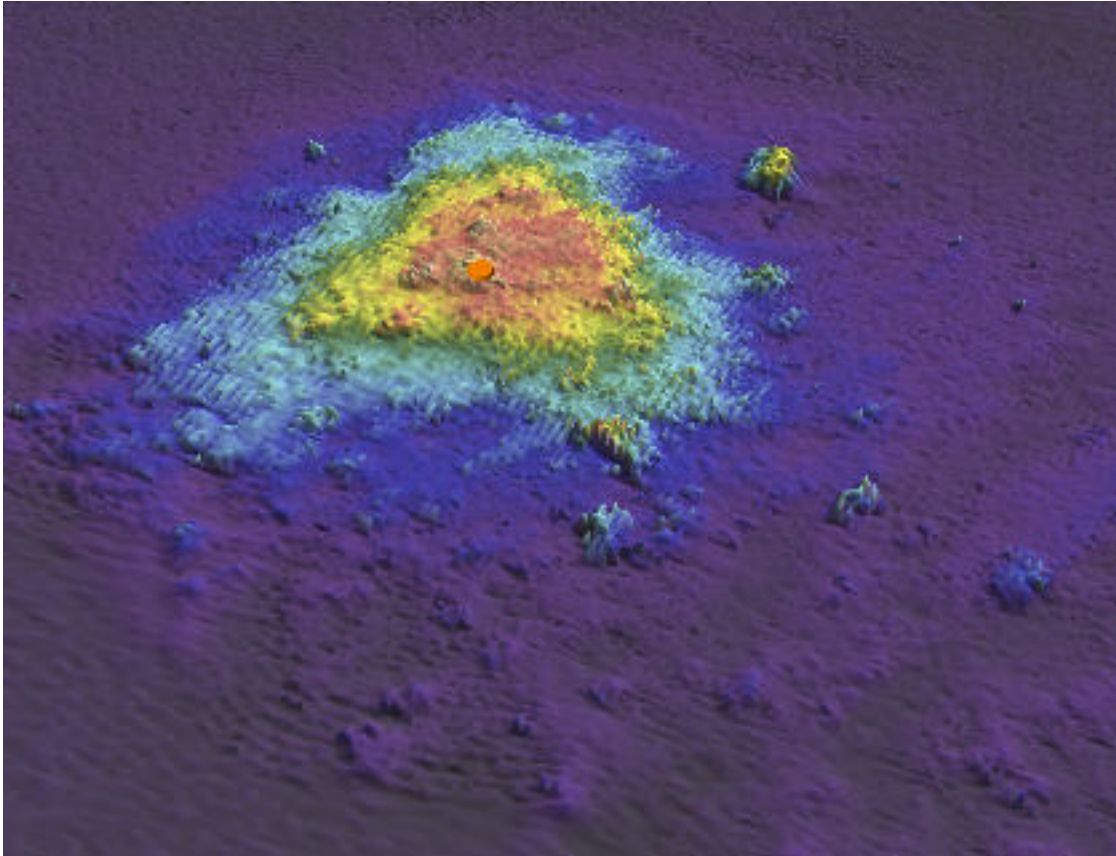


Figure 1.59.1

1.60) Profile/Beam - 837/177 from h11709 / tj_3101_reson8125 / 2007-227 / 074_1442

Survey Summary

Survey Position: 40° 28' 17.9" N, 073° 57' 20.9" W
Least Depth: 6.78 m (= 22.25 ft = 3.709 fm = 3 fm 4.25 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-227.14:42:56.135 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 074_1442
Profile/Beam: 837/177
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/074_1442	837/177	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-180/542_1742	0003	2.09	353.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.783 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22 "Rks"

Feature Images

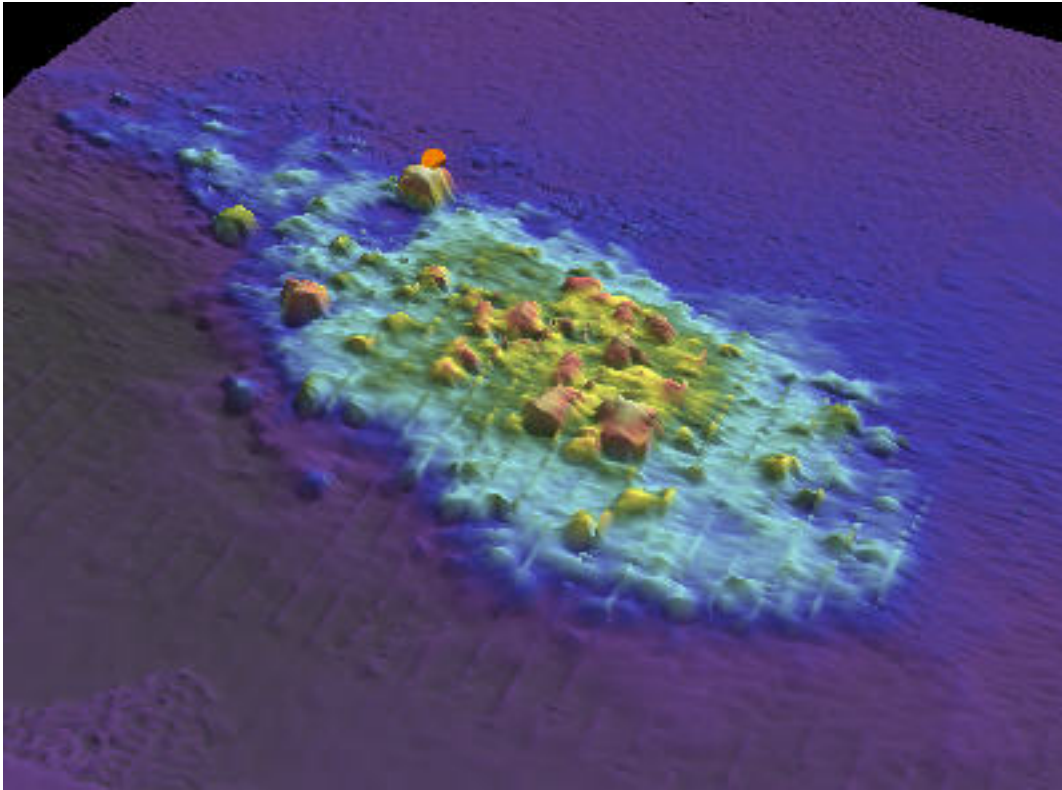


Figure 1.60.1

1.61) Profile/Beam - 213/222 from h11709 / tj_3101_reson8125 / 2007-227 / 091_1909

Survey Summary

Survey Position: 40° 29' 04.7" N, 073° 58' 20.9" W
Least Depth: 7.44 m (= 24.41 ft = 4.068 fm = 4 fm 0.41 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2007-227.19:09:55.414 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 091_1909
Profile/Beam: 213/222
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/091_1909	213/222	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/520_1449	0003	2.26	068.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

24ft (12401_1, 12324_1, 12327_1, 12326_1)

4fm (12300_1, 13006_1, 13003_1, 14500_1)

7.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.440 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 24 Rks

Feature Images

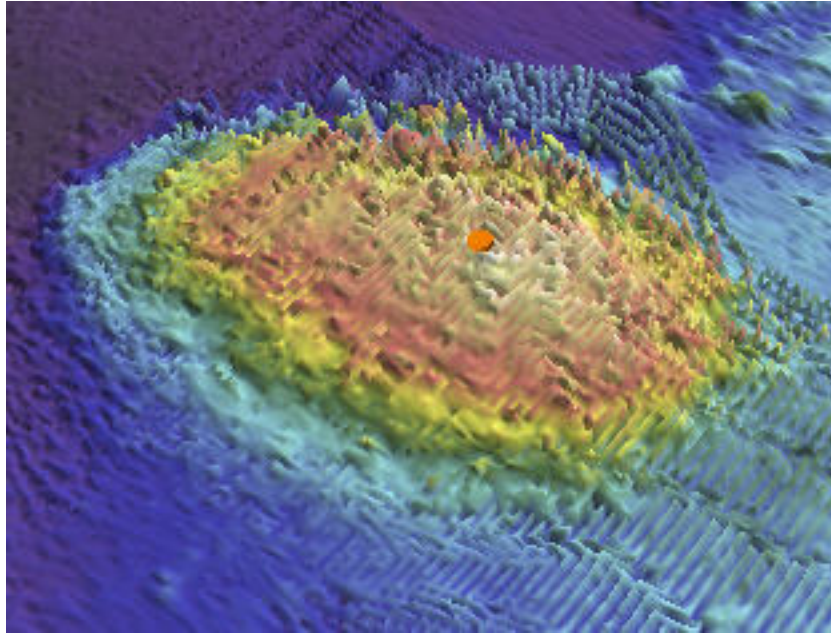


Figure 1.61.1

1.62) Profile/Beam - 120/203 from h11709 / tj_3101_reson8125 / 2007-227 / 201_1748

Survey Summary

Survey Position: 40° 28' 39.9" N, 073° 57' 38.6" W
Least Depth: 5.68 m (= 18.64 ft = 3.107 fm = 3 fm 0.64 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-227.17:49:07.426 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 201_1748
Profile/Beam: 120/203
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/201_1748	120/203	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/518_1311	0001	3.89	223.2	Secondary
h11709/tj_3102_klein5000_sss100/2007-217/503_1352	0008	5.30	003.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12401_1, 12324_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.682 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Change 18-ft sounding to Dangerous Obstrn least depth 18 ft.

Feature Images



Figure 1.62.1

1.63) Profile/Beam - 181/136 from h11709 / tj_3101_reson8125 / 2007-228 / 099_1302

Survey Summary

Survey Position: 40° 29' 34.9" N, 073° 59' 12.9" W
Least Depth: 7.69 m (= 25.23 ft = 4.205 fm = 4 fm 1.23 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-228.13:02:57.911 (08/16/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-228 / 099_1302
Profile/Beam: 181/136
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-228/099_1302	181/136	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/514_1656	0006	2.17	167.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

25ft (12401_1, 12324_1, 12327_1, 12326_1)
 4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 7.7m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.690 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 25 "Rks"

Feature Images

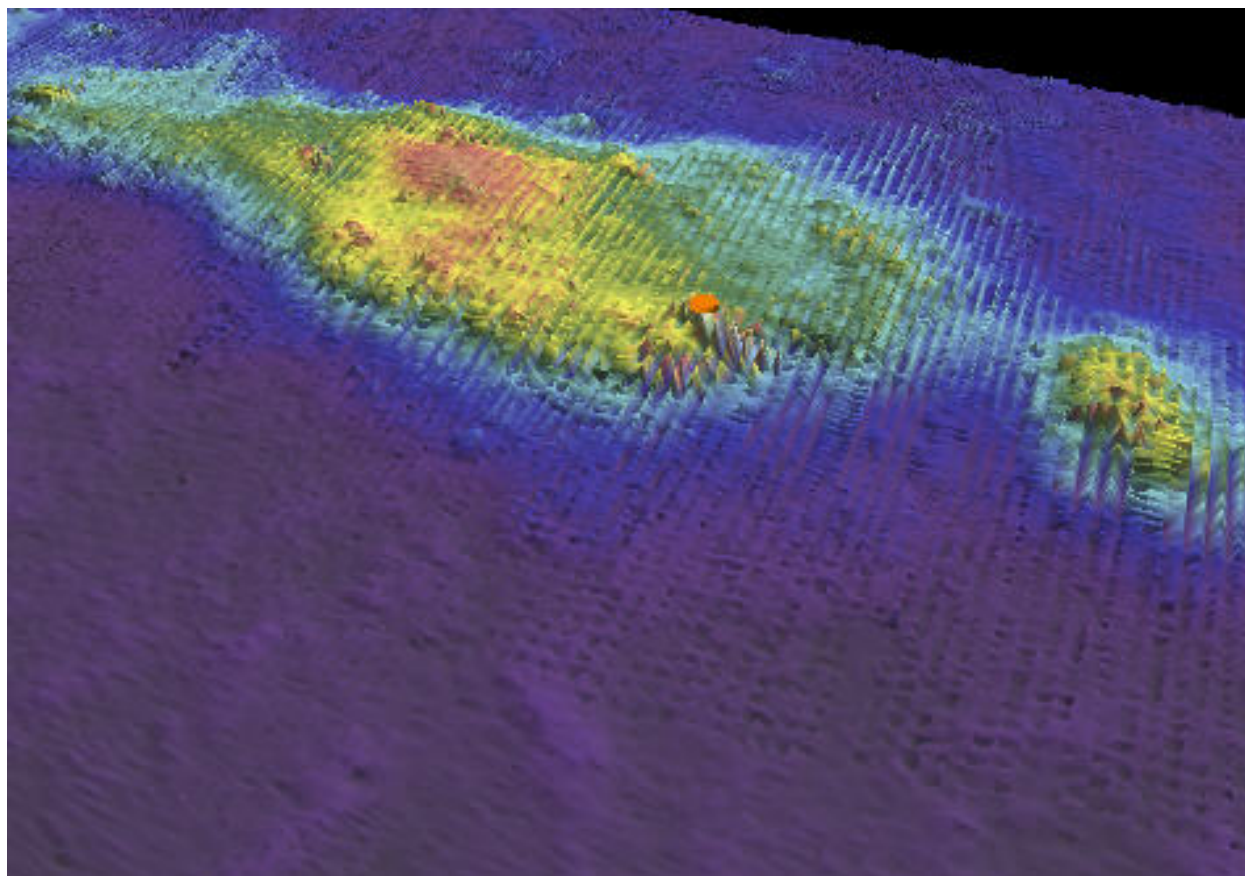


Figure 1.63.1

1.64) Profile/Beam - 220/58 from h11709 / tj_3101_reson8125 / 2007-228 / 103_1333

Survey Summary

Survey Position: 40° 29' 25.2" N, 073° 59' 21.9" W
Least Depth: 8.65 m (= 28.37 ft = 4.729 fm = 4 fm 4.37 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-228.13:34:00.148 (08/16/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-228 / 103_1333
Profile/Beam: 220/58
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-228/103_1333	220/58	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/518_1310	0003	2.92	011.4	Secondary (grouped)
h11709/tj_3101_reson8125/2007-228/103_1333	192/214	18.72	057.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

28ft (12401_1, 12324_1, 12327_1, 12326_1)
 4 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 8.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.648 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 28 Rk

Feature Images

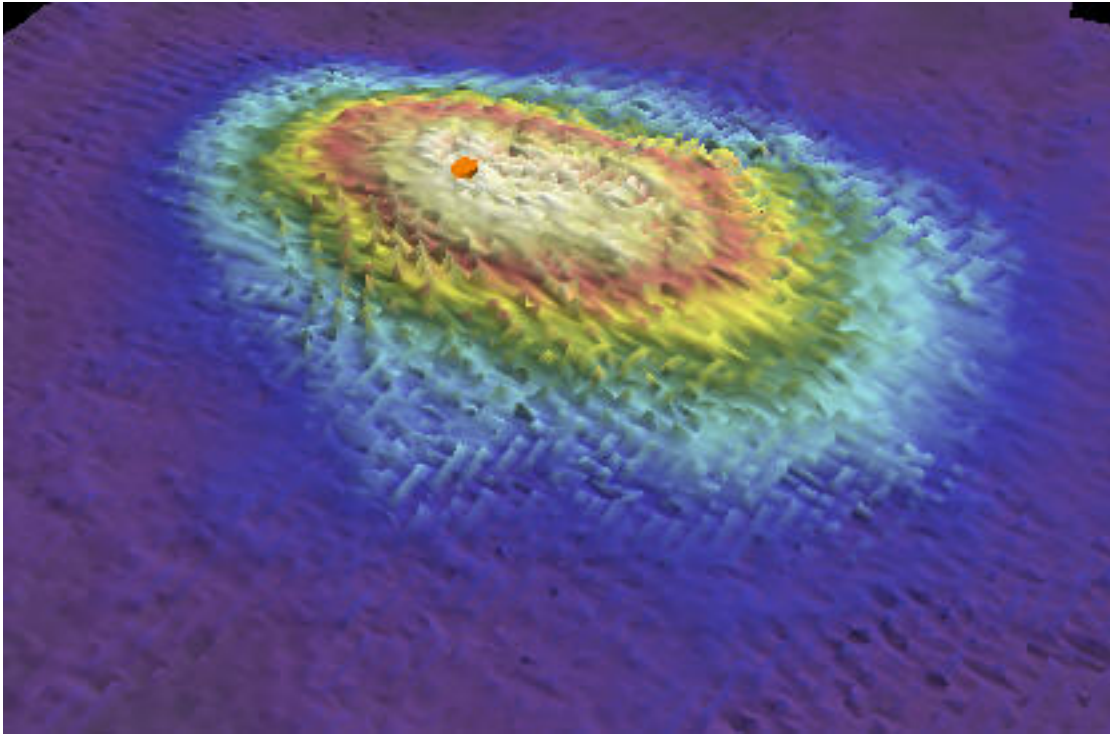


Figure 1.64.1

1.65) Profile/Beam - 171/129 from h11709 / tj_3101_reson8125 / 2007-229 / 013_1845

Survey Summary

Survey Position: 40° 31' 28.9" N, 073° 55' 54.8" W
Least Depth: 8.76 m (= 28.73 ft = 4.789 fm = 4 fm 4.73 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-229.18:46:11.971 (08/17/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-229 / 013_1845
Profile/Beam: 171/129
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-229/013_1845	171/129	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/331_1644	0002	3.75	010.1	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

28ft (12327_1, 12326_1)

4 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

8.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.758 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 28 "Rks"

Feature Images

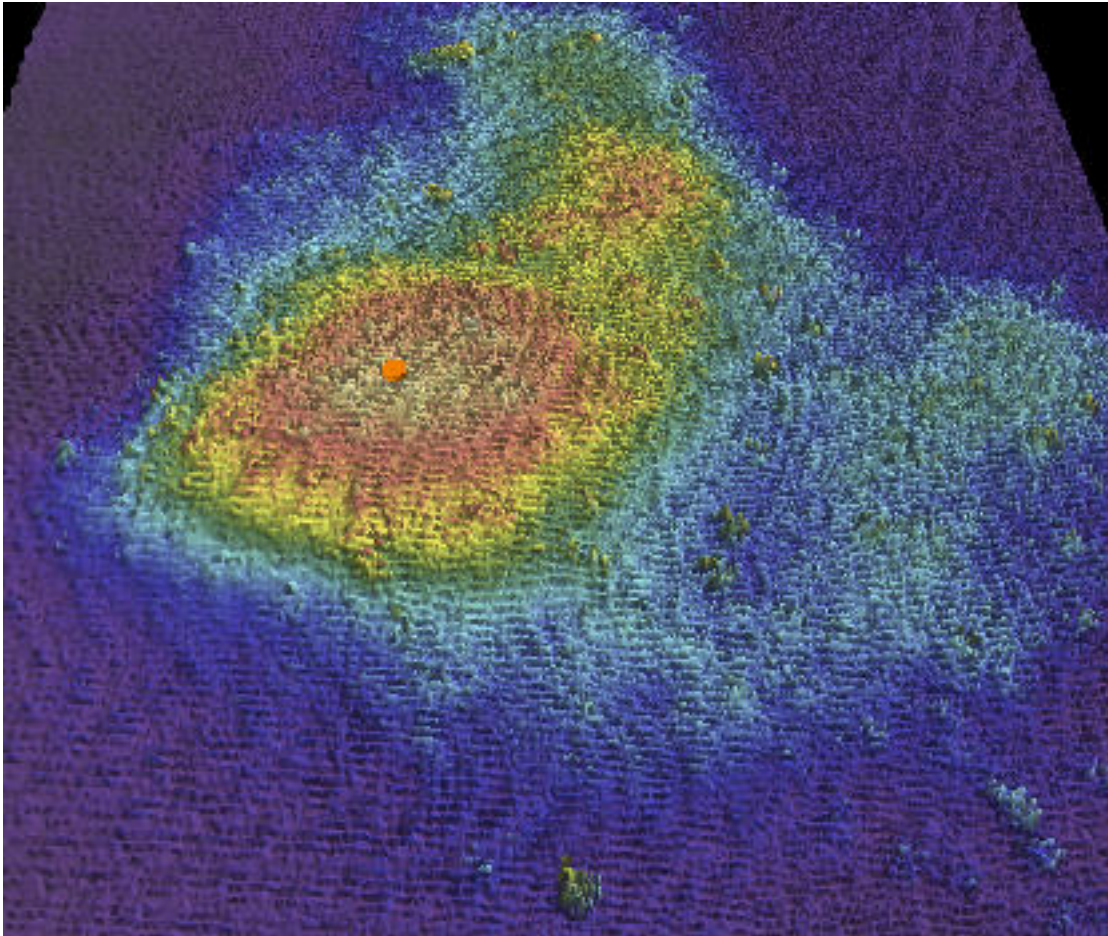


Figure 1.65.1

1.66) Profile/Beam - 65/7 from h11709 / tj_3101_reson8125 / 2007-229 / 049_1736

Survey Summary

Survey Position: 40° 31' 21.3" N, 073° 56' 28.1" W
Least Depth: 7.02 m (= 23.03 ft = 3.838 fm = 3 fm 5.03 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.156 m
Timestamp: 2007-229.17:37:05.035 (08/17/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-229 / 049_1736
Profile/Beam: 65/7
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-229/049_1736	65/7	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12402_1, 12327_1, 12326_1)

3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

7.0m (5161_1)

S-57 Data

[None]

Office Notes

Chart "Rks" least depth 23 ft

Feature Images

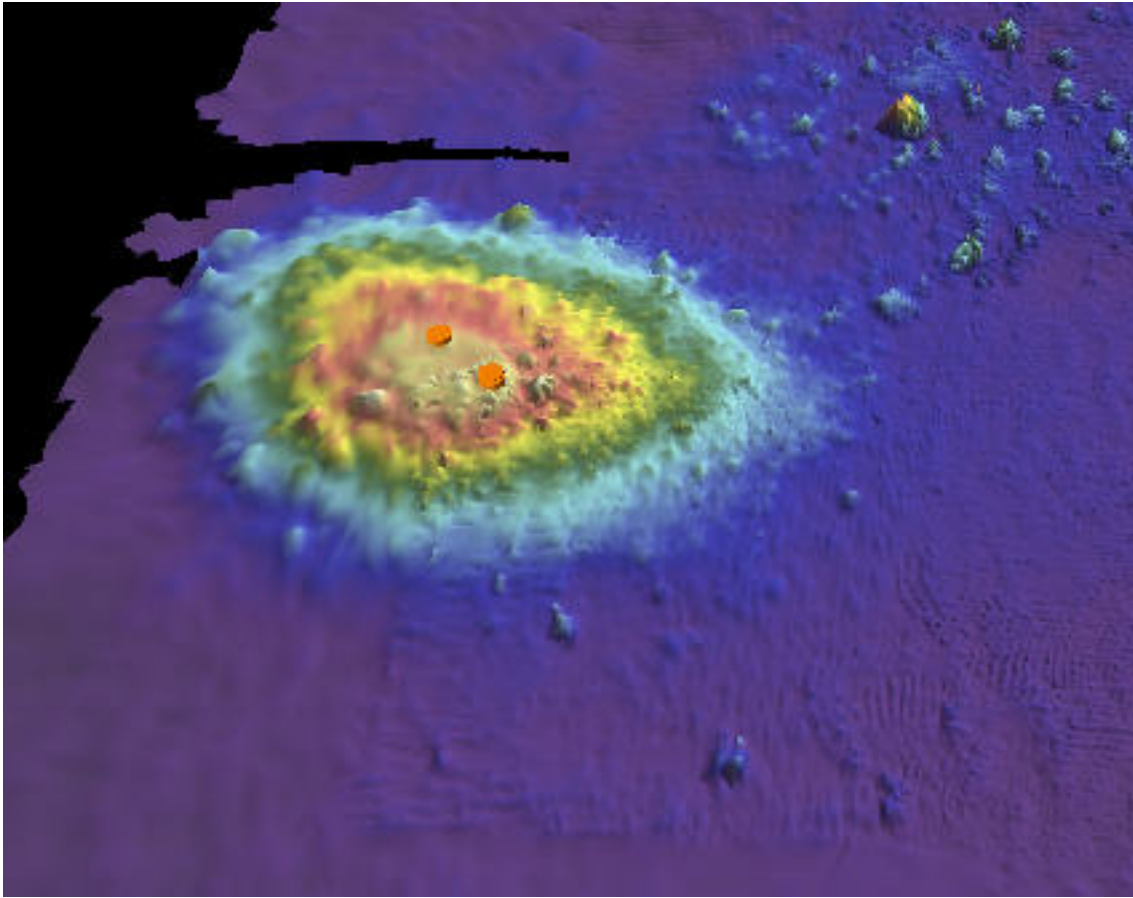


Figure 1.66.1

1.67) Profile/Beam - 66/6 from h11709 / tj_3101_reson8125 / 2007-229 / 049_1736

Survey Summary

Survey Position: 40° 31' 21.3" N, 073° 56' 28.1" W
Least Depth: 6.96 m (= 22.85 ft = 3.809 fm = 3 fm 4.85 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.157 m
Timestamp: 2007-229.17:37:05.095 (08/17/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-229 / 049_1736
Profile/Beam: 66/6
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-229/049_1736	66/6	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-220/244_1417	0002	2.71	147.3	Secondary
h11709/tj_3102_reson8101/2007-218/338_1457	1741/48	2.79	138.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12402_1, 12327_1, 12326_1)

3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

7.0m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.965 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 23-ft "Rks"

Feature Images

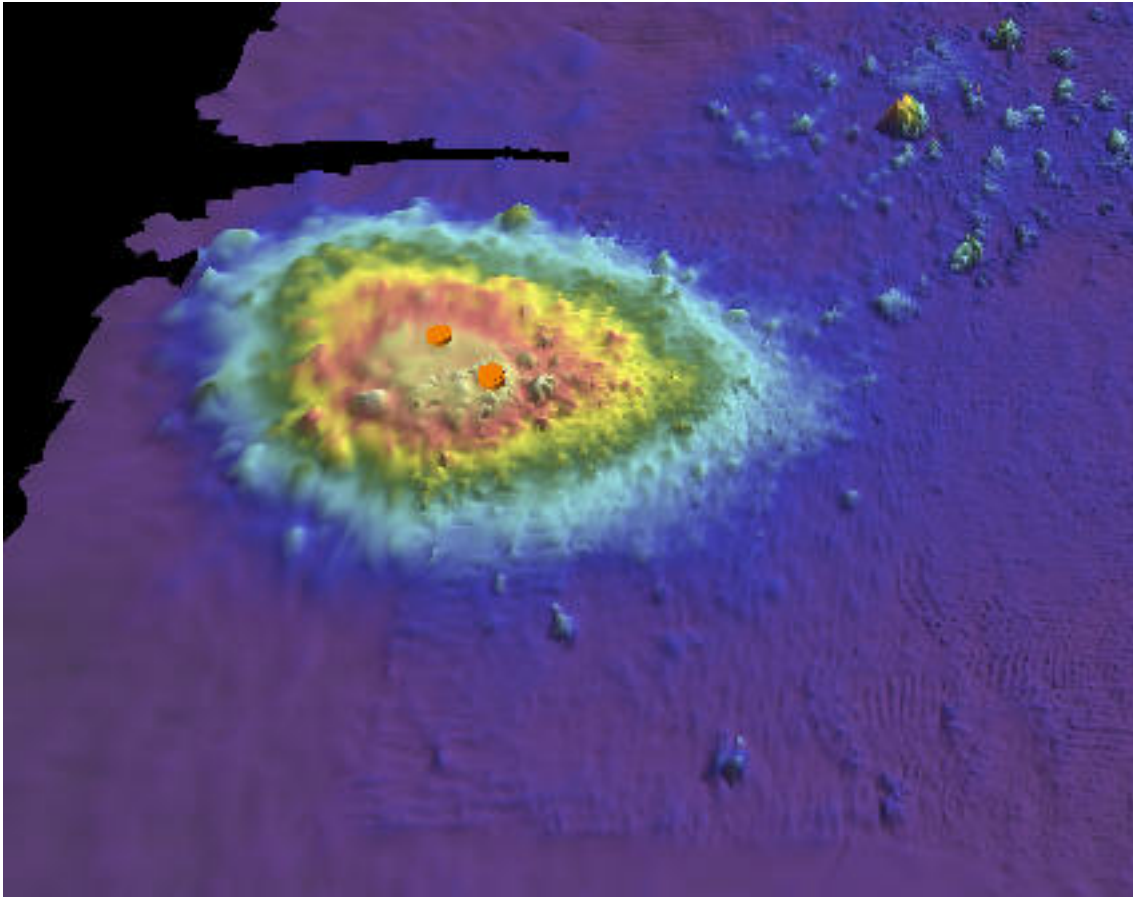


Figure 1.67.1

1.68) Profile/Beam - 320/119 from h11709 / tj_3101_reson8125 / 2007-229 / 057_1714

Survey Summary

Survey Position: 40° 31' 14.8" N, 073° 56' 34.6" W
Least Depth: 6.11 m (= 20.05 ft = 3.341 fm = 3 fm 2.05 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-229.17:14:34.365 (08/17/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-229 / 057_1714
Profile/Beam: 320/119
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-229/057_1714	320/119	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/339_1442	0003	4.67	207.1	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12402_1, 12327_1, 12326_1)

3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

6.1m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.110 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20 "Rks"

Feature Images

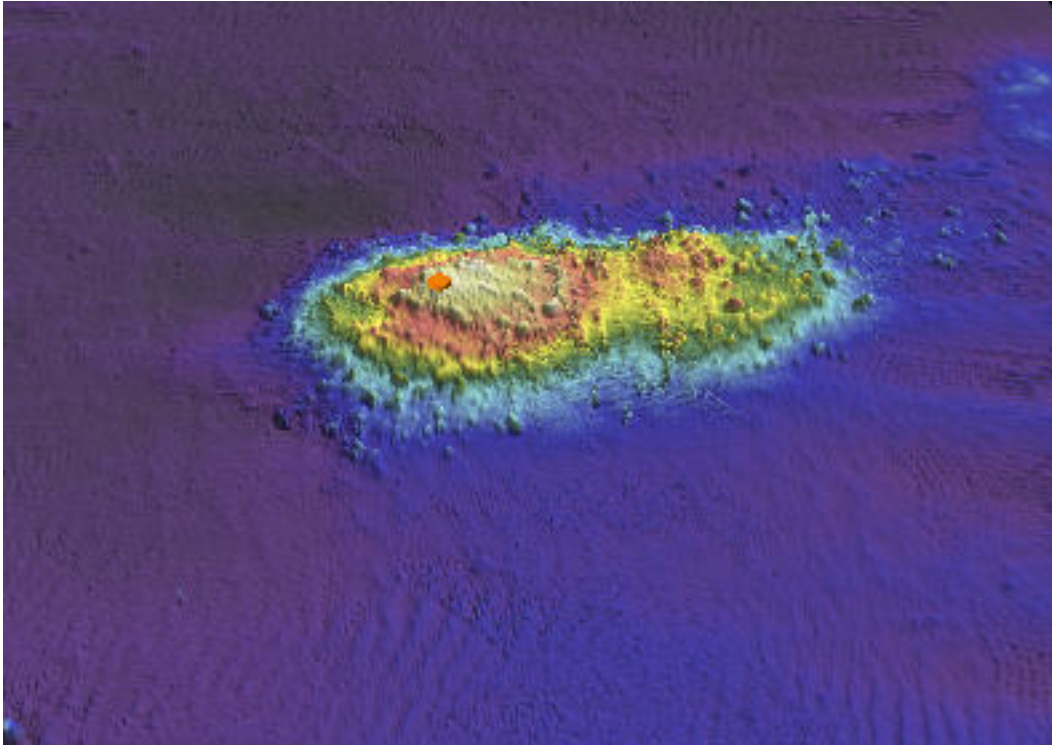


Figure 1.68.1

1.69) Profile/Beam - 3486/39 from h11709 / tj_3101_reson8125 / 2007-229 / 070_1655

Survey Summary

Survey Position: 40° 31' 11.2" N, 073° 56' 39.5" W
Least Depth: 6.13 m (= 20.13 ft = 3.355 fm = 3 fm 2.13 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-229.16:58:56.795 (08/17/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-229 / 070_1655
Profile/Beam: 3486/39
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-229/070_1655	3486/39	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-220/246_1352	0004	1.74	122.8	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 6.135 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Chart Rks least depth 20 ft.

Feature Images

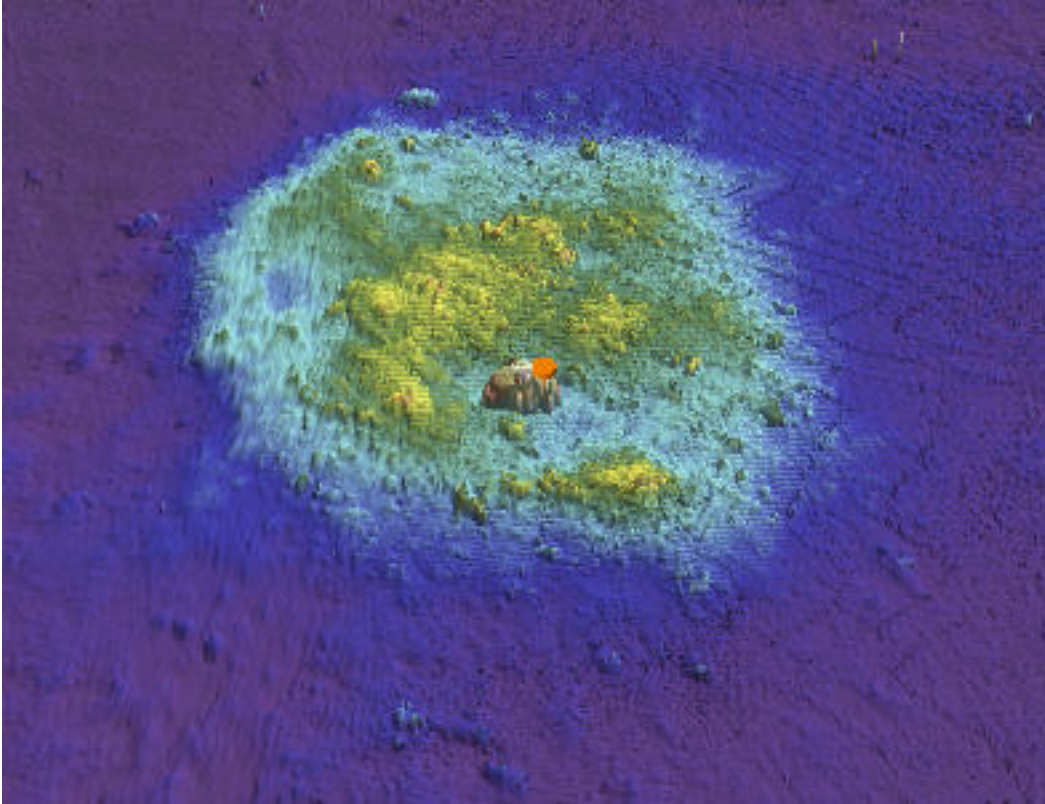


Figure 1.69.1

1.70) Profile/Beam - 235/22 from h11709 / tj_3101_reson8125 / 2007-229 / 189_1636

Survey Summary

Survey Position: 40° 30' 52.2" N, 073° 55' 58.5" W
Least Depth: 7.88 m (= 25.86 ft = 4.310 fm = 4 fm 1.86 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2007-229.16:36:41.385 (08/17/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-229 / 189_1636
Profile/Beam: 235/22
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-229/189_1636	235/22	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/333_1629	0001	1.93	110.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/215_1545	0001	3.62	317.4	Secondary (grouped)
h11709/tj_3102_reson8101/2007-220/215_1545	3042/50	50.13	268.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

26ft (12327_1, 12326_1)

4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

7.9m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 7.883 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 26 Rk

Feature Images

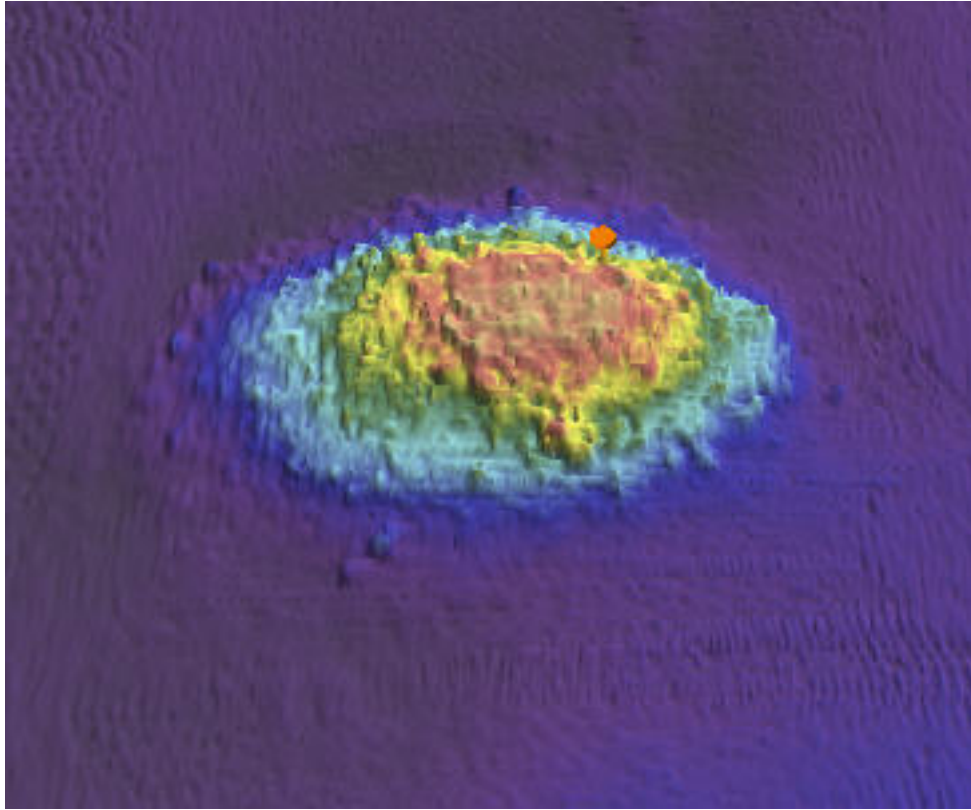


Figure 1.70.1

1.71) Profile/Beam - 2507/84 from h11709 / tj_3101_reson8125 / 2007-231 / 073_1442

Survey Summary

Survey Position: 40° 31' 05.2" N, 073° 56' 41.8" W
Least Depth: 5.37 m (= 17.63 ft = 2.938 fm = 2 fm 5.63 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-231.14:45:07.116 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 073_1442
Profile/Beam: 2507/84
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/073_1442	2507/84	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-220/246_1352	0001	0.99	113.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-218/341_1359	0003	2.31	169.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 5.373 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rk least depth 17 ft

Feature Images

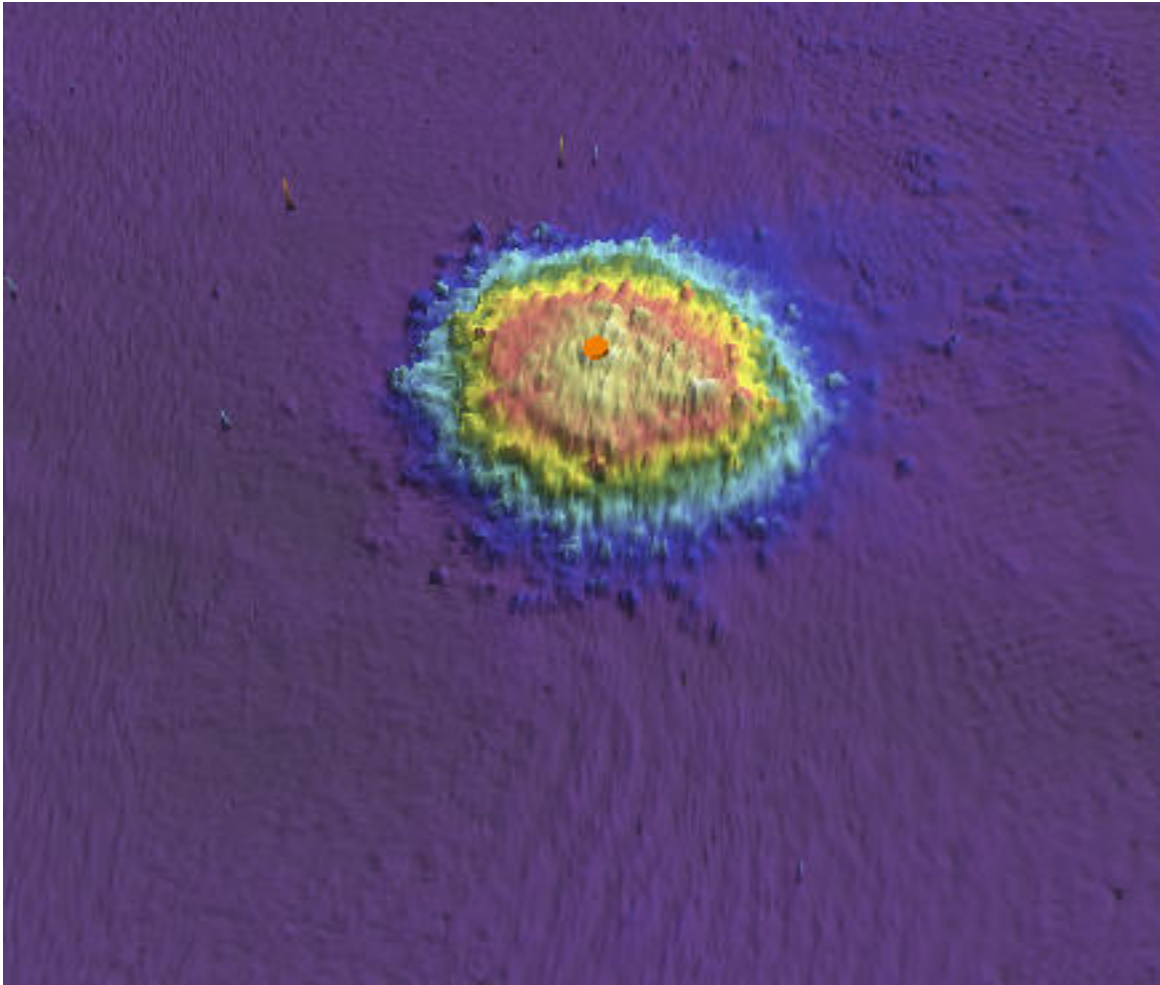


Figure 1.71.1

1.72) Profile/Beam - 4777/16 from h11709 / tj_3101_reson8125 / 2007-231 / 077_1519

Survey Summary

Survey Position: 40° 31' 23.5" N, 073° 56' 45.2" W
Least Depth: 5.79 m (= 19.00 ft = 3.167 fm = 3 fm 1.00 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-231.15:24:22.761 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 077_1519
Profile/Beam: 4777/16
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/077_1519	4777/16	0.00	000.0	Primary
h11709/tj_3102_reson8101/2007-220/247_1339	1345/2	1.52	014.3	Secondary
h11709/tj_3102_klein5000_sss200/2007-220/247_1339	0002	4.24	346.8	Secondary
h11709/tj_3102_klein5000_sss100/2007-218/341_1359	0004	6.84	009.0	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.791 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 19-ft Rk

Feature Images

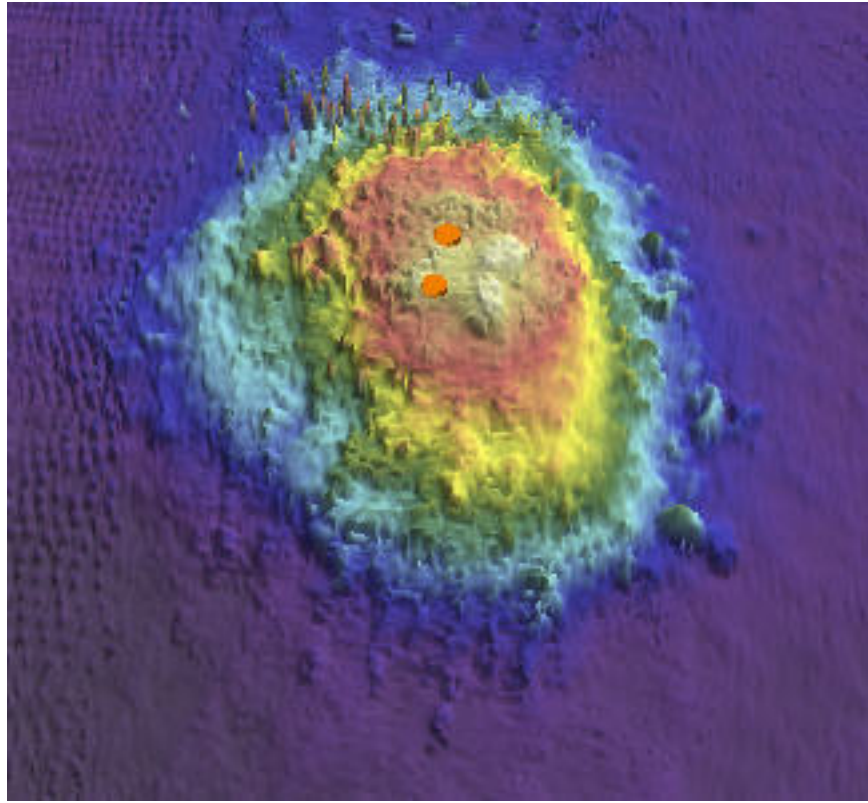


Figure 1.72.1

1.73) Profile/Beam - 3179/183 from h11709 / tj_3101_reson8125 / 2007-231 / 081_1554

Survey Summary

Survey Position: 40° 31' 11.4" N, 073° 56' 48.0" W
Least Depth: 5.42 m (= 17.78 ft = 2.964 fm = 2 fm 5.78 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-231.15:58:07.853 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 081_1554
Profile/Beam: 3179/183
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/081_1554	3179/183	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-220/247_1339	0004	2.22	357.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-218/342_1346	0005	2.44	082.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 5.420 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rk least depth 18 ft

Feature Images

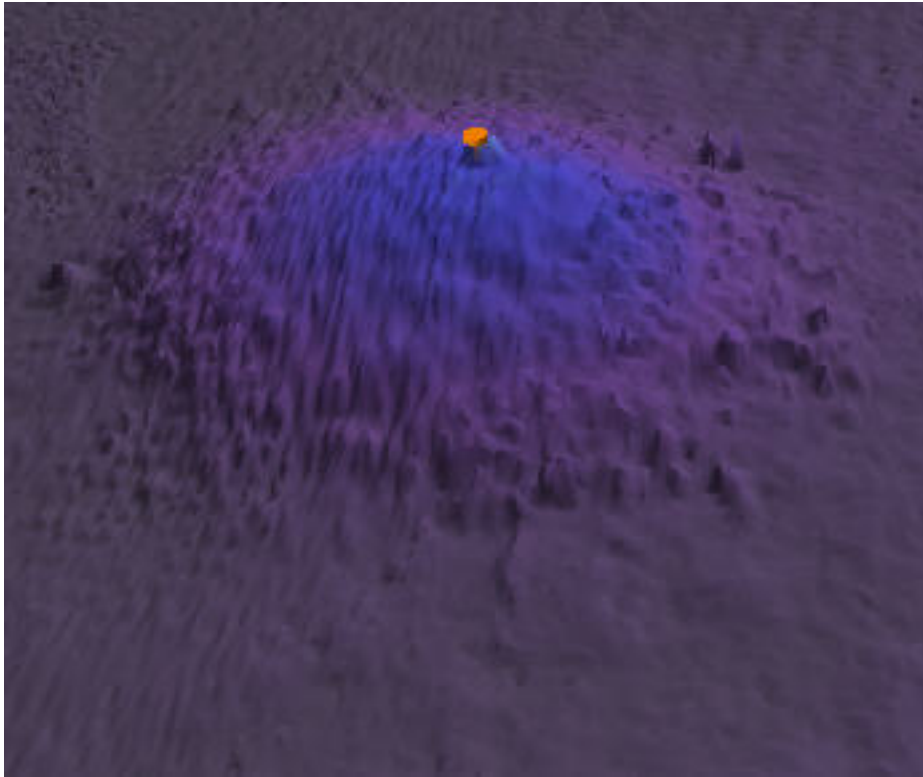


Figure 1.73.1

1.74) Profile/Beam - 124/52 from h11709 / tj_3101_reson8125 / 2007-231 / 083_1650

Survey Summary

Survey Position: 40° 30' 47.3" N, 073° 56' 50.8" W
Least Depth: 5.22 m (= 17.13 ft = 2.855 fm = 2 fm 5.13 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-231.16:51:10.861 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 083_1650
Profile/Beam: 124/52
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rocky area was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/083_1650	124/52	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/342_1346	0010	13.69	220.1	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12401_1, 12402_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 5.222 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rks least depth 17 ft.

Feature Images



Figure 1.74.1

1.75) Profile/Beam - 6899/66 from h11709 / tj_3101_reson8125 / 2007-231 / 088_1743

Survey Summary

Survey Position: 40° 30' 50.4" N, 073° 56' 54.7" W
Least Depth: 5.06 m (= 16.60 ft = 2.767 fm = 2 fm 4.60 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-231.17:49:58.609 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 088_1743
Profile/Beam: 6899/66
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/088_1743	6899/66	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

16ft (12401_1, 12402_1, 12327_1, 12326_1)
 2 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.1m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.060 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Chart 16-ft "Rks"

Feature Images

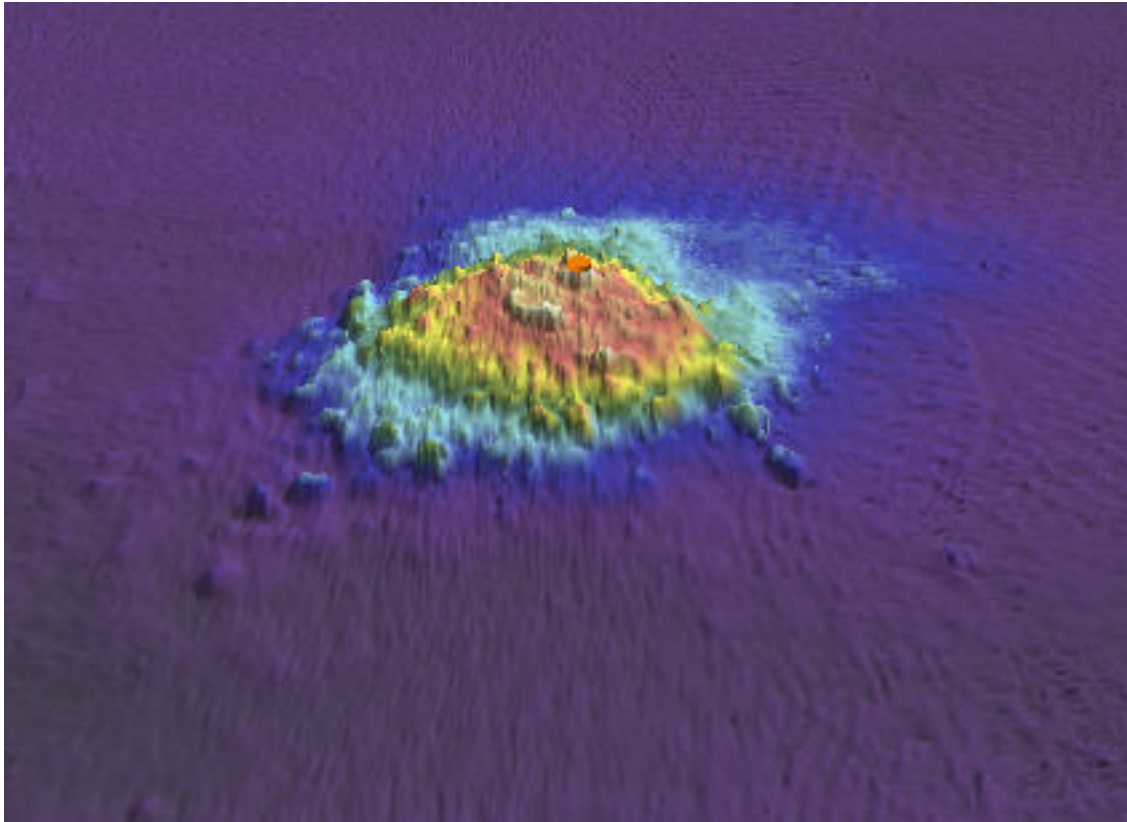


Figure 1.75.1

1.76) Profile/Beam - 7585/191 from h11709 / tj_3101_reson8125 / 2007-231 / 098_1938

Survey Summary

Survey Position: 40° 31' 40.9" N, 073° 57' 02.2" W
Least Depth: 6.18 m (= 20.26 ft = 3.377 fm = 3 fm 2.26 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-231.19:45:40.223 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 098_1938
Profile/Beam: 7585/191
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/098_1938	7585/191	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-220/250_1302	0009	4.37	234.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-229/261_1314	0001	5.18	316.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/399_1804	0001	5.59	011.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-229/265_1317	0003	26.13	022.7	Secondary (grouped)
h11709/tj_3101_reson8125/2007-231/099_1946	407/68	35.31	033.7	Secondary (grouped)
h11709/tj_3101_reson8125/2007-231/099_1946	68/95	43.97	156.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/399_1804	0002	45.52	141.5	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 6.176 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" least depth 20-ft

1.77) Profile/Beam - 6322/214 from h11709 / tj_3101_reson8125 / 2007-231 / 099_1946

Survey Summary

Survey Position: 40° 30' 57.1" N, 073° 57' 03.9" W
Least Depth: 4.80 m (= 15.74 ft = 2.624 fm = 2 fm 3.74 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-231.19:52:59.325 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 099_1946
Profile/Beam: 6322/214
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/099_1946	6322/214	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-229/273_1446	0012	4.62	088.0	Secondary
h11709/tj_3102_klein5000_sss100/2007-226/505_1548	0002	10.73	051.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/505_1548	0004	38.43	179.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/505_1548	0003	39.41	058.2	Secondary (grouped)
h11709/tj_3101_reson8125/2007-231/099_1946	6136/204	41.71	181.7	Secondary (grouped)
h11709/tj_3101_reson8125/2007-231/101_2003	6062/226	43.16	055.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-229/273_1446	0013	44.49	059.1	Secondary (grouped)
h11709/tj_3101_reson8125/2007-231/095_1912	6433/82	78.53	290.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-218/344_1318	0012	80.08	290.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/505_1548	0013	81.31	294.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/250_1302	0002	83.37	290.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

15ft (12401_1, 12402_1, 12327_1, 12326_1)

2 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

4.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 4.799 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart 15-ft "Rks"

Feature Images

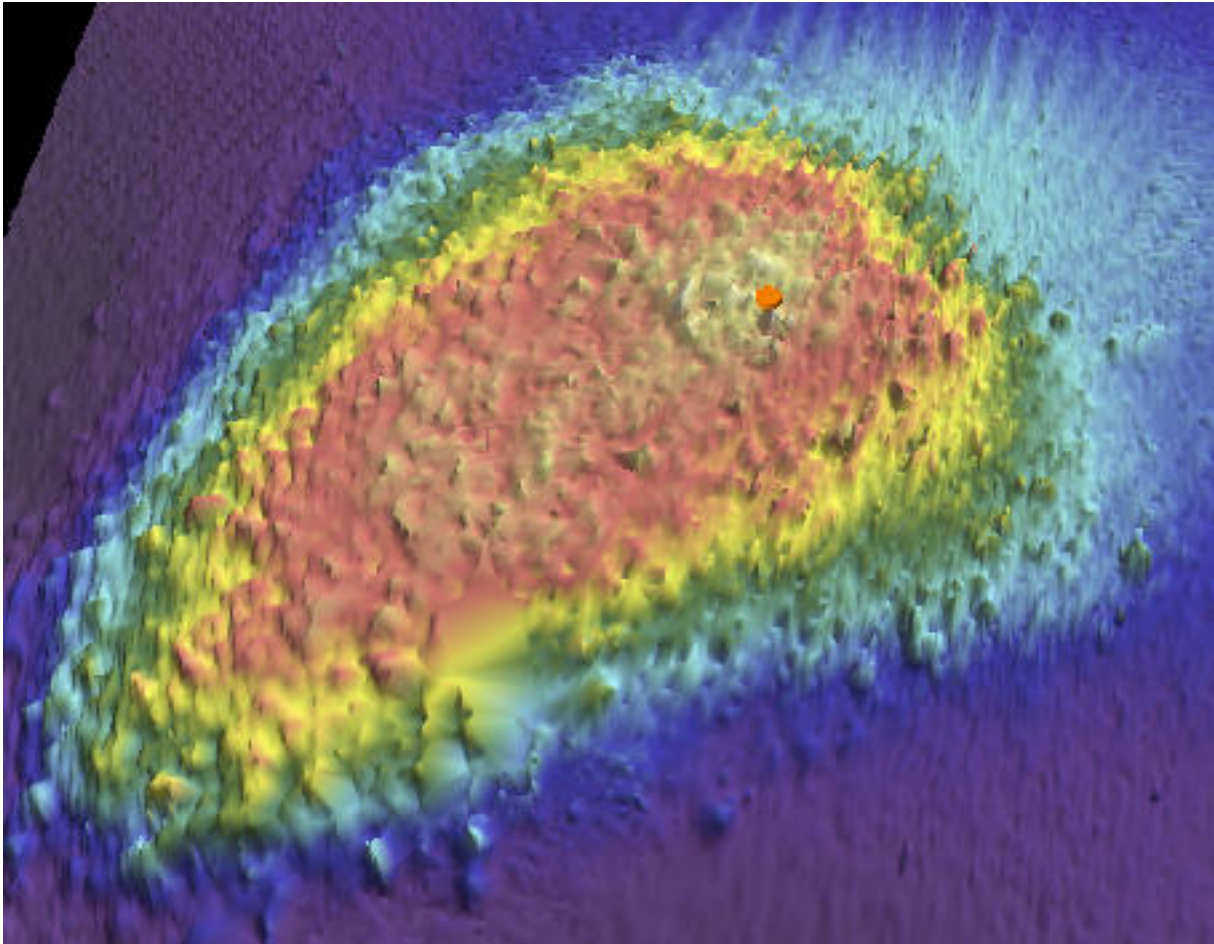


Figure 1.77.1

1.78) Profile/Beam - 1533/76 from h11709 / tj_3101_reson8125 / 2007-231 / 105_2056

Survey Summary

Survey Position: 40° 31' 31.9" N, 073° 57' 07.3" W
Least Depth: 5.75 m (= 18.85 ft = 3.142 fm = 3 fm 0.85 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-231.20:57:43.620 (08/19/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-231 / 105_2056
Profile/Beam: 1533/76
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-231/105_2056	1533/76	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-231/105_2056	1547/64	3.81	350.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/530_1755	0004	5.28	221.3	Secondary
h11709/tj_3102_klein5000_sss200/2007-229/263_1324	0003	8.76	028.2	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.7m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 5.747 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 19 "Rks"

Feature Images

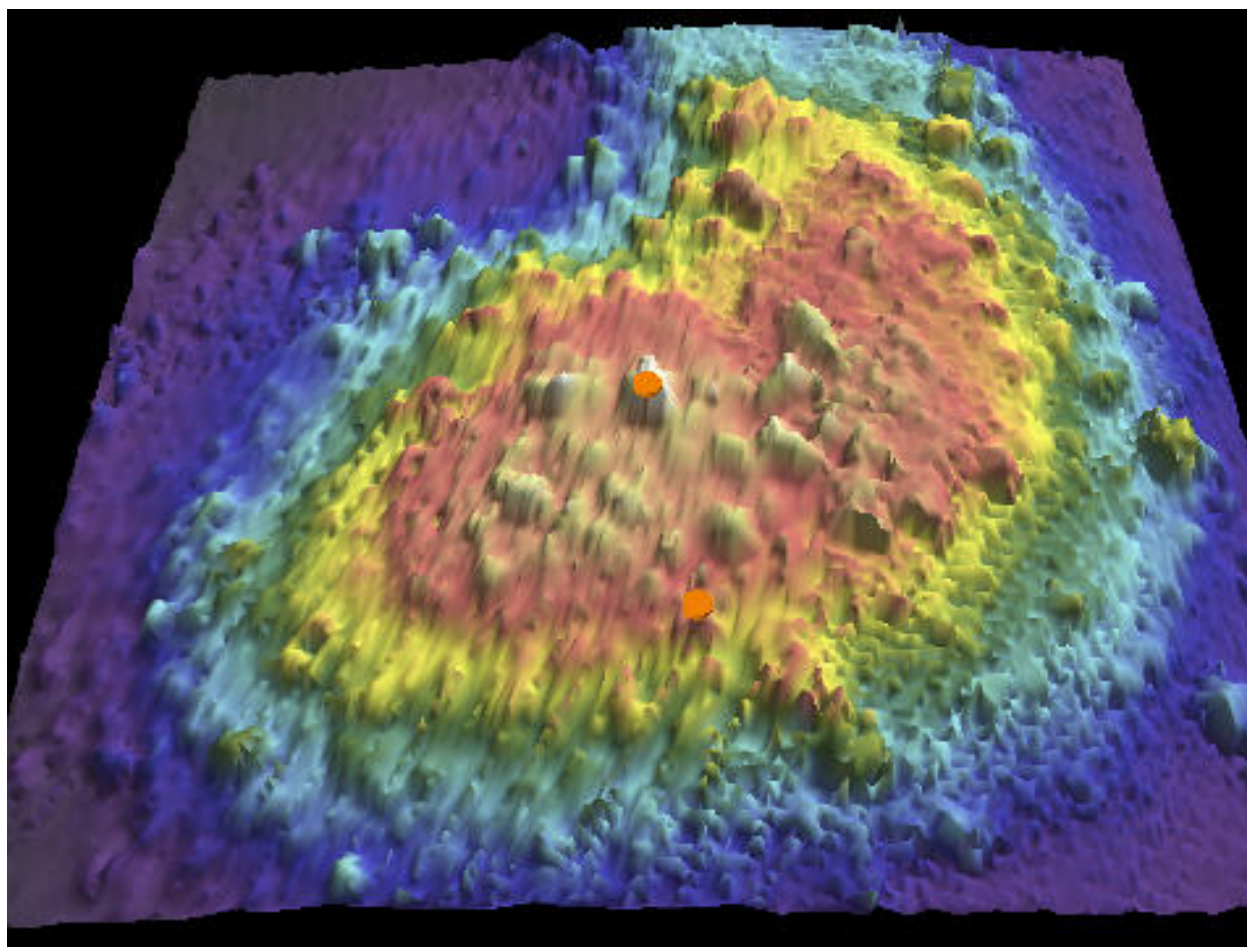


Figure 1.78.1

1.79) Profile/Beam - 322/203 from h11709 / tj_3101_reson8125 / 2007-234 / 563_1941

Survey Summary

Survey Position: 40° 28' 06.5" N, 074° 01' 08.9" W
Least Depth: 6.58 m (= 21.58 ft = 3.597 fm = 3 fm 3.58 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.149 m
Timestamp: 2007-234.19:42:01.721 (08/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-234 / 563_1941
Profile/Beam: 322/203
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found with Reson 8125 MBES and Klein 5000 SSS. Soundings are corrected to MLLW with verified water levels and preliminary TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-234/563_1941	322/203	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-234/611_1509	0005	1.09	134.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-185/506_1252	0001	1.80	136.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-186/375_1252	0006	1.98	004.3	Secondary (grouped)

Hydrographer Recommendations

Chart a dangerous obstruction in current survey position with a least depth of 6.58 meters (21 feet).

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.6m (5161_1)

S-57 Data

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

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

VALSOU - 6.578 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images



Figure 1.79.1

1.80) Profile/Beam - 331/74 from h11709 / tj_3101_reson8125 / 2007-234 / 645_2031

Survey Summary

Survey Position: 40° 27' 57.8" N, 074° 00' 41.4" W
Least Depth: 5.32 m (= 17.46 ft = 2.911 fm = 2 fm 5.46 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-234.20:32:23.691 (08/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-234 / 645_2031
Profile/Beam: 331/74
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. The area looks like a continuation of ruins out of the Coast Guard station. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-234/645_2031	331/74	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-186/373_1231	0003	7.74	107.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-234/609_1444	0003	18.64	324.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-185/506_1253	0001	20.56	108.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12401_1, 12324_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.3m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CONDTN - 2:ruined

QUASOU - 6:least depth known

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

VALSOU - 5.323 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart ruins and depth of 17 ft.

Feature Images

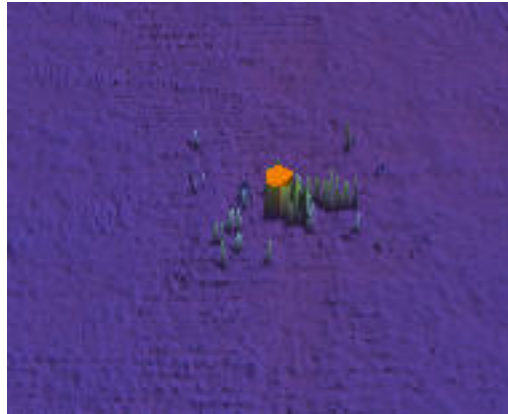


Figure 1.80.1

1.81) Profile/Beam - 7047/239 from h11709 / tj_3101_reson8125 / 2007-235 / 108_1356

Survey Summary

Survey Position: 40° 31' 42.1" N, 073° 57' 09.1" W
Least Depth: 6.38 m (= 20.95 ft = 3.491 fm = 3 fm 2.95 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2007-235.14:03:35.759 (08/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-235 / 108_1356
Profile/Beam: 7047/239
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-235/108_1356	7047/239	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-229/265_1317	0004	5.31	079.0	Secondary (grouped)
h11709/tj_3101_reson8125/2007-184/833_1553	10243/9	29.09	238.0	Secondary (grouped)
h11709/tj_3102_reson8101/2007-229/265_1317	605/8	46.58	030.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12402_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 6.385 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 21 "Rks"

Feature Images

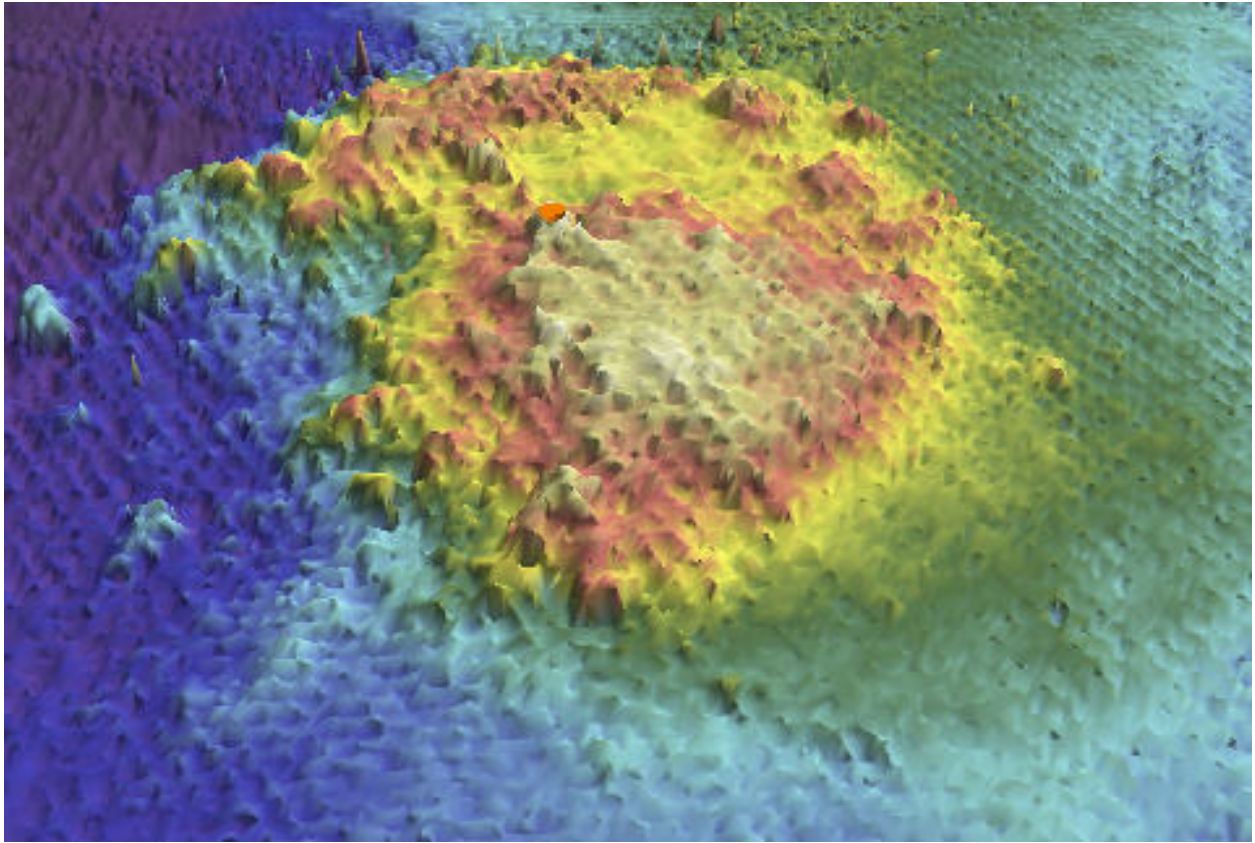


Figure 1.81.1

1.82) Profile/Beam - 580/87 from h11709 / tj_3101_reson8125 / 2007-235 / 152_1901

Survey Summary

Survey Position: 40° 31' 36.0" N, 073° 57' 43.2" W
Least Depth: 6.00 m (= 19.68 ft = 3.280 fm = 3 fm 1.68 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-235.19:02:03.397 (08/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-235 / 152_1901
Profile/Beam: 580/87
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-235/152_1901	580/87	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-235/152_1901	585/75	1.65	336.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-226/549_1732	0001	3.46	226.7	Secondary
h11709/tj_3102_klein5000_sss200/2007-229/279_1336	0002	4.18	330.3	Secondary
h11709/tj_3102_klein5000_sss300/2007-267/938_1922	0001	5.74	163.7	Secondary
h11709/tj_3102_klein5000_sss300/2007-267/938_1922	0002	23.04	129.3	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12402_1, 12327_1, 12326_1)

3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

6.0m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 5.998 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart 19-ft "Rks"

Feature Images

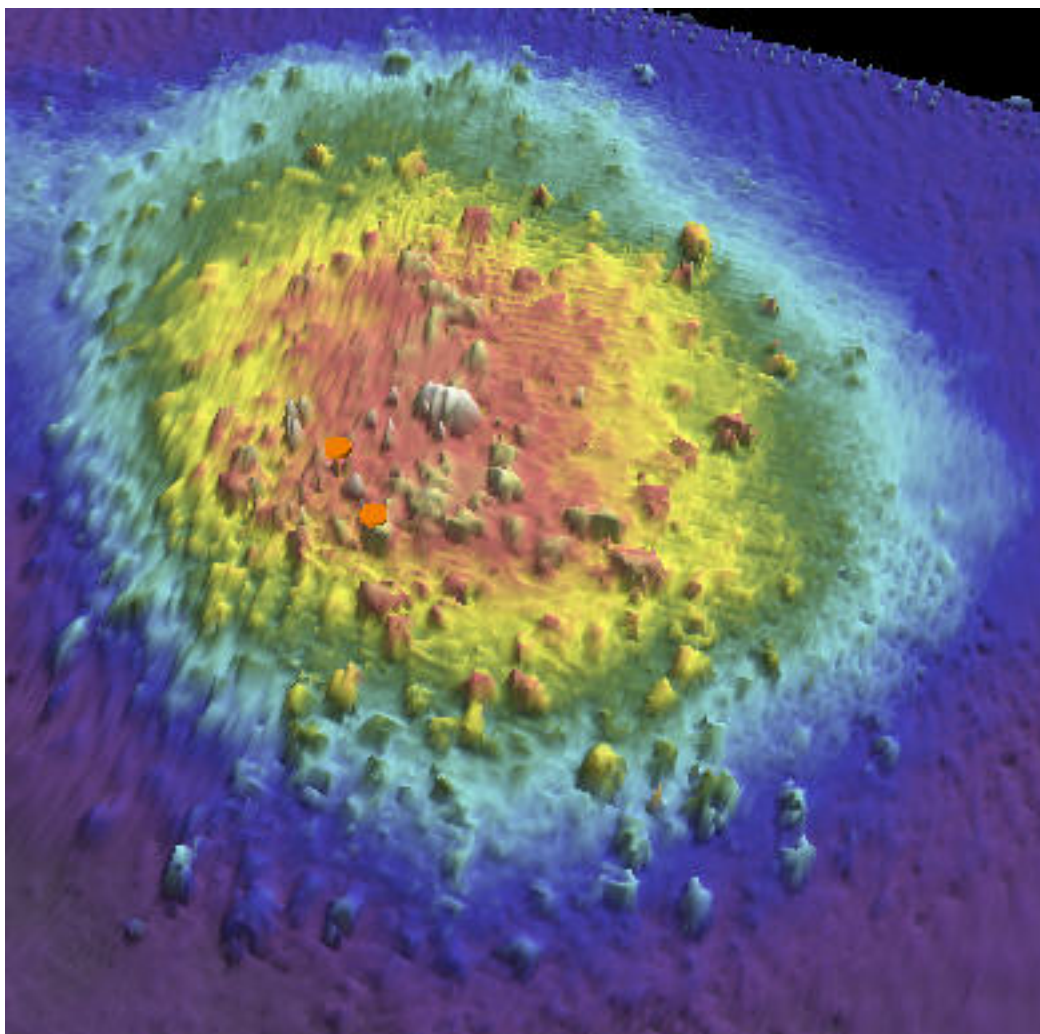


Figure 1.82.1

1.83) Profile/Beam - 272/102 from h11709 / tj_3101_reson8125 / 2007-235 / 208_1925

Survey Summary

Survey Position: 40° 30' 56.5" N, 073° 58' 22.1" W
Least Depth: 7.20 m (= 23.61 ft = 3.935 fm = 3 fm 5.61 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-235.19:26:00.065 (08/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-235 / 208_1925
Profile/Beam: 272/102
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-235/208_1925	272/102	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-225/557_1811	0001	1.04	044.0	Secondary
h11709/tj_3102_klein5000_sss200/2007-229/266_1723	0001	2.23	014.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12401_1, 12402_1, 12327_1, 12326_1)

3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

7.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.197 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 23-ft "Rks"

Feature Images

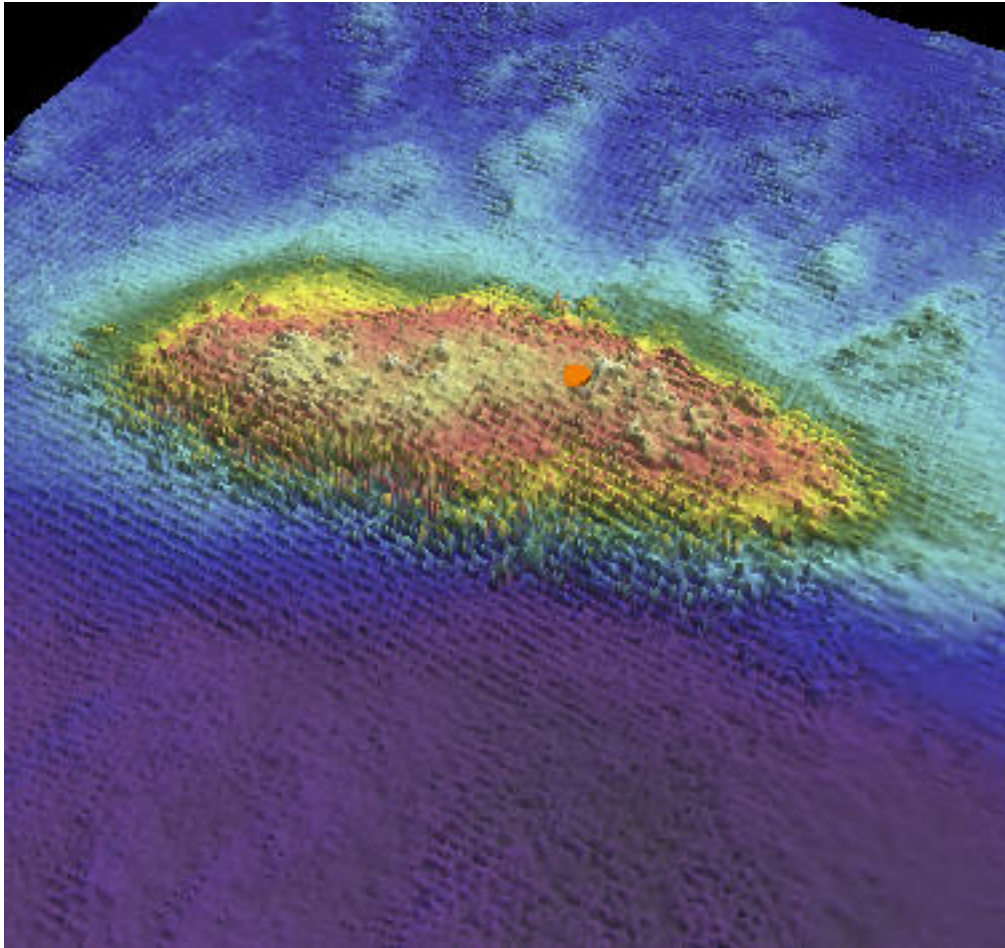


Figure 1.83.1

1.84) Profile/Beam - 227/221 from h11709 / tj_3101_reson8125 / 2007-236 / 186_1446

Survey Summary

Survey Position: 40° 31' 02.0" N, 074° 00' 12.6" W
Least Depth: 5.51 m (= 18.07 ft = 3.011 fm = 3 fm 0.07 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.149 m
Timestamp: 2007-236.14:47:02.463 (08/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-236 / 186_1446
Profile/Beam: 227/221
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-236/186_1446	227/221	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-231/403_1744	0001	6.30	127.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-219/526_1729	0001	10.21	067.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.5m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.507 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 18 Obstn

Feature Images

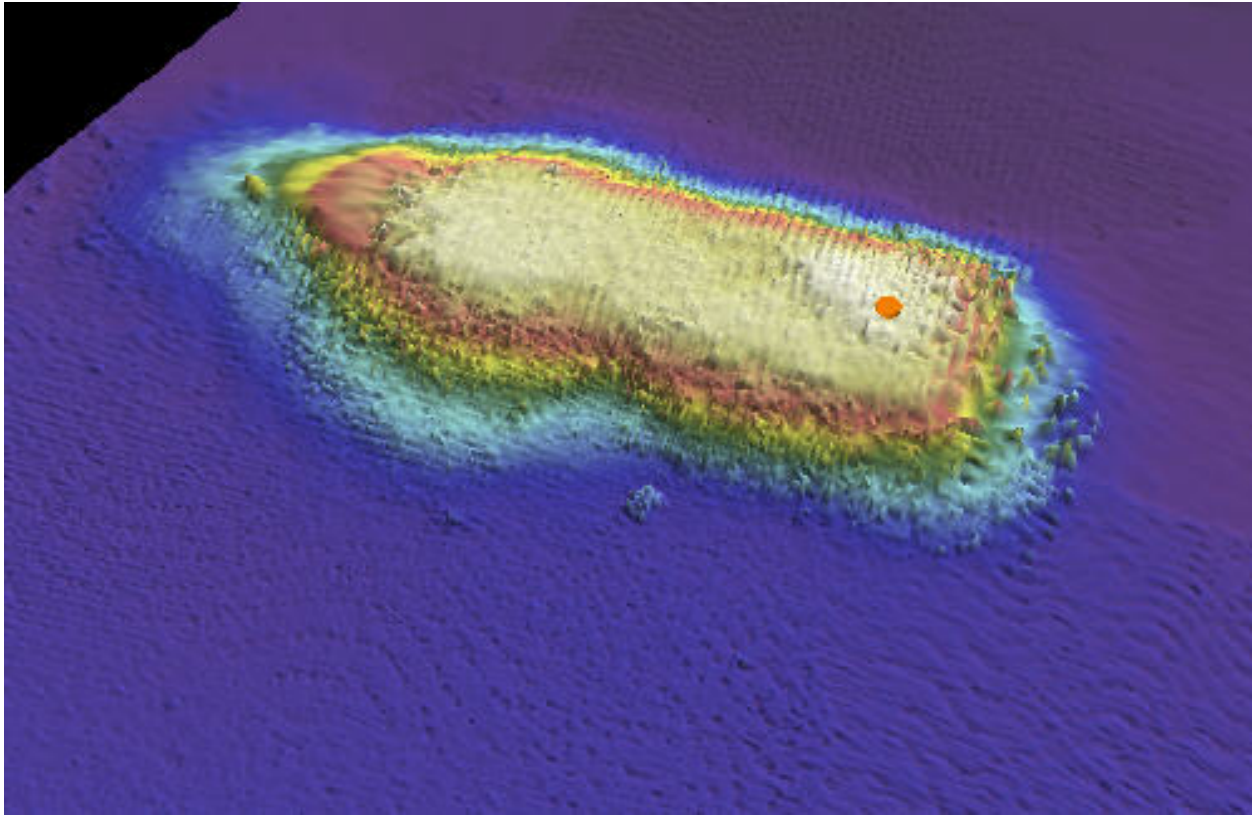


Figure 1.84.1

1.85) Profile/Beam - 266/196 from h11709 / tj_3101_reson8125 / 2007-236 / 286_1851

Survey Summary

Survey Position: 40° 30' 42.5" N, 073° 57' 13.9" W
Least Depth: 5.03 m (= 16.52 ft = 2.753 fm = 2 fm 4.52 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-236.18:52:03.242 (08/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-236 / 286_1851
Profile/Beam: 266/196
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-236/286_1851	266/196	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-226/579_1432	0001	2.37	259.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-229/269_1614	0002	11.96	033.6	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

16ft (12401_1, 12402_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.0m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.034 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 16-ft "Rks"

Feature Images

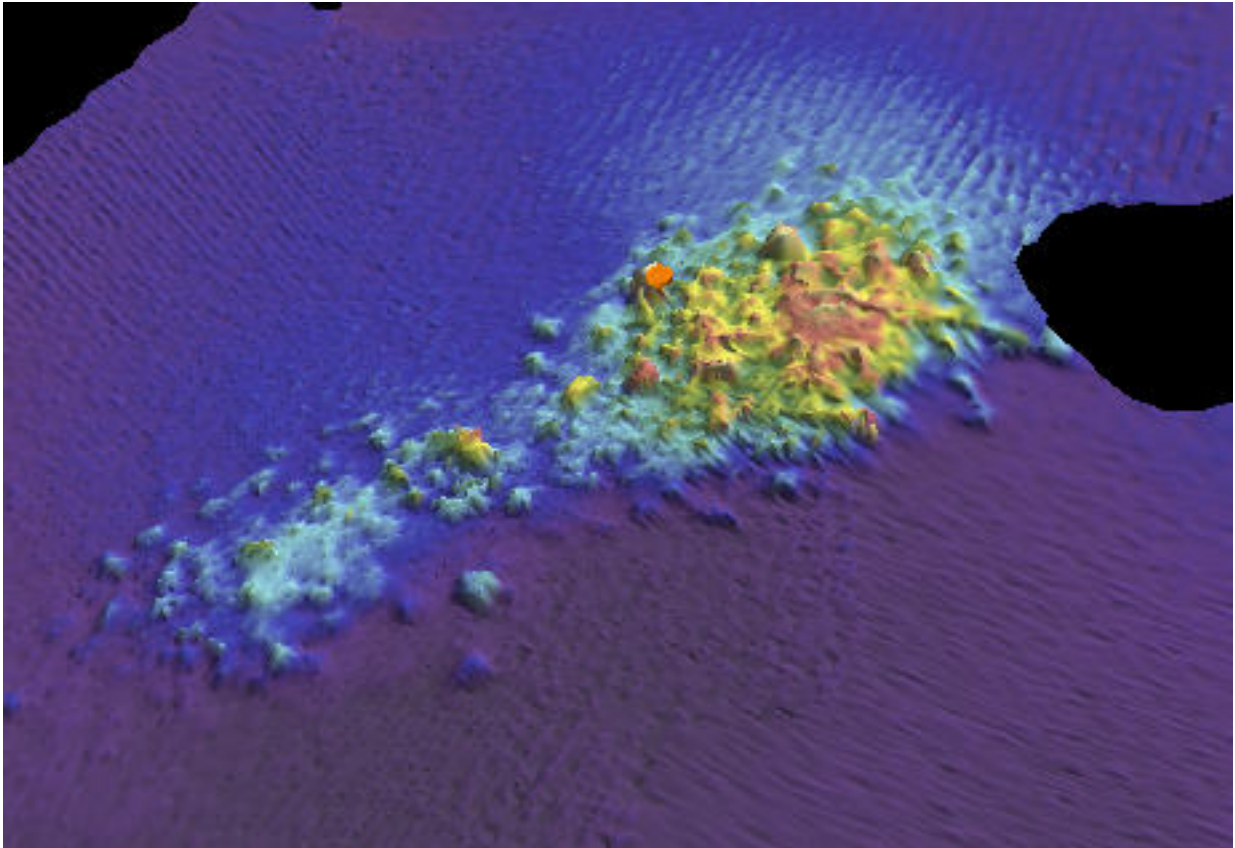


Figure 1.85.1

1.86) Profile/Beam - 943/151 from h11709 / tj_3101_reson8125 / 2007-237 / 288_1510

Survey Summary

Survey Position: 40° 30' 55.5" N, 073° 56' 34.1" W
Least Depth: 5.55 m (= 18.22 ft = 3.036 fm = 3 fm 0.22 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-237.15:11:39.475 (08/25/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-237 / 288_1510
Profile/Beam: 943/151
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-237/288_1510	943/151	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/339_1442	0001	1.45	324.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12401_1, 12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.552 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 18 Rk

Feature Images

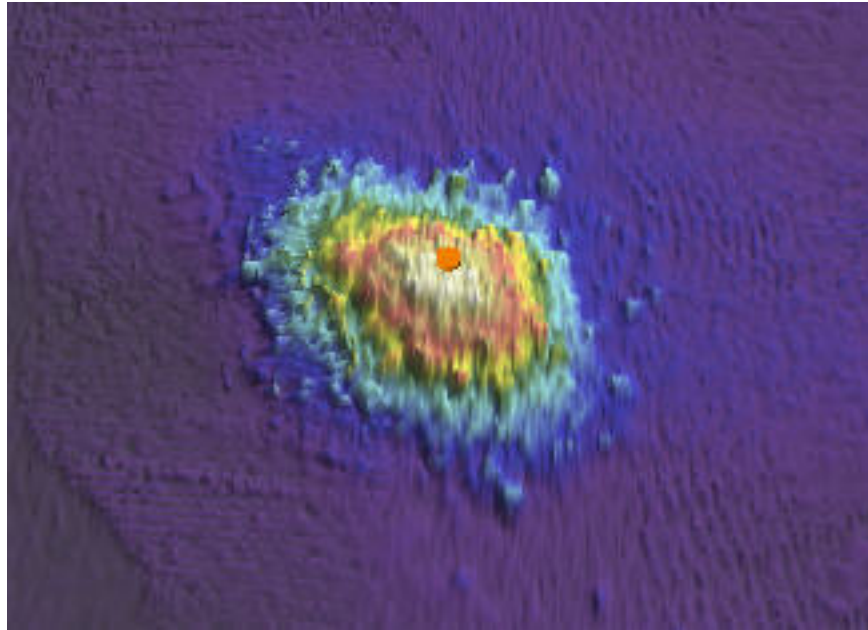


Figure 1.86.1

1.87) Profile/Beam - 155/184 from h11709 / tj_3101_reson8125 / 2007-237 / 288_1510

Survey Summary

Survey Position: 40° 31' 01.9" N, 073° 56' 33.9" W
Least Depth: 4.74 m (= 15.56 ft = 2.594 fm = 2 fm 3.56 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-237.15:10:53.145 (08/25/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-237 / 288_1510
Profile/Beam: 155/184
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-237/288_1510	155/184	0.00	000.0	Primary
h11709/tj_3102_reson8101/2007-218/339_1442	4130/9	1.02	255.2	Secondary
h11709/tj_3102_klein5000_sss100/2007-218/339_1442	0002	11.44	083.7	Secondary
h11709/tj_3102_klein5000_sss200/2007-220/245_1405	0005	18.59	064.3	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

15ft (12402_1, 12327_1, 12326_1)

2 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

4.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 4.743 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 15 Obstn

Feature Images

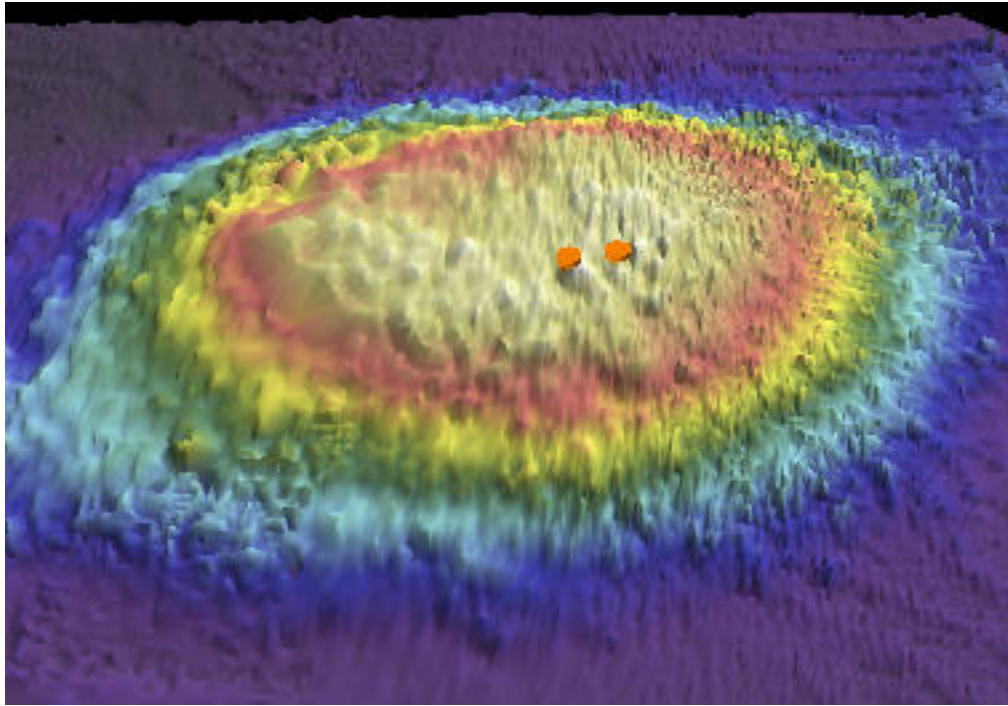


Figure 1.87.1

1.88) Profile/Beam - 230/189 from h11709 / tj_3101_reson8125 / 2007-265 / 420_1554

Survey Summary

Survey Position: 40° 31' 39.8" N, 073° 56' 28.9" W
Least Depth: 6.23 m (= 20.43 ft = 3.406 fm = 3 fm 2.43 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-265.15:55:36.969 (09/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-265 / 420_1554
Profile/Beam: 230/189
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-265/420_1554	230/189	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/338_1457	0003	8.01	094.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12402_1, 12327_1, 12326_1)

3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

6.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.228 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20-ft "Rks"

Feature Images

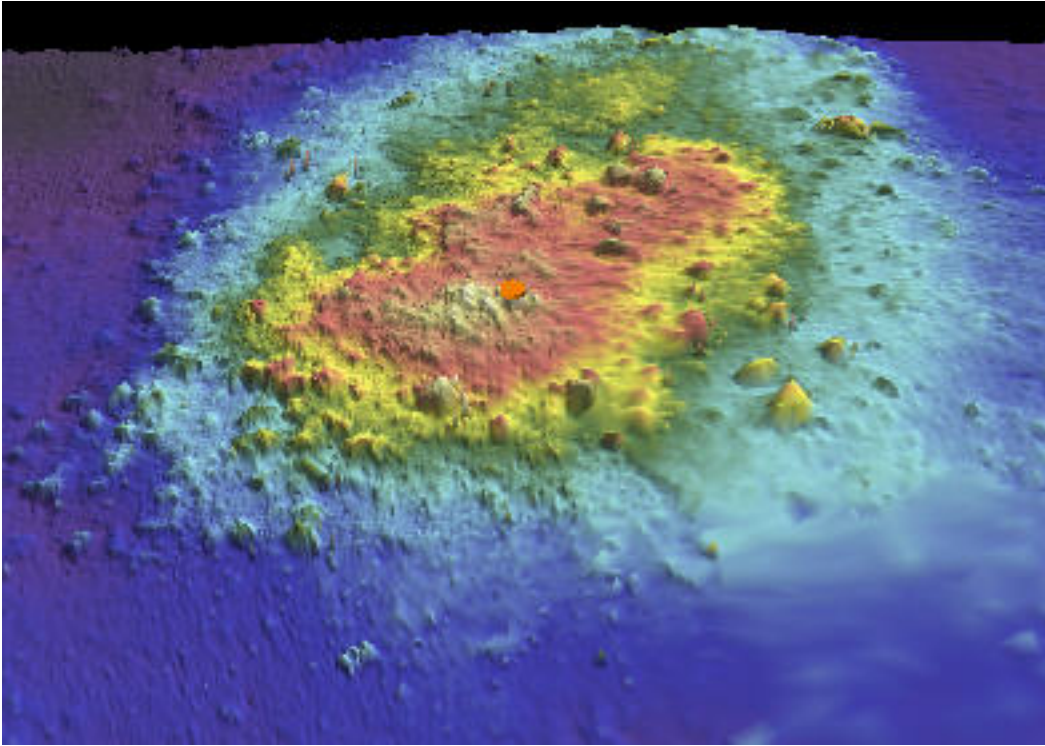


Figure 1.88.1

1.89) Profile/Beam - 120/16 from h11709 / tj_3101_reson8125 / 2007-266 / 649_1837

Survey Summary

Survey Position: 40° 29' 34.9" N, 073° 59' 26.7" W
Least Depth: 6.86 m (= 22.52 ft = 3.753 fm = 3 fm 4.52 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.151 m
Timestamp: 2007-266.18:38:11.890 (09/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-266 / 649_1837
Profile/Beam: 120/16
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-266/649_1837	120/16	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-266/649_1837	206/118	19.16	329.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/407_1723	0001	19.39	324.9	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

6.9m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.863 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22-ft "Rks"

Feature Images

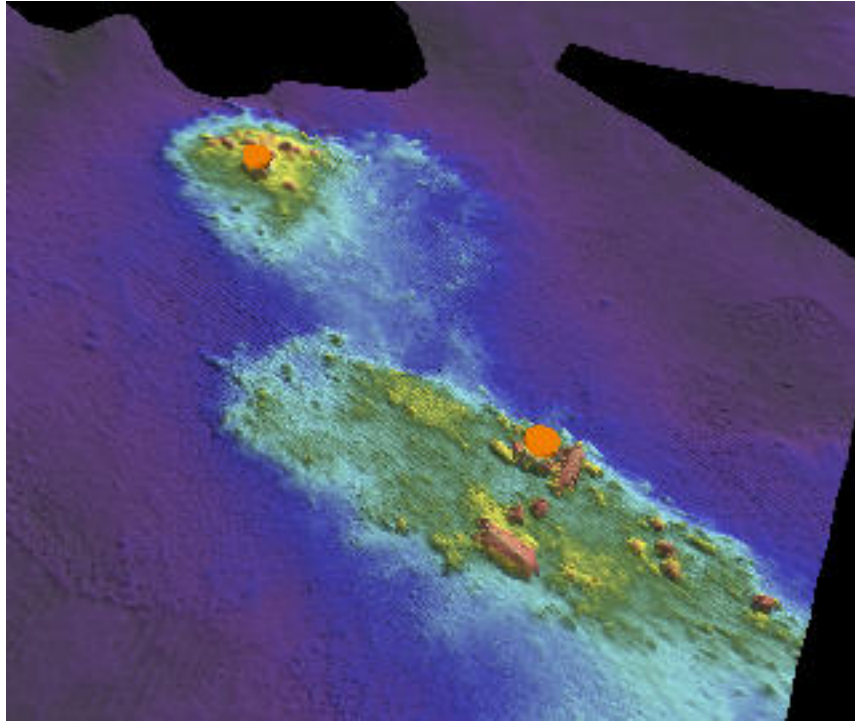


Figure 1.89.1

1.90) Profile/Beam - 215/178 from h11709 / tj_3101_reson8125 / 2007-266 / 733_1830

Survey Summary

Survey Position: 40° 29' 36.6" N, 073° 59' 43.2" W
Least Depth: 6.87 m (= 22.54 ft = 3.756 fm = 3 fm 4.54 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-266.18:31:11.383 (09/23/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-266 / 733_1830
Profile/Beam: 215/178
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-266/733_1830	215/178	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-268/966_1506	0004	4.12	114.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/406_1802	0002	4.51	164.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

6.9m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.869 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22 Obstn

Feature Images

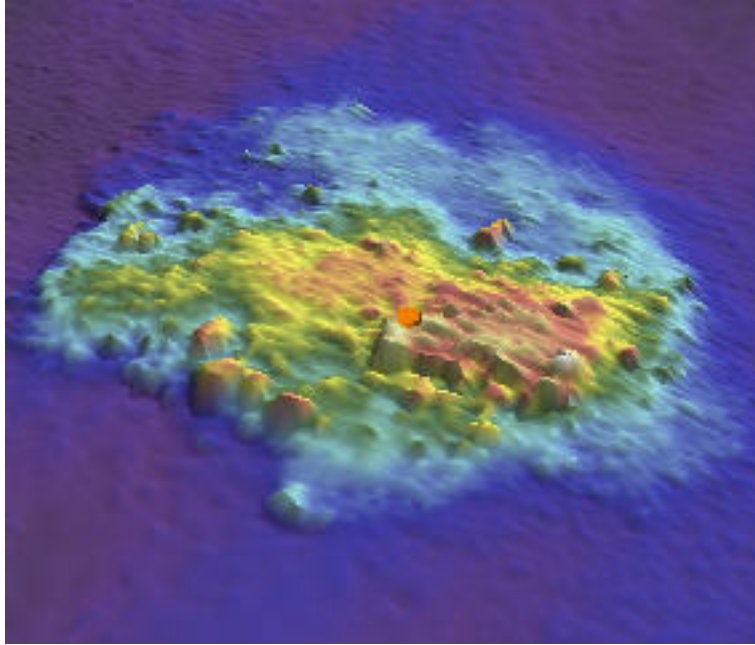


Figure 1.90.1

1.91) Profile/Beam - 262/122 from h11709 / tj_3101_reson8125 / 2007-267 / 193_1422

Survey Summary

Survey Position: 40° 29' 41.0" N, 073° 59' 31.6" W
Least Depth: 6.58 m (= 21.59 ft = 3.599 fm = 3 fm 3.59 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-267.14:23:16.001 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 193_1422
Profile/Beam: 262/122
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

These uncharted rocks were found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/193_1422	262/122	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-267/949_2113	0001	2.67	001.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/408_1645	0001	3.70	213.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/530_1623	0002	4.23	115.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known

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

VALSOU - 6.581 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rks least depth 21 ft.

Feature Images

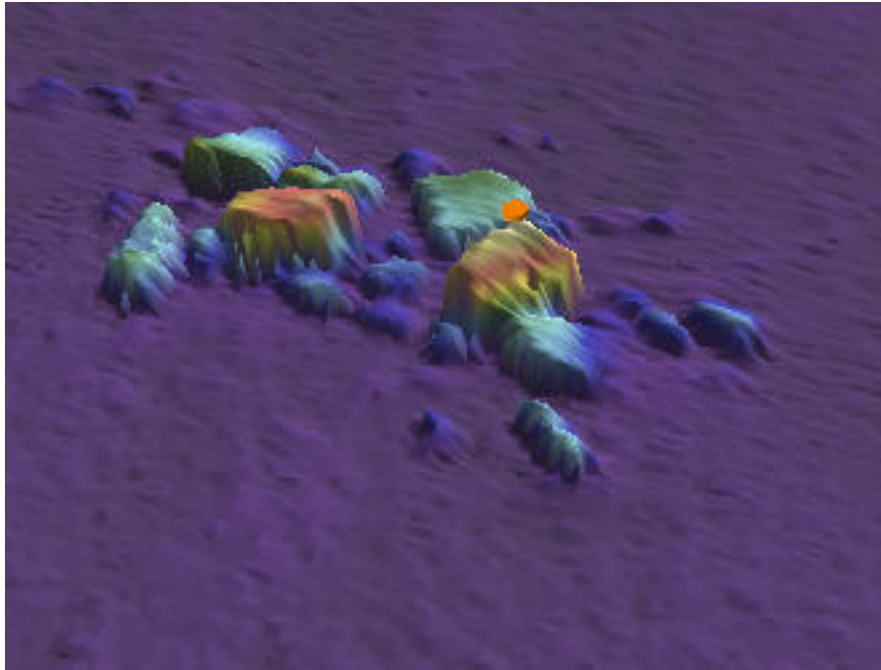


Figure 1.91.1

1.92) Profile/Beam - 125/239 from h11709 / tj_3101_reson8125 / 2007-267 / 199_1415

Survey Summary

Survey Position: 40° 29' 43.1" N, 074° 00' 04.1" W
Least Depth: 6.34 m (= 20.78 ft = 3.464 fm = 3 fm 2.78 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.154 m
Timestamp: 2007-267.14:16:18.995 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 199_1415
Profile/Beam: 125/239
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/199_1415	125/239	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-268/966_1506	0003	4.70	314.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/520_1450	0002	12.06	254.5	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.3m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.335 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 21-ft "Rks"

Feature Images

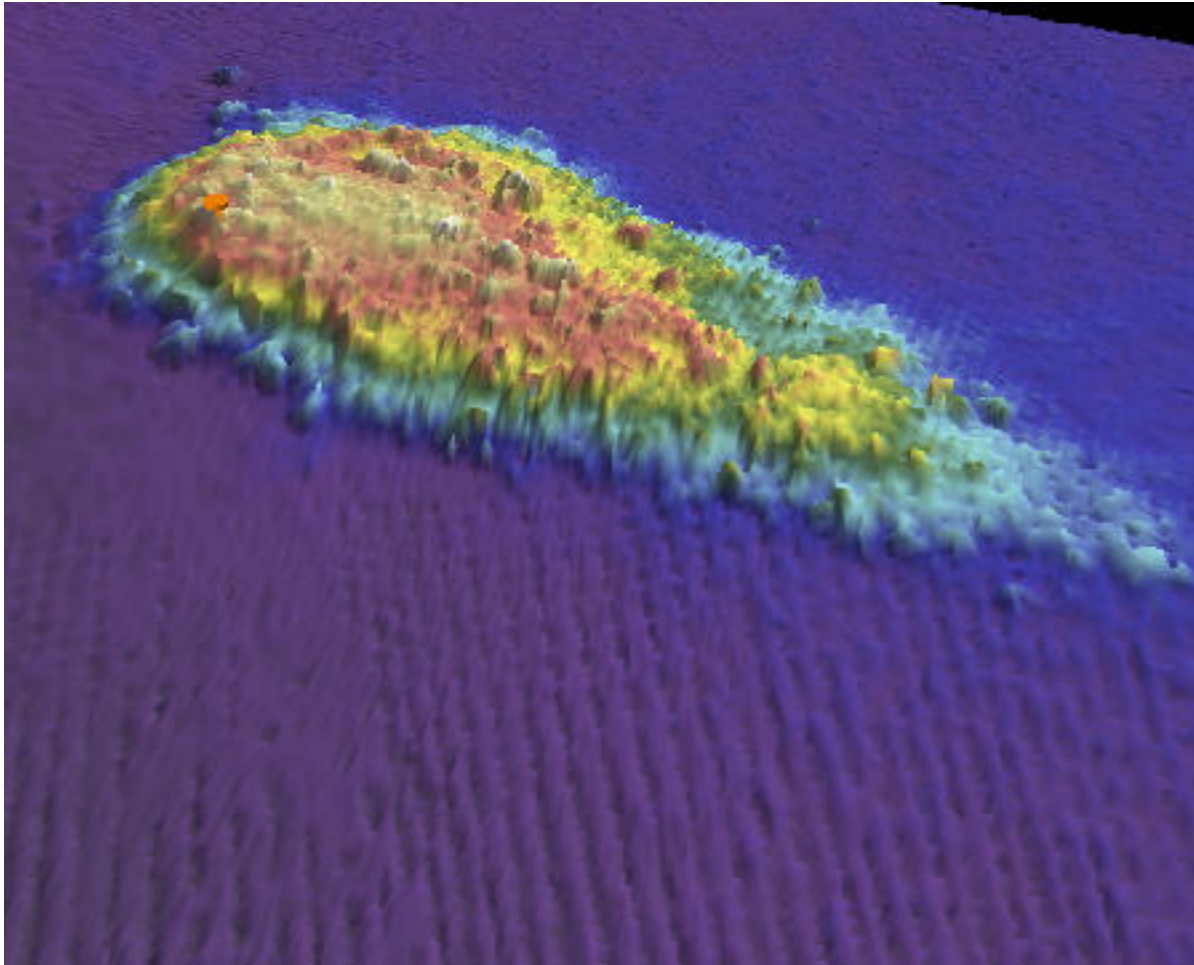


Figure 1.92.1

1.93) Profile/Beam - 211/49 from h11709 / tj_3101_reson8125 / 2007-267 / 212_1655

Survey Summary

Survey Position: 40° 29' 60.0" N, 074° 00' 46.6" W
Least Depth: 3.87 m (= 12.68 ft = 2.114 fm = 2 fm 0.68 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.146 m
Timestamp: 2007-267.16:56:19.155 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 212_1655
Profile/Beam: 211/49
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/212_1655	211/49	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/401_1855	0003	6.38	174.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-180/540_1458	0004	6.62	314.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

12ft (12401_1, 12324_1, 12327_1, 12326_1)

2fm (12300_1, 13006_1, 13003_1, 14500_1)

3.9m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 3.866 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rk least depth 12 ft.

Feature Images

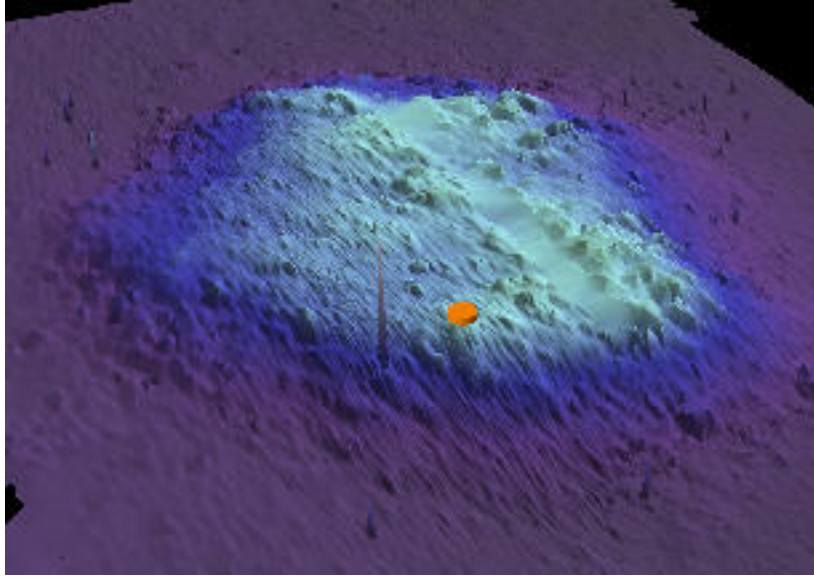


Figure 1.93.1

1.94) Profile/Beam - 175/180 from h11709 / tj_3101_reson8125 / 2007-267 / 241_1330

Survey Summary

Survey Position: 40° 29' 14.6" N, 073° 59' 12.1" W
Least Depth: 8.28 m (= 27.16 ft = 4.527 fm = 4 fm 3.16 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-267.13:31:16.796 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 241_1330
Profile/Beam: 175/180
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/241_1330	175/180	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/299_1744	0001	3.03	044.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/503_1352	0006	5.75	067.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

27ft (12401_1, 12324_1, 12327_1, 12326_1)
 4 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 8.3m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.279 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 27-ft "Rks"

Feature Images

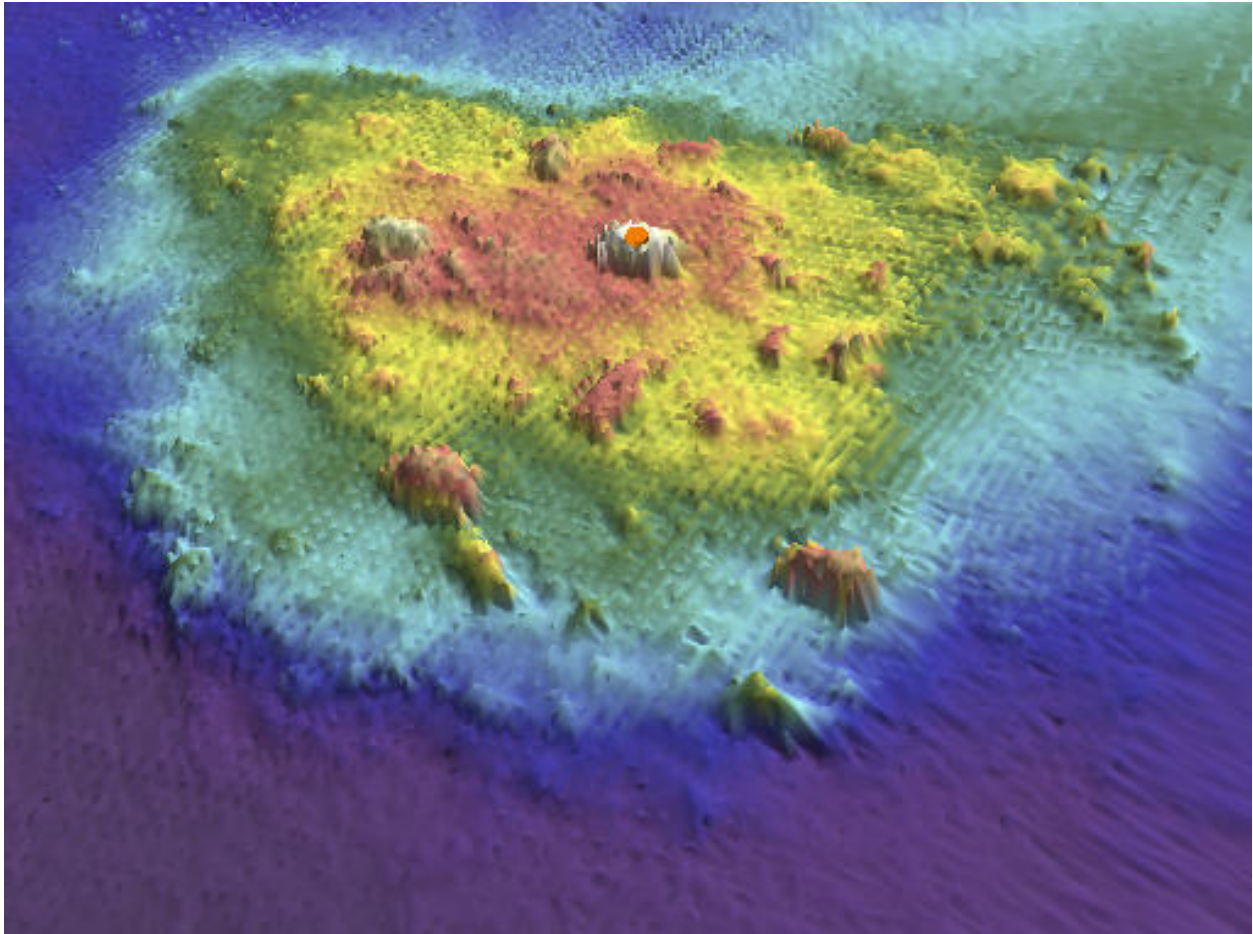


Figure 1.94.1

1.95) Profile/Beam - 288/240 from h11709 / tj_3101_reson8125 / 2007-267 / 410_1322

Survey Summary

Survey Position: 40° 29' 22.9" N, 073° 59' 18.7" W
Least Depth: 8.13 m (= 26.66 ft = 4.443 fm = 4 fm 2.66 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.160 m
Timestamp: 2007-267.13:23:42.588 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 410_1322
Profile/Beam: 288/240
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/410_1322	288/240	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-267/410_1322	243/205	13.49	325.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/518_1310	0004	14.49	335.5	Secondary
h11709/tj_3102_klein5000_sss200/2007-235/401_1910	0005	15.68	320.8	Secondary
h11709/tj_3101_reson8125/2007-269/077_1725	109/17	27.34	353.3	Secondary
h11709/tj_3102_klein5000_sss200/2007-235/400_2013	0005	28.38	000.1	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

26ft (12401_1, 12324_1, 12327_1, 12326_1)
 4 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 8.1m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 8.125 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" least depth = 26 ft

Feature Images

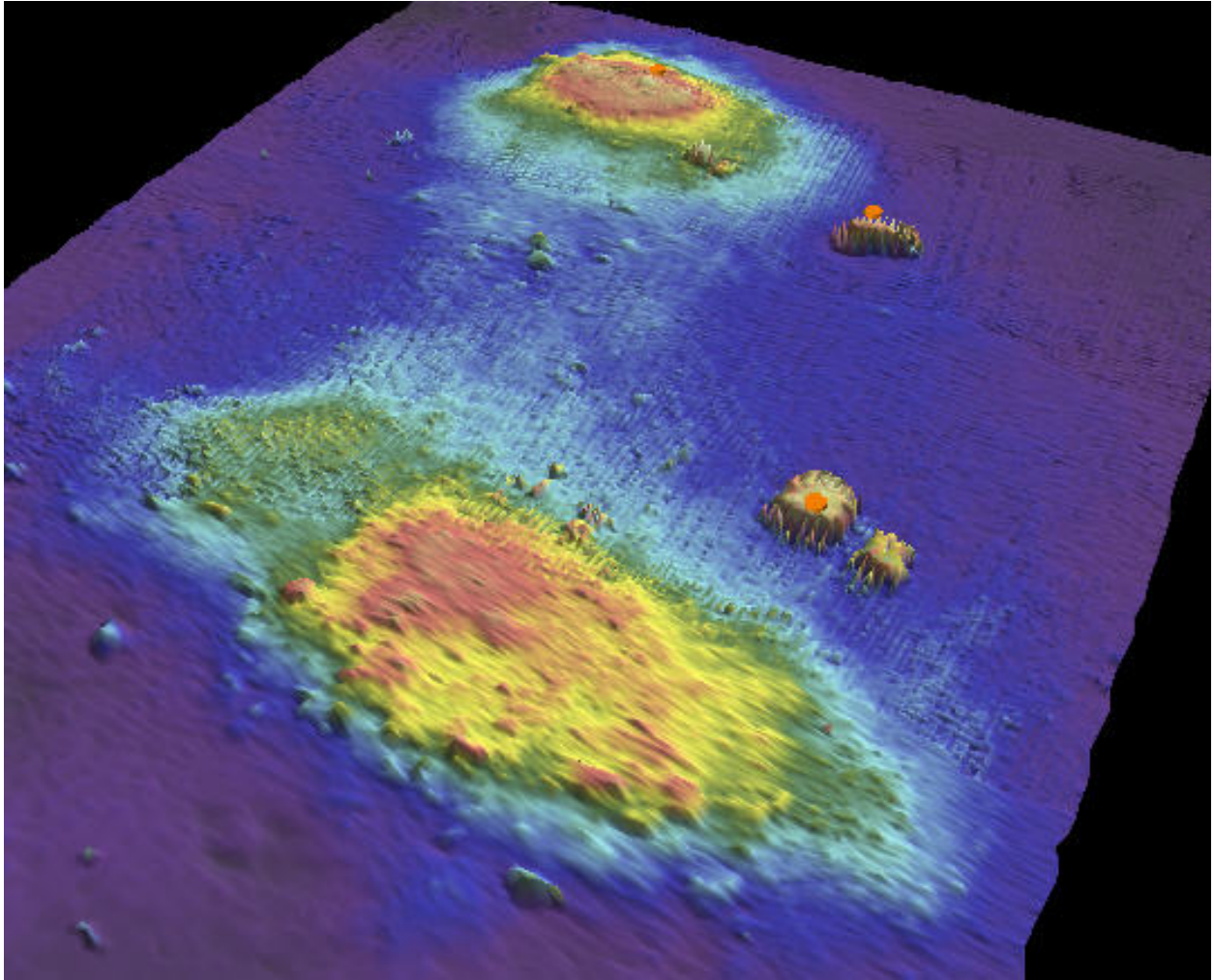


Figure 1.95.1

1.96) Profile/Beam - 152/94 from h11709 / tj_3101_reson8125 / 2007-267 / 543_1356

Survey Summary

Survey Position: 40° 29' 12.2" N, 074° 00' 00.9" W
Least Depth: 9.29 m (= 30.48 ft = 5.080 fm = 5 fm 0.48 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2007-267.13:57:21.372 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 543_1356
Profile/Beam: 152/94
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/543_1356	152/94	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/458_1945	0002	6.88	235.1	Secondary (grouped)
h11709/tj_3101_reson8125/2007-267/509_1354	114/92	28.84	183.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-236/459_1936	0002	31.99	179.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

30ft (12401_1, 12324_1, 12327_1, 12326_1)

5fm (12300_1, 13006_1, 13003_1, 14500_1)

9.3m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: EXPSOU - 2:shoaler than range of depth of the surrounding depth area
 QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

Shoal sounding of 30-ft

Feature Images

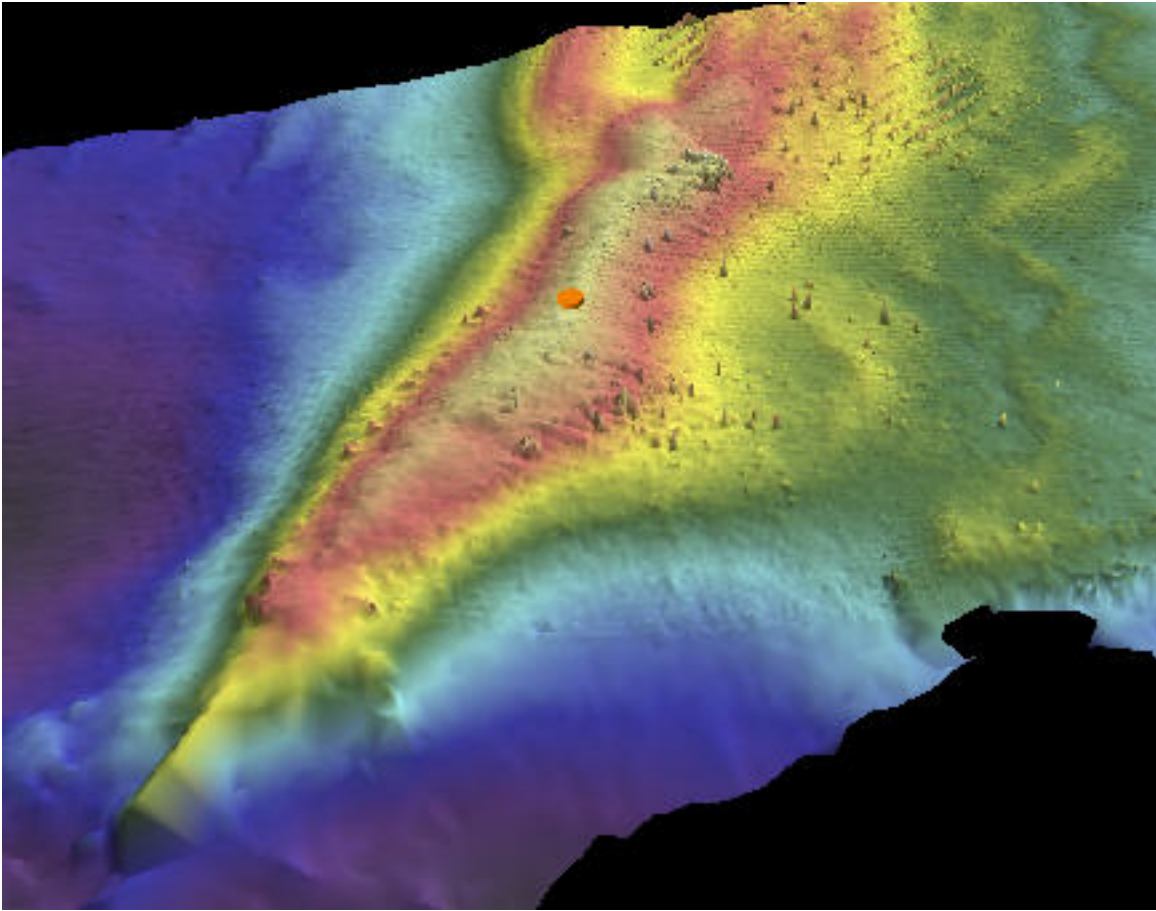


Figure 1.96.1

1.97) Profile/Beam - 158/88 from h11709 / tj_3101_reson8125 / 2007-267 / 570_1518

Survey Summary

Survey Position: 40° 30' 10.7" N, 074° 00' 30.2" W
Least Depth: 6.47 m (= 21.21 ft = 3.536 fm = 3 fm 3.21 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-267.15:18:47.835 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 570_1518
Profile/Beam: 158/88
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/570_1518	158/88	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/409_1528	0001	2.62	081.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/531_1739	0002	2.81	196.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12402_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.5m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 6.466 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rk least depth 21 ft.

Feature Images

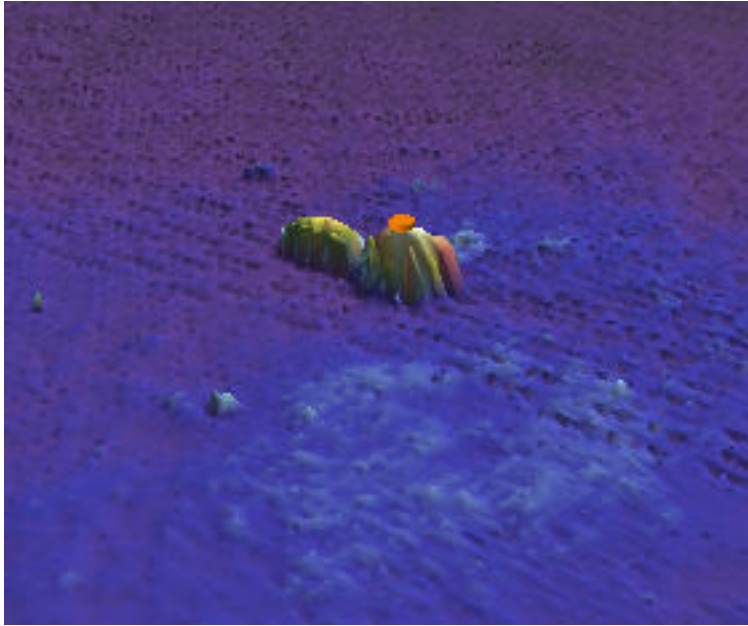


Figure 1.97.1

1.98) Profile/Beam - 226/80 from h11709 / tj_3101_reson8125 / 2007-267 / 572_1550

Survey Summary

Survey Position: 40° 30' 12.8" N, 074° 00' 40.8" W
Least Depth: 5.70 m (= 18.70 ft = 3.117 fm = 3 fm 0.70 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-267.15:51:40.207 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 572_1550
Profile/Beam: 226/80
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/572_1550	226/80	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-267/980_2052	0020	3.27	109.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/409_1528	0004	3.96	346.5	Secondary (grouped)
h11709/tj_3102_reson8101/2007-217/531_1739	3076/58	99.45	212.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-217/533_1818	0006	148.93	214.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12401_1, 12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.7m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

VALSOU - 5.700 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 18-ft "Rks"

Feature Images

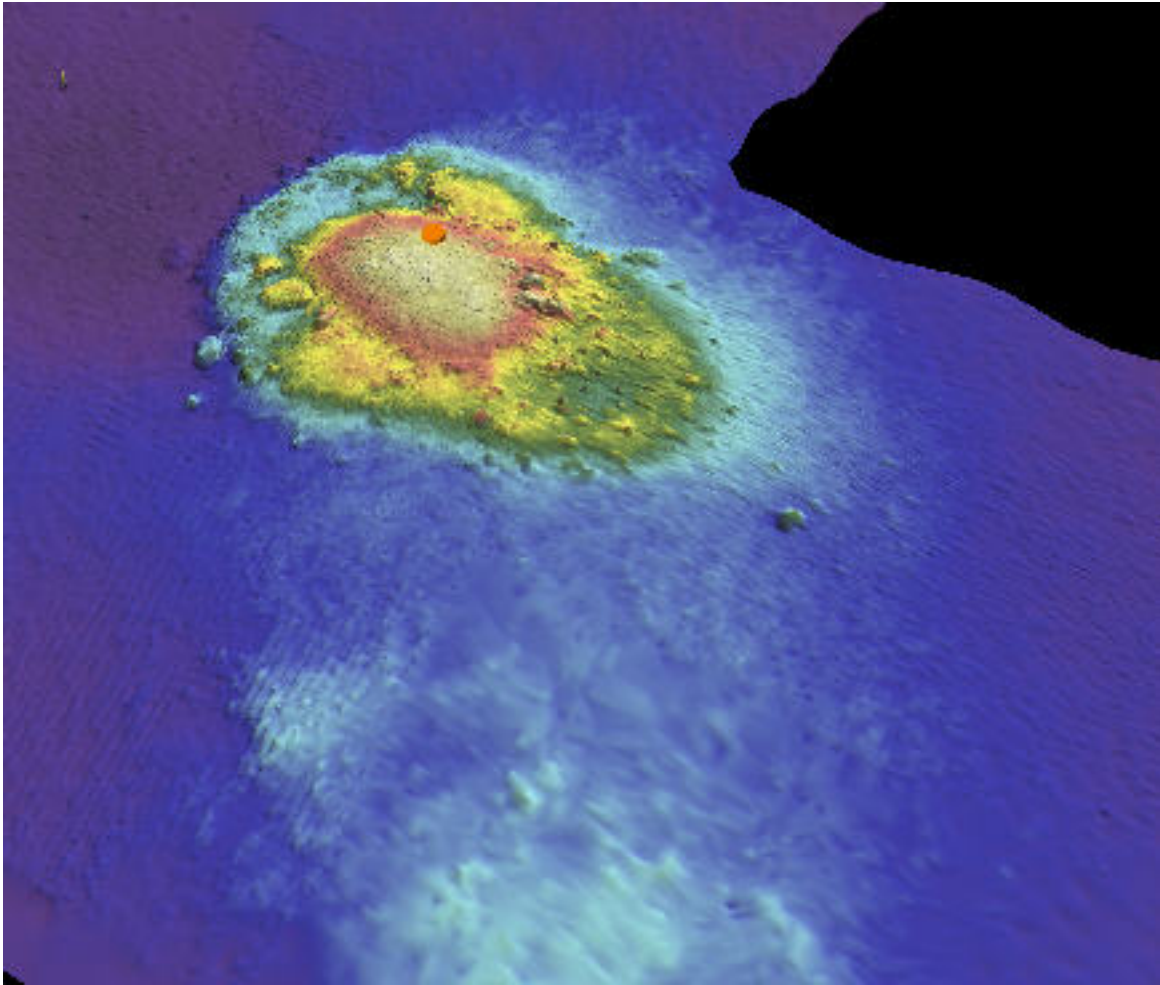


Figure 1.98.1

1.99) Profile/Beam - 219/177 from h11709 / tj_3101_reson8125 / 2007-267 / 577_1600

Survey Summary

Survey Position: 40° 30' 13.9" N, 074° 01' 03.0" W
Least Depth: 5.48 m (= 17.98 ft = 2.996 fm = 2 fm 5.98 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-267.16:01:36.433 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 577_1600
Profile/Beam: 219/177
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/577_1600	219/177	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/407_1722	0003	0.70	229.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

18ft (12401_1, 12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.5m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 5.479 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rk least depth 18 ft.

Feature Images



Figure 1.99.1

1.100) Profile/Beam - 155/232 from h11709 / tj_3101_reson8125 / 2007-267 / 668_1549

Survey Summary

Survey Position: 40° 30' 17.6" N, 074° 00' 50.5" W
Least Depth: 5.93 m (= 19.46 ft = 3.243 fm = 3 fm 1.46 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.150 m
Timestamp: 2007-267.15:49:52.142 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 668_1549
Profile/Beam: 155/232
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/668_1549	155/232	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-267/980_2052	0018	3.33	009.7	Secondary
h11709/tj_3102_klein5000_sss200/2007-235/409_1528	0003	4.95	012.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12402_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.9m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.931 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 19 Obstn

Feature Images

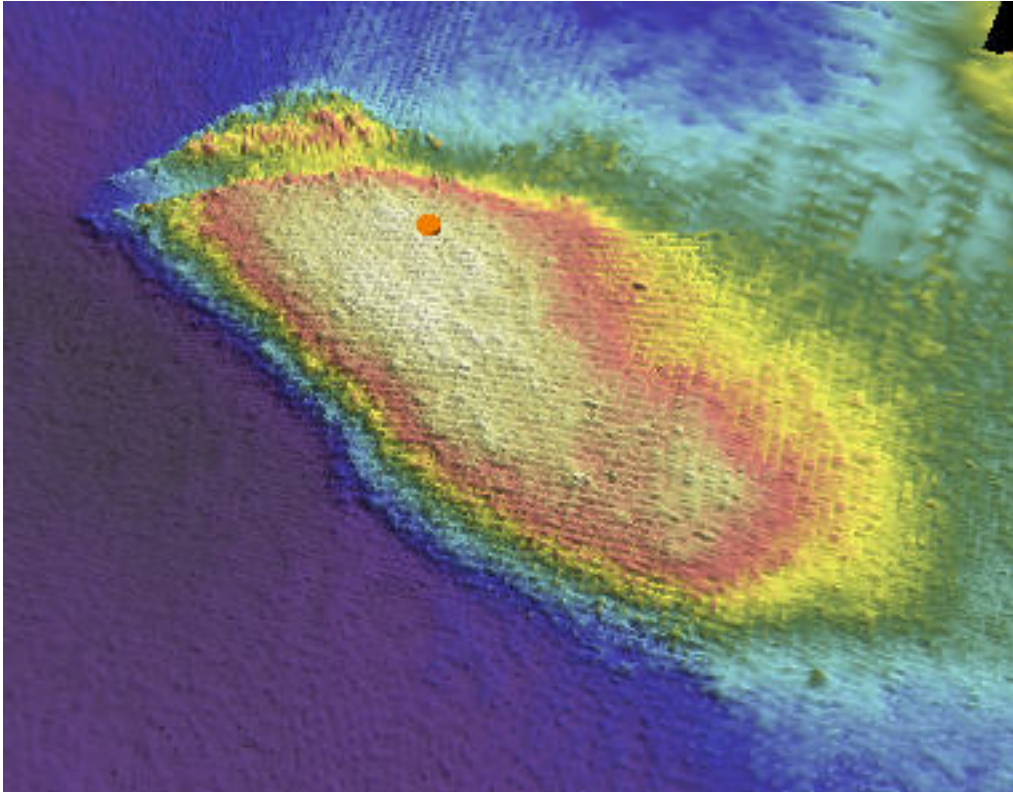


Figure 1.100.1

1.101) Profile/Beam - 161/90 from h11709 / tj_3101_reson8125 / 2007-267 / 708_1522

Survey Summary

Survey Position: 40° 30' 11.7" N, 074° 00' 21.5" W
Least Depth: 6.88 m (= 22.59 ft = 3.764 fm = 3 fm 4.59 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-267.15:23:18.610 (09/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-267 / 708_1522
Profile/Beam: 161/90
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-267/708_1522	161/90	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/412_1418	0010	4.31	215.3	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12402_1, 12327_1, 12326_1)
 3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.9m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.884 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22 Obstn

Feature Images

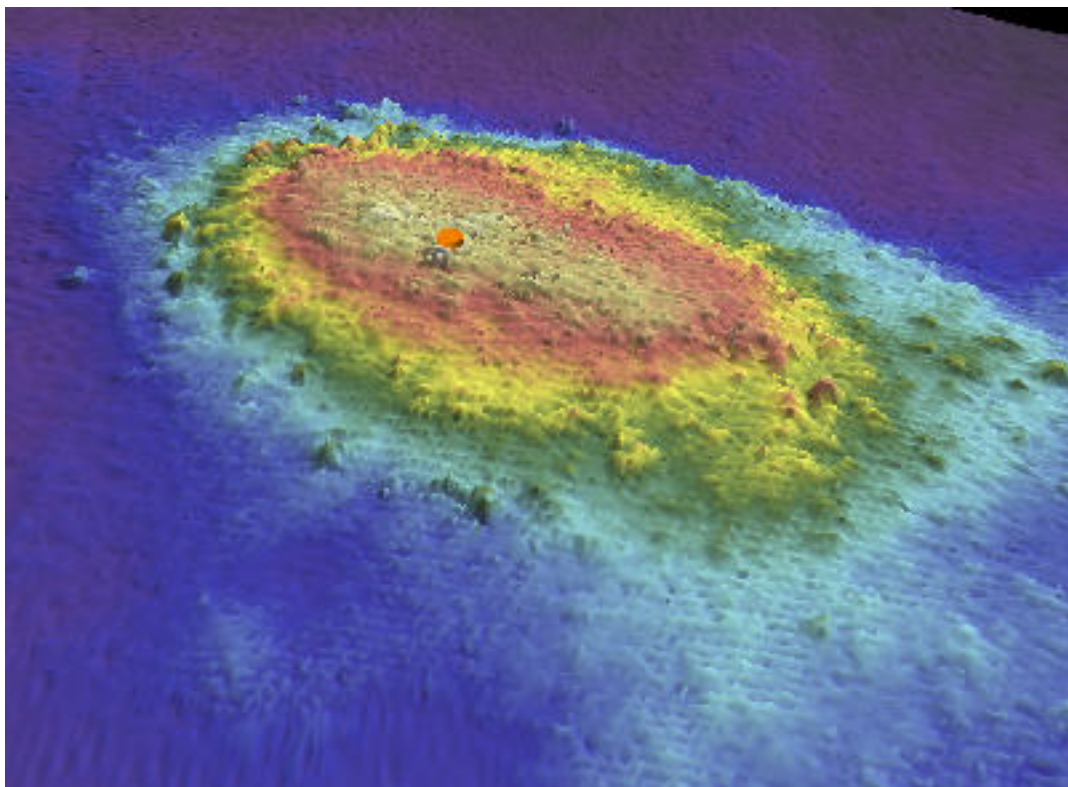


Figure 1.101.1

1.102) Profile/Beam - 264/107 from h11709 / tj_3101_reson8125 / 2007-269 / 010_1506

Survey Summary

Survey Position: 40° 28' 37.2" N, 073° 57' 16.3" W
Least Depth: 5.73 m (= 18.81 ft = 3.135 fm = 3 fm 0.81 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-269.15:07:30.513 (09/26/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-269 / 010_1506
Profile/Beam: 264/107
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-269/010_1506	264/107	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-266/929_1946	0012	19.70	286.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12401_1, 12324_1, 12327_1, 12326_1)
 3fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.7m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.734 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 19 Obstn

Feature Images

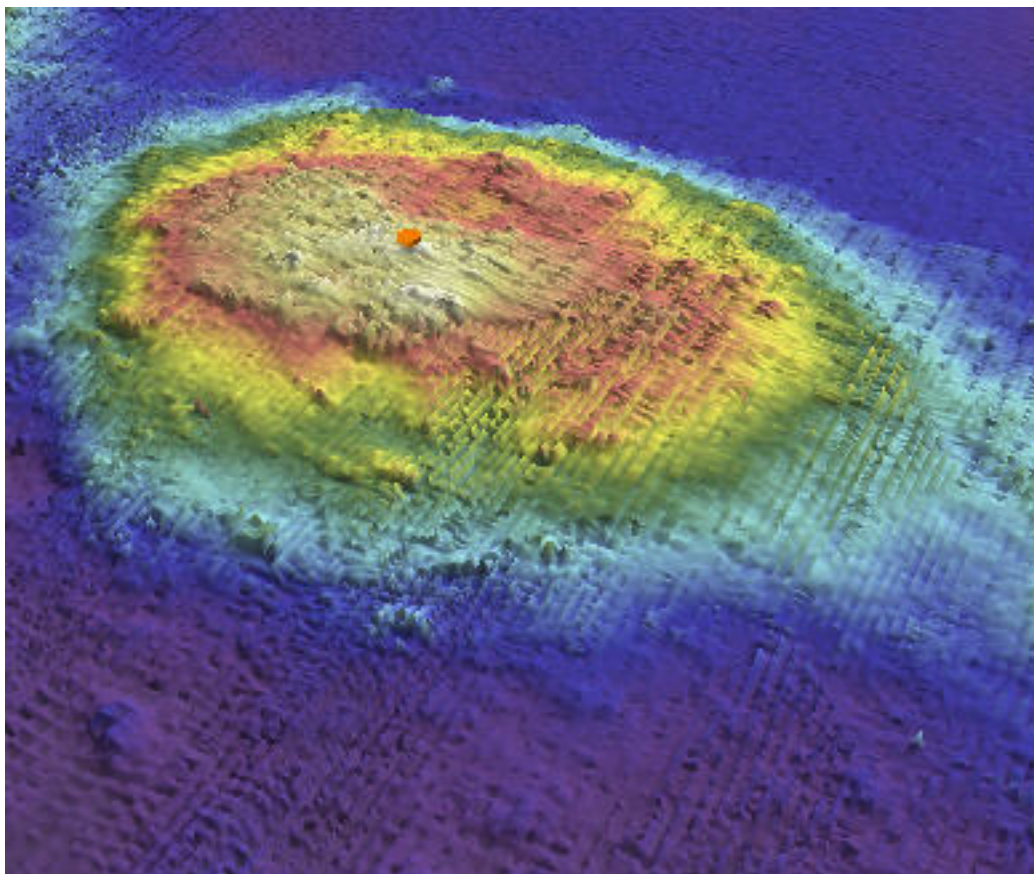


Figure 1.102.1

1.103) Profile/Beam - 89/223 from h11709 / tj_3101_reson8125 / 2007-269 / 013_1454

Survey Summary

Survey Position: 40° 28' 14.8" N, 073° 57' 08.4" W
Least Depth: 6.59 m (= 21.61 ft = 3.601 fm = 3 fm 3.61 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.151 m
Timestamp: 2007-269.14:54:54.227 (09/26/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-269 / 013_1454
Profile/Beam: 89/223
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-269/013_1454	89/223	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-269/013_1454	93/227	1.36	297.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss300/2007-266/901_1925	0001	5.46	267.0	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.6m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.586 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 21 Obstn

Feature Images

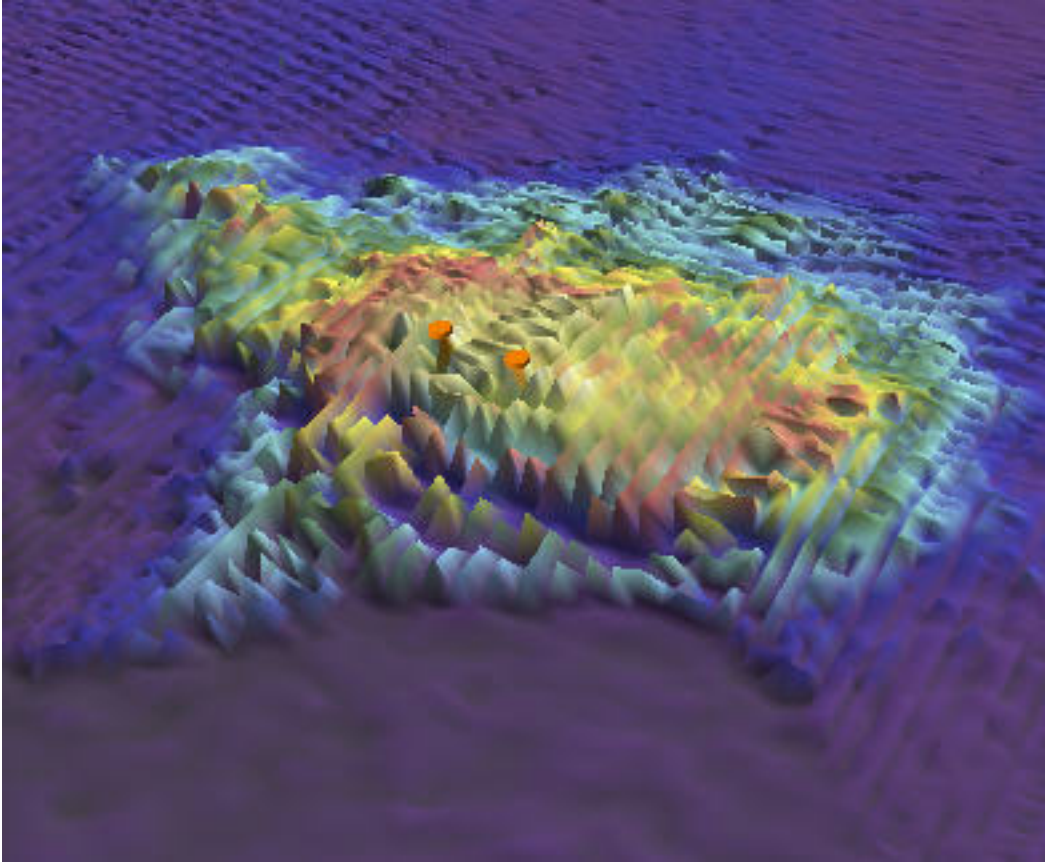


Figure 1.103.1

1.104) Profile/Beam - 417/149 from h11709 / tj_3101_reson8125 / 2007-269 / 017_2035

Survey Summary

Survey Position: 40° 31' 27.3" N, 074° 02' 05.8" W
Least Depth: 5.23 m (= 17.16 ft = 2.859 fm = 2 fm 5.16 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-269.20:36:07.067 (09/26/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-269 / 017_2035
Profile/Beam: 417/149
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-269/017_2035	417/149	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-187/596_1342	0001	1.06	210.3	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-236/425_1403	0003	2.81	051.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12402_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 5.229 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rk least depth 17 ft.

Feature Images

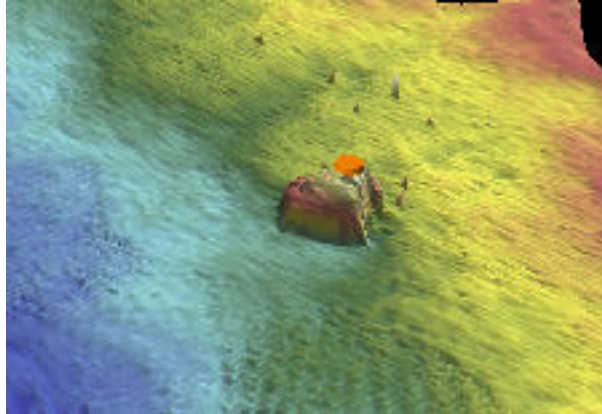


Figure 1.104.1

1.105) Profile/Beam - 96/202 from h11709 / tj_3101_reson8125 / 2007-269 / 046_1644

Survey Summary

Survey Position: 40° 28' 38.6" N, 073° 58' 20.2" W
Least Depth: 10.08 m (= 33.06 ft = 5.511 fm = 5 fm 3.06 ft)
TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.152 m
Timestamp: 2007-269.16:45:04.252 (09/26/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-269 / 046_1644
Profile/Beam: 96/202
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-269/046_1644	96/202	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-266/287_1657	0001	5.47	134.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

33ft (12401_1, 12324_1, 12327_1, 12326_1)
 5 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 10.1m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 10.078 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 33 Rk

Feature Images

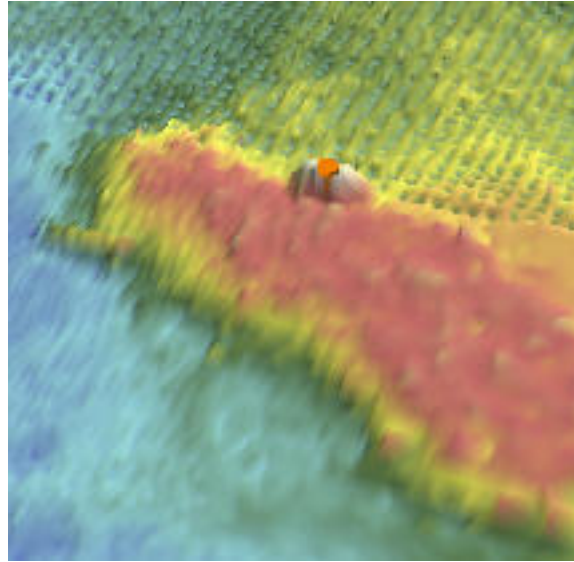


Figure 1.105.1

1.106) Profile/Beam - 193/86 from h11709 / tj_3101_reson8125 / 2007-269 / 047_2027

Survey Summary

Survey Position: 40° 31' 28.7" N, 074° 02' 16.7" W
Least Depth: 7.25 m (= 23.78 ft = 3.963 fm = 3 fm 5.78 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.148 m
Timestamp: 2007-269.20:28:05.463 (09/26/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-269 / 047_2027
Profile/Beam: 193/86
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-269/047_2027	193/86	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/426_1417	0001	2.33	215.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-187/503_1302	0017	2.35	050.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

24ft (12402_1, 12327_1, 12326_1)

4fm (12300_1, 13006_1, 13003_1, 14500_1)

7.2m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

VALSOU - 7.248 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Rks least depth 24 ft.

Feature Images

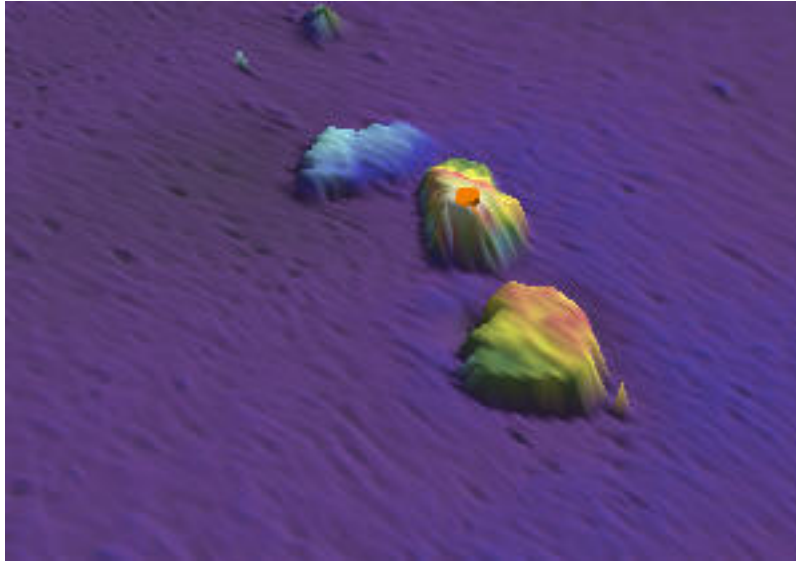


Figure 1.106.1

1.107) Profile/Beam - 168/235 from h11709 / tj_3101_reson8125 / 2007-269 / 062_1928

Survey Summary

Survey Position: 40° 31' 27.7" N, 074° 02' 39.4" W
Least Depth: 6.58 m (= 21.58 ft = 3.597 fm = 3 fm 3.58 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.151 m
Timestamp: 2007-269.19:29:08.306 (09/26/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-269 / 062_1928
Profile/Beam: 168/235
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-269/062_1928	168/235	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-187/543_1912	0001	4.49	295.0	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

21ft (12402_1, 12327_1, 12326_1)

3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

6.6m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.578 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" least depth 21 ft.

Feature Images

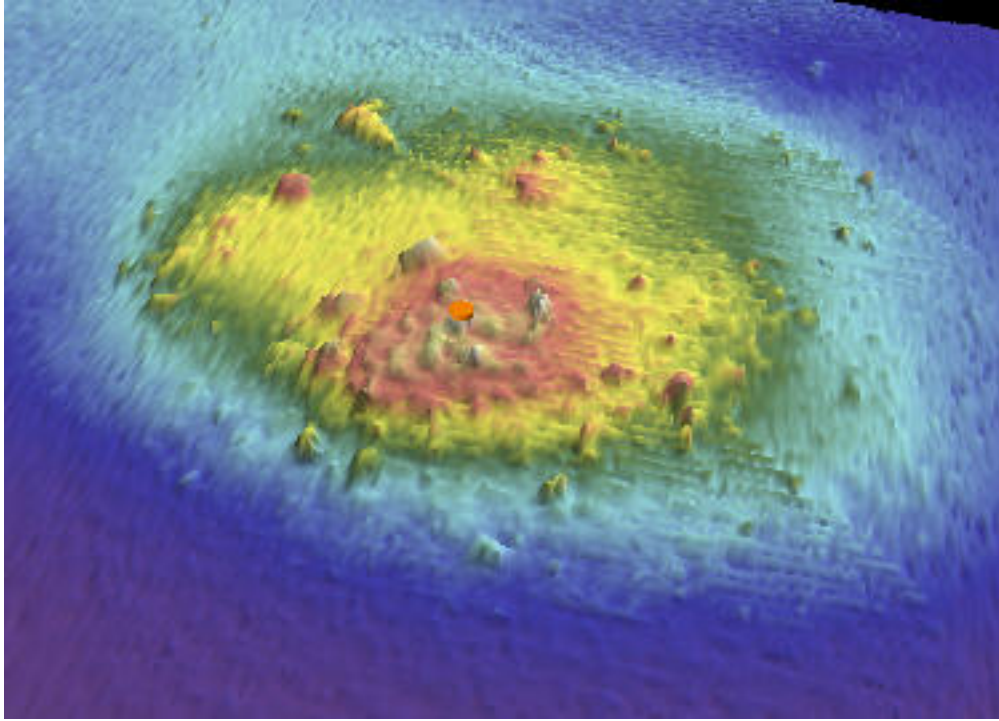


Figure 1.107.1

1.108) Profile/Beam - 135/198 from h11709 / tj_3101_reson8125 / 2007-270 / 170_1802

Survey Summary

Survey Position: 40° 29' 32.1" N, 073° 59' 29.0" W
Least Depth: 7.18 m (= 23.56 ft = 3.927 fm = 3 fm 5.56 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.146 m
Timestamp: 2007-270.18:02:52.727 (09/27/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-270 / 170_1802
Profile/Beam: 135/198
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-270/170_1802	135/198	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/520_1450	0001	1.87	149.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/406_1801	0008	2.28	213.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12401_1, 12324_1, 12327_1, 12326_1)

3 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

7.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 7.181 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 23-ft "Rks"

Feature Images

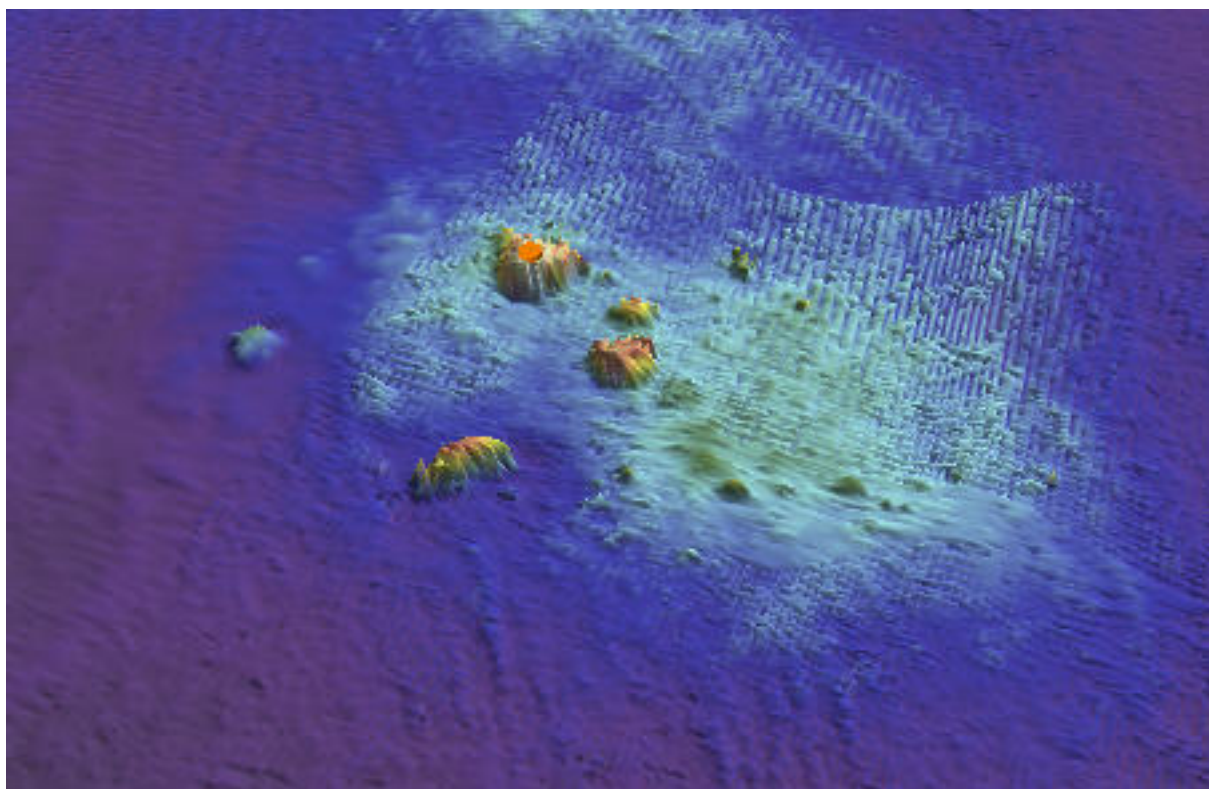


Figure 1.108.1

1.109) Profile/Beam - 6558/89 from h11709 / tj_3102_reson8101 / 2007-180 / 540_1458

Survey Summary

Survey Position: 40° 29' 49.4" N, 074° 01' 23.8" W
Least Depth: 4.00 m (= 13.13 ft = 2.188 fm = 2 fm 1.13 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.391 m
Timestamp: 2007-180.15:15:09.717 (06/29/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-180 / 540_1458
Profile/Beam: 6558/89
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The object appears to be the hulk of an airplane or wreck structure.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-180/540_1458	6558/89	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-237/436_2026	0001	1.54	349.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-180/540_1458	0003	1.65	306.7	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-186/364_1831	0004	3.85	234.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-180/541_1524	0002	4.92	301.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-237/436_2026	0003	160.66	298.6	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

13ft (12401_1, 12324_1, 12327_1, 12326_1)

2 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

4.0m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 4.001 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart Obsn least depth 13 ft.

Feature Images



Figure 1.109.1

1.110) Profile/Beam - 1596/63 from h11709 / tj_3102_reson8101 / 2007-184 / 252_1808

Survey Summary

Survey Position: 40° 27' 44.1" N, 073° 56' 24.1" W
Least Depth: 6.24 m (= 20.48 ft = 3.413 fm = 3 fm 2.48 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.393 m
Timestamp: 2007-184.18:11:15.709 (07/03/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-184 / 252_1808
Profile/Beam: 1596/63
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-184/252_1808	1596/63	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-184/252_1808	0015	4.79	175.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.242 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20-ft "Rks"

Feature Images

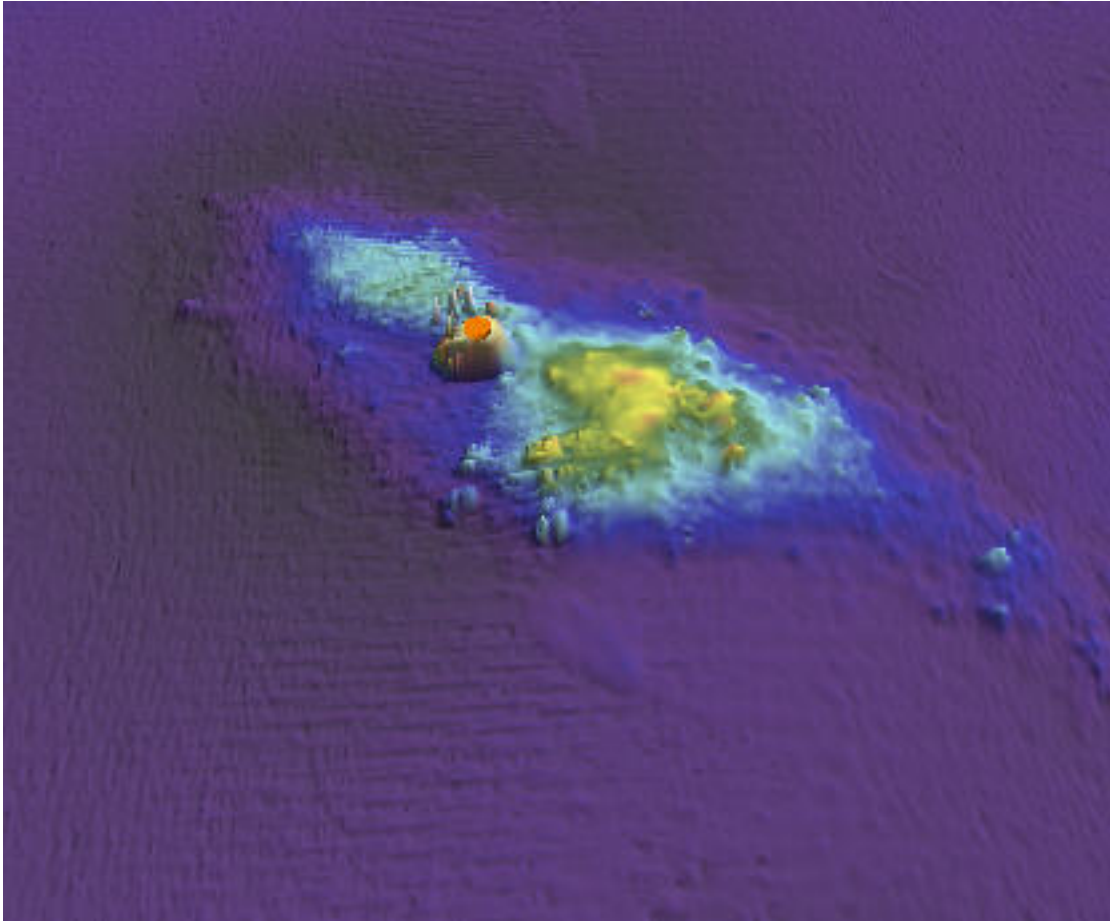


Figure 1.110.1

1.111) Profile/Beam - 3124/1 from h11709 / tj_3102_reson8101 / 2007-184 / 253_1829

Survey Summary

Survey Position: 40° 27' 59.8" N, 073° 56' 28.1" W
Least Depth: 5.31 m (= 17.41 ft = 2.902 fm = 2 fm 5.41 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.986 m ; **TVU (TPEv)** ± 0.422 m
Timestamp: 2007-184.18:41:17.897 (07/03/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-184 / 253_1829
Profile/Beam: 3124/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-184/253_1829	3124/1	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-184/350_1724	0003	6.87	250.6	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.308 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Chart 17-ft "Rks"

Feature Images

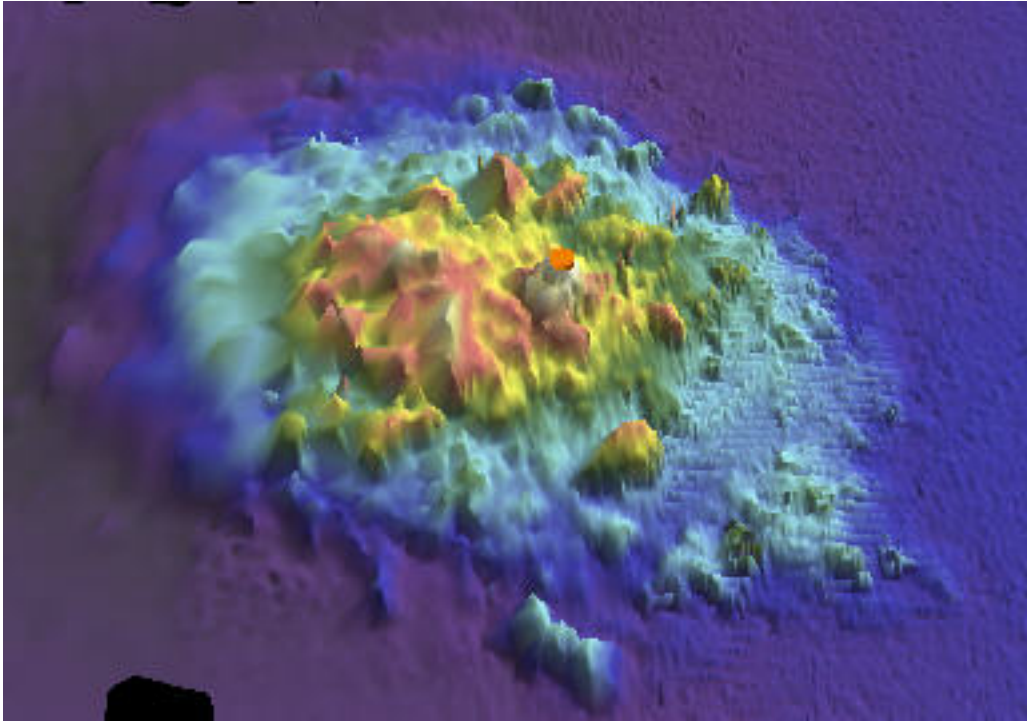


Figure 1.111.1

1.112) Profile/Beam - 6407/73 from h11709 / tj_3102_reson8101 / 2007-184 / 549_1543

Survey Summary

Survey Position: 40° 30' 58.5" N, 074° 00' 32.7" W
Least Depth: 3.77 m (= 12.35 ft = 2.059 fm = 2 fm 0.35 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.392 m
Timestamp: 2007-184.15:50:04.300 (07/03/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-184 / 549_1543
Profile/Beam: 6407/73
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-184/549_1543	6407/73	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-236/420_1304	0003	8.10	046.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-184/549_1543	0004	9.10	214.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-184/550_1531	0002	19.46	170.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

12ft (12401_1, 12402_1, 12327_1, 12326_1)

2fm (12300_1, 13006_1, 13003_1, 14500_1)

3.8m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 3.765 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 12-ft "Rks"

Feature Images

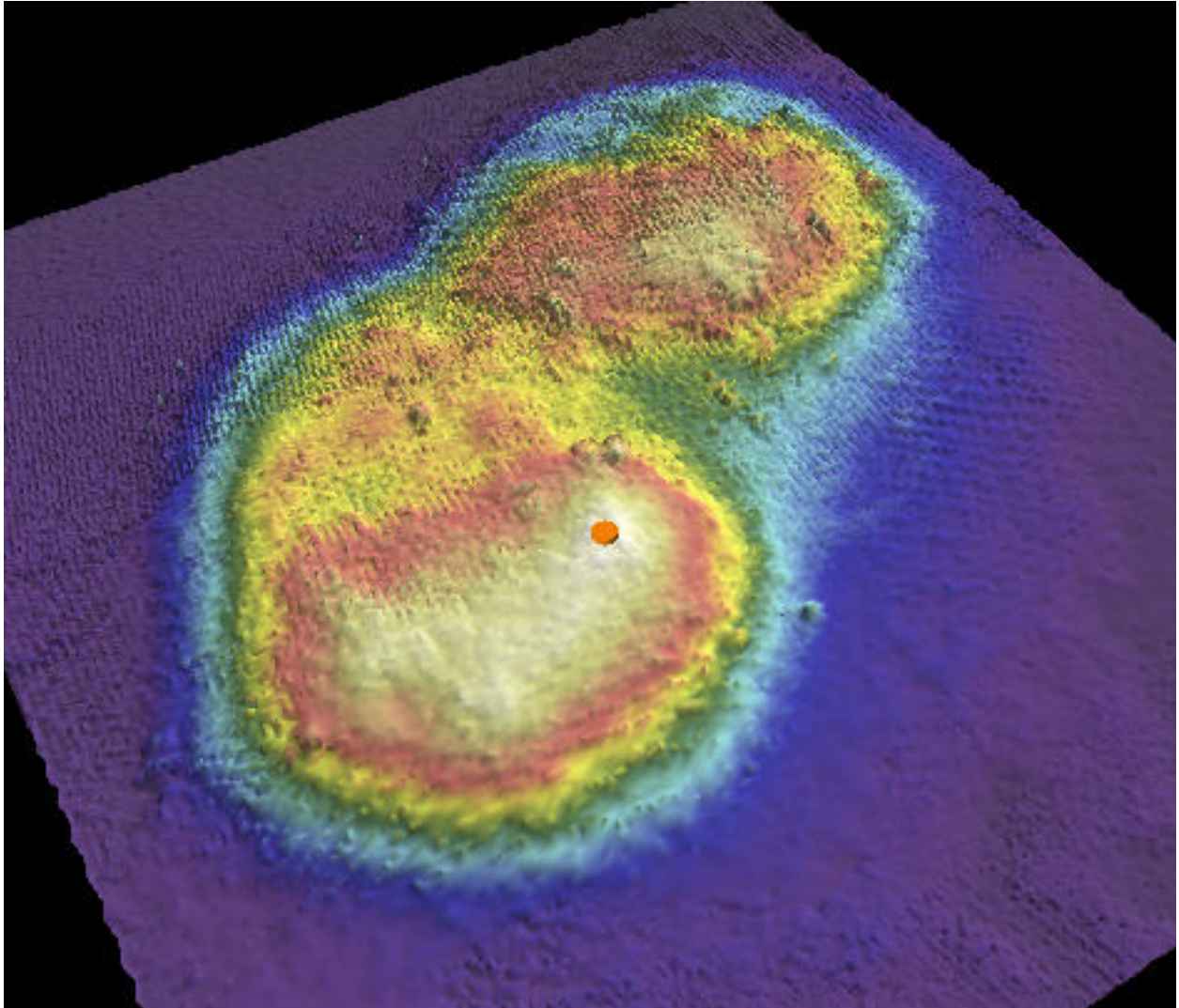


Figure 1.112.1

1.113) Profile/Beam - 998/13 from h11709 / tj_3102_reson8101 / 2007-187 / 501_1320

Survey Summary

Survey Position: 40° 31' 27.6" N, 074° 02' 10.4" W
Least Depth: 7.18 m (= 23.56 ft = 3.927 fm = 3 fm 5.56 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.394 m
Timestamp: 2007-187.13:22:46.687 (07/06/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-187 / 501_1320
Profile/Beam: 998/13
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-187/501_1320	998/13	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-187/501_1320	0005	1.89	055.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-236/425_1403	0004	2.11	274.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-236/426_1417	0002	4.27	005.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

23ft (12402_1, 12327_1, 12326_1)

3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

7.2m (5161_1)

S-57 Data

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

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

VALSOU - 7.182 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Obstn least depth 23 ft.

Feature Images



Figure 1.113.1

1.114) Profile/Beam - 452/82 from h11709 / tj_3102_reson8101 / 2007-217 / 530_1623

Survey Summary

Survey Position: 40° 29' 45.0" N, 073° 59' 43.3" W
Least Depth: 6.22 m (= 20.42 ft = 3.403 fm = 3 fm 2.42 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.393 m
Timestamp: 2007-217.16:37:42.064 (08/05/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-217 / 530_1623
Profile/Beam: 452/82
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-217/530_1623	452/82	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-217/530_1623	0004	1.39	182.5	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/408_1645	0003	11.74	234.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.2m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.224 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20-ft "Rks"

Feature Images

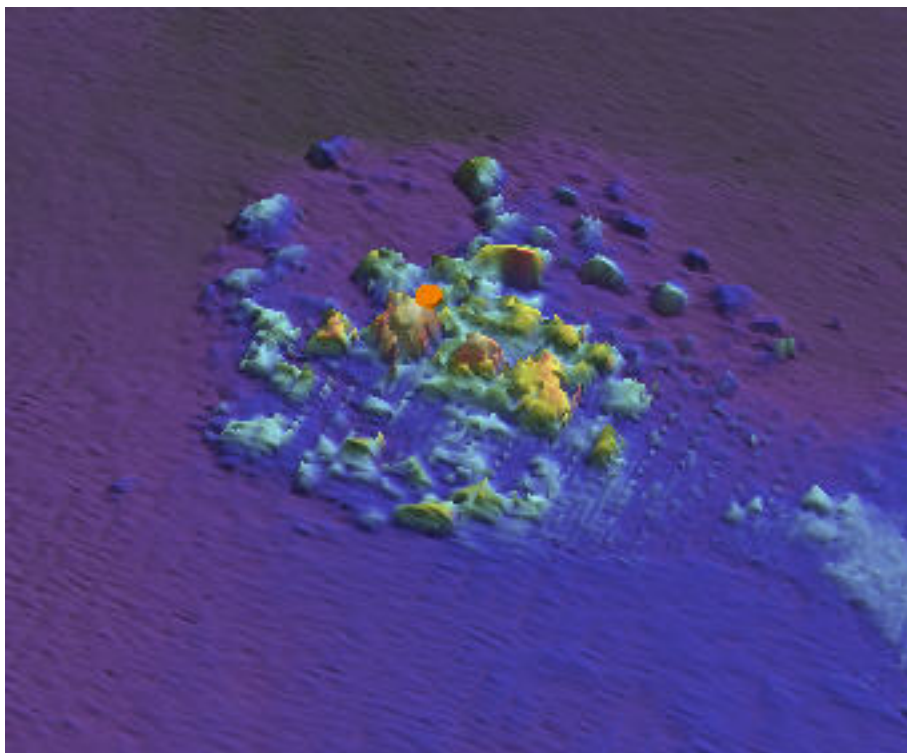


Figure 1.114.1

1.115) Profile/Beam - 1493/84 from h11709 / tj_3102_reson8101 / 2007-218 / 344_1318

Survey Summary

Survey Position: 40° 31' 24.8" N, 073° 56' 59.0" W
Least Depth: 6.06 m (= 19.88 ft = 3.313 fm = 3 fm 1.88 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.393 m
Timestamp: 2007-218.13:20:30.900 (08/06/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-218 / 344_1318
Profile/Beam: 1493/84
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-218/344_1318	1493/84	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-220/250_1302	0007	1.71	358.4	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12402_1, 12327_1, 12326_1)

3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

6.1m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.058 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20-ft "Rks"

Feature Images

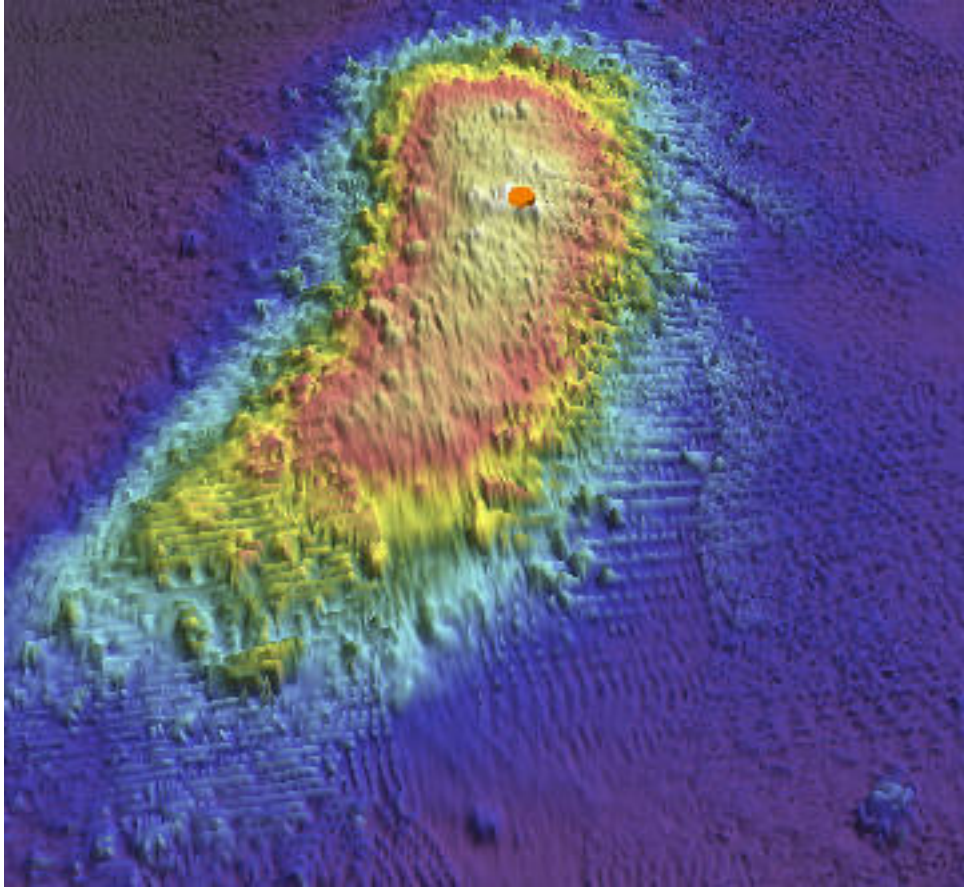


Figure 1.115.1

1.116) Profile/Beam - 2235/13 from h11709 / tj_3102_reson8101 / 2007-220 / 214_1600

Survey Summary

Survey Position: 40° 31' 07.6" N, 073° 55' 48.8" W
Least Depth: 8.45 m (= 27.74 ft = 4.623 fm = 4 fm 3.74 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.394 m
Timestamp: 2007-220.16:05:04.317 (08/08/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-220 / 214_1600
Profile/Beam: 2235/13
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-220/214_1600	2235/13	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss300/2007-267/977_1505	0001	5.81	350.7	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

27ft (12327_1, 12326_1)

4 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

8.5m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 8.454 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 27-ft "Rks"

Feature Images

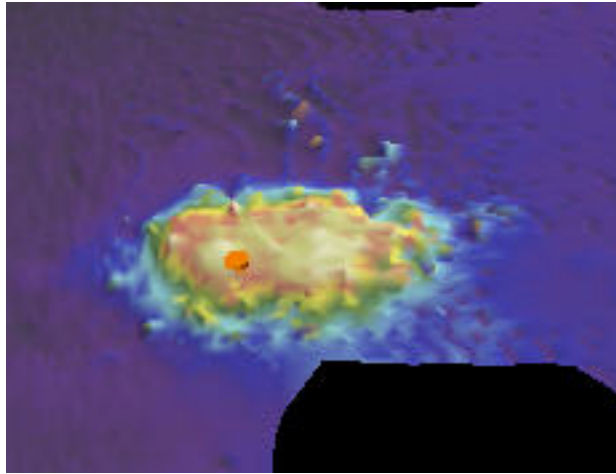


Figure 1.116.1

1.117) Profile/Beam - 506/78 from h11709 / tj_3102_reson8101 / 2007-220 / 216_1530

Survey Summary

Survey Position: 40° 31' 35.6" N, 073° 56' 02.6" W
Least Depth: 7.74 m (= 25.40 ft = 4.234 fm = 4 fm 1.40 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.393 m
Timestamp: 2007-220.15:31:14.745 (08/08/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-220 / 216_1530
Profile/Beam: 506/78
Charts Affected: 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-220/216_1530	506/78	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-237/658_1535	182/164	20.77	221.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/216_1530	0003	21.57	231.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/216_1530	0002	58.06	102.3	Secondary (grouped)
h11709/tj_3101_reson8125/2007-229/022_1834	144/177	59.71	105.9	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-218/334_1606	0001	59.85	104.3	Secondary (grouped)
h11709/tj_3102_reson8101/2007-218/334_1606	621/45	78.55	068.3	Secondary (grouped)
h11709/tj_3101_reson8125/2007-237/660_1527	264/1	80.70	081.9	Secondary (grouped)
h11709/tj_3101_reson8125/2007-237/660_1527	180/51	85.94	095.8	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

25ft (12327_1, 12326_1)

4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

7.7m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 7.743 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart 25-ft "Rks"

Feature Images

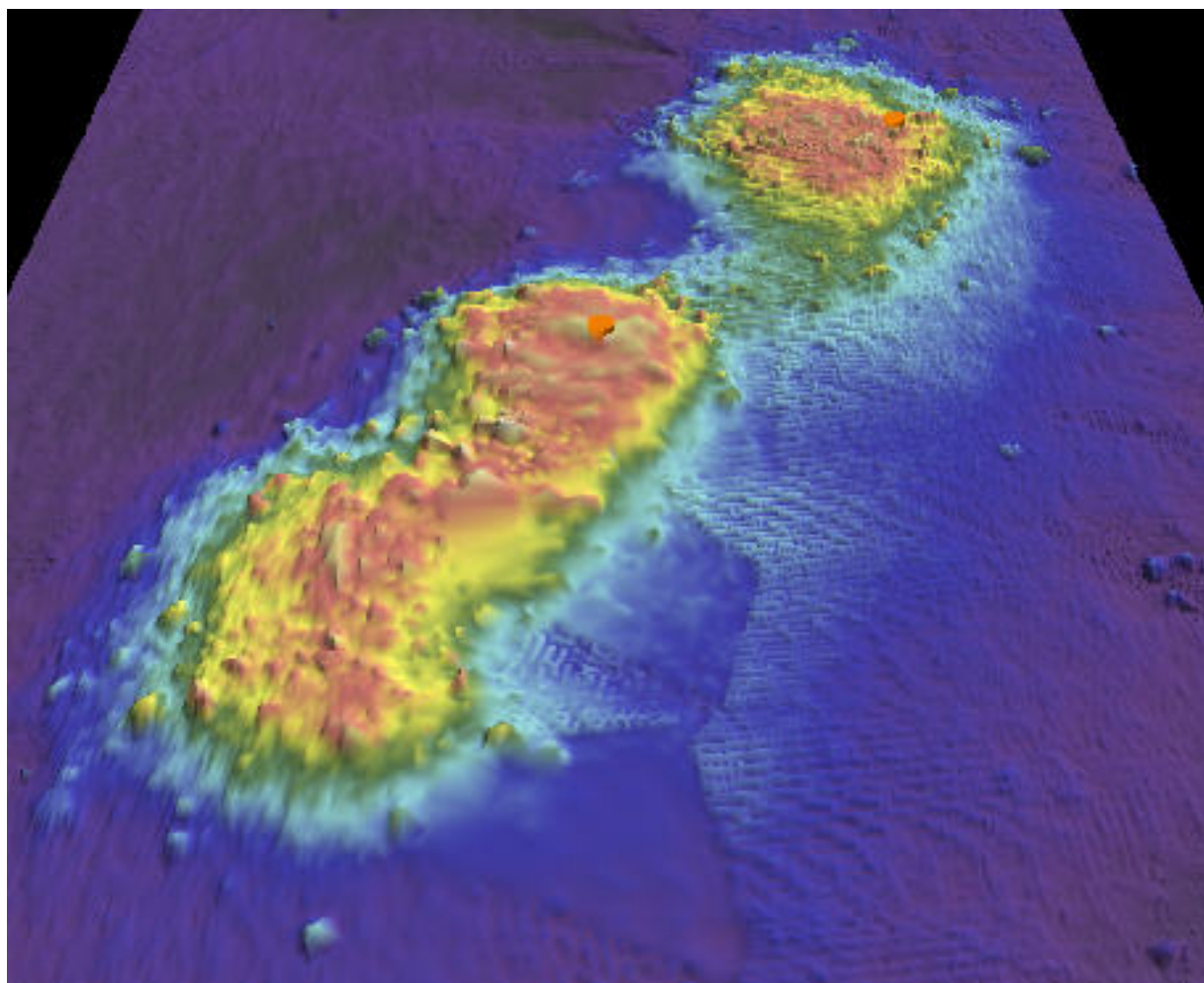


Figure 1.117.1

1.118) Profile/Beam - 3332/97 from h11709 / tj_3102_reson8101 / 2007-220 / 247_1339

Survey Summary

Survey Position: 40° 30' 55.4" N, 073° 56' 47.1" W
Least Depth: 4.78 m (= 15.68 ft = 2.614 fm = 2 fm 3.68 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.984 m ; **TVU (TPEv)** ± 0.402 m
Timestamp: 2007-220.13:45:26.669 (08/08/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-220 / 247_1339
Profile/Beam: 3332/97
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-220/247_1339	3332/97	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-218/342_1346	0009	3.15	041.6	Secondary (grouped)
h11709/tj_3102_reson8101/2007-218/342_1346	3953/1	18.42	061.8	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/247_1339	0006	35.50	062.4	Secondary (grouped)
h11709/tj_3101_reson8125/2007-231/081_1554	1089/72	36.36	067.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-220/248_1326	0006	56.10	064.5	Secondary (grouped)
h11709/tj_3102_reson8101/2007-218/342_1346	3998/85	57.06	062.4	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

15ft (12401_1, 12402_1, 12327_1, 12326_1)
 2 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 4.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 4.780 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart 15-ft "Rks"

Feature Images

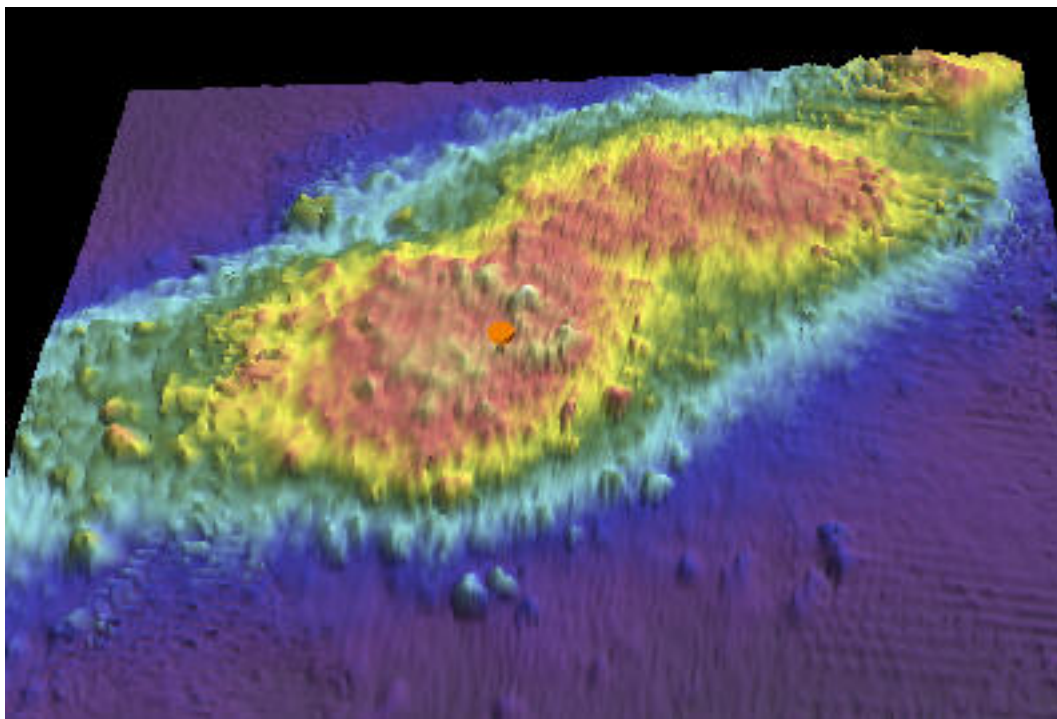


Figure 1.118.1

1.119) Profile/Beam - 1828/73 from h11709 / tj_3102_reson8101 / 2007-226 / 512_1656

Survey Summary

Survey Position: 40° 31' 14.4" N, 073° 57' 24.7" W
Least Depth: 5.75 m (= 18.88 ft = 3.147 fm = 3 fm 0.88 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.393 m
Timestamp: 2007-226.16:59:59.199 (08/14/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-226 / 512_1656
Profile/Beam: 1828/73
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-226/512_1656	1828/73	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-226/512_1656	0008	3.38	050.2	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

19ft (12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.8m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 5.755 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 19-ft "Rks"

Feature Images

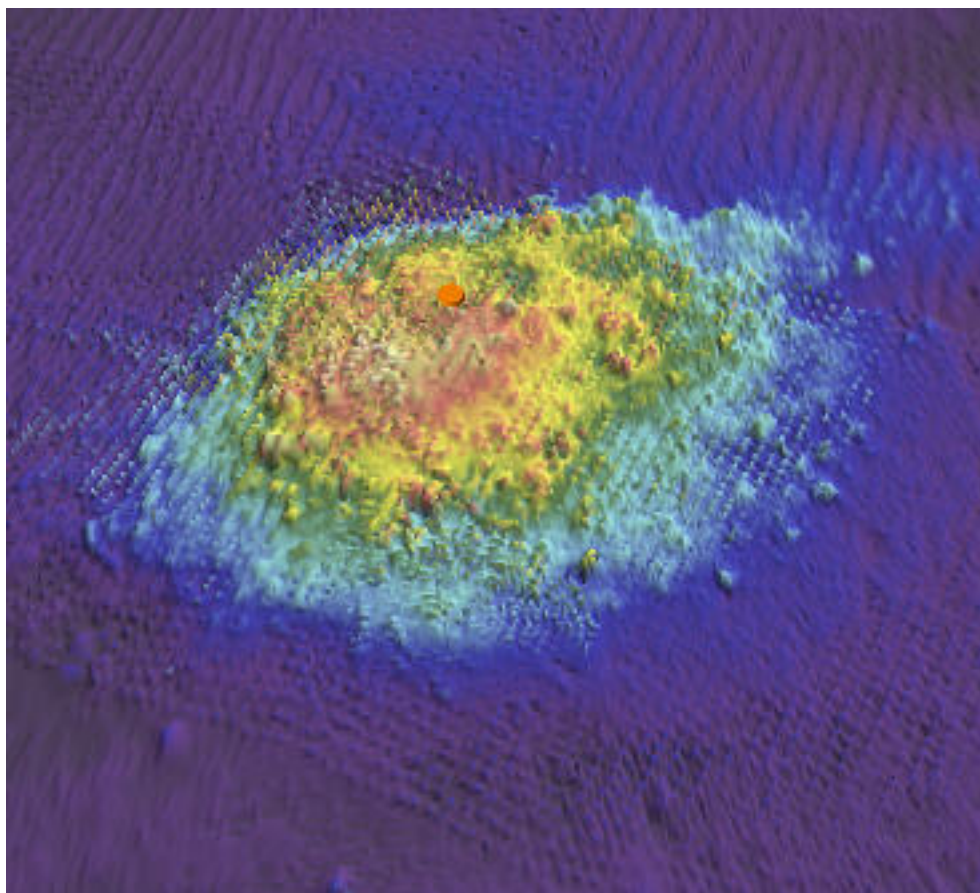


Figure 1.119.1

1.120) Profile/Beam - 5596/66 from h11709 / tj_3102_reson8101 / 2007-231 / 288_1933

Survey Summary

Survey Position: 40° 29' 32.9" N, 073° 57' 07.4" W
Least Depth: 6.28 m (= 20.61 ft = 3.436 fm = 3 fm 2.61 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.981 m ; TVU (TPEv) ± 0.393 m
Timestamp: 2007-231.19:41:27.861 (08/19/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-231 / 288_1933
Profile/Beam: 5596/66
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-231/288_1933	5596/66	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-227/521_1750	0002	3.06	003.9	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

20ft (12401_1, 12324_1, 12327_1, 12326_1)
 3 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.3m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 6.283 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 20-ft "Rks"

Feature Images

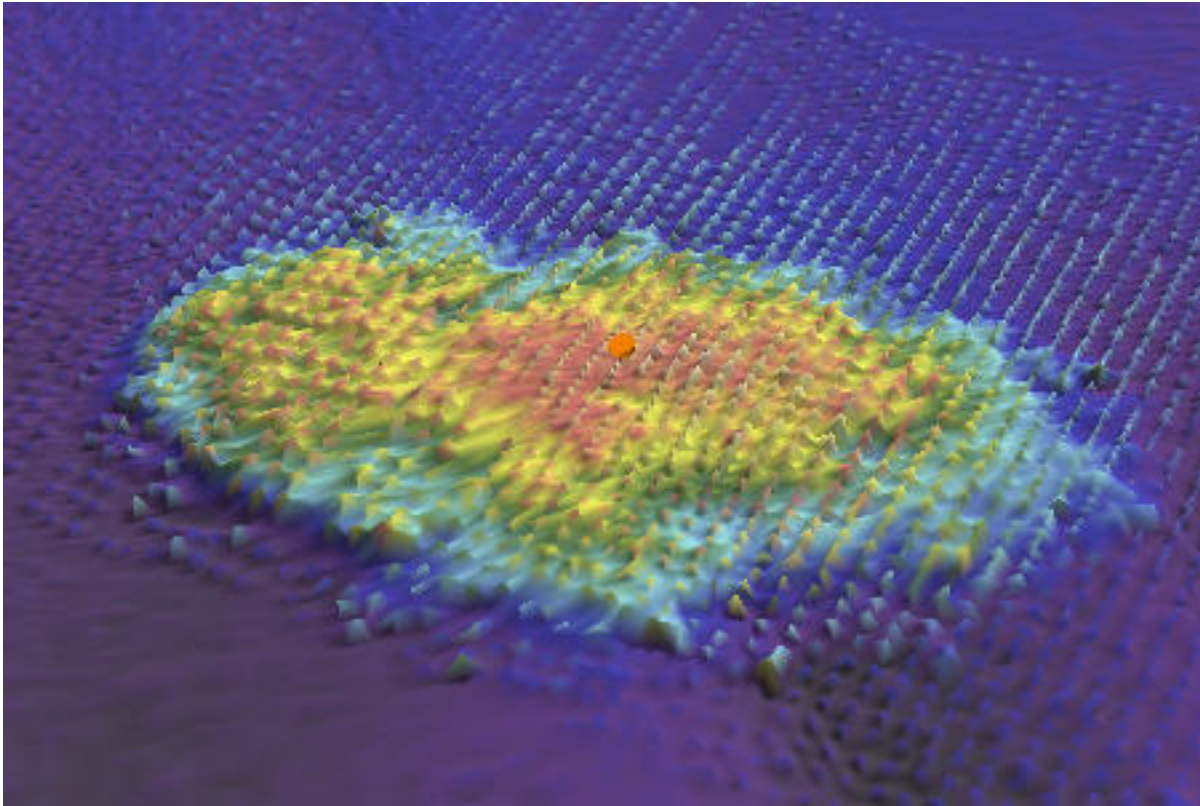


Figure 1.120.1

1.121) Profile/Beam - 6464/75 from h11709 / tj_3102_reson8101 / 2007-231 / 295_2002

Survey Summary

Survey Position: 40° 29' 49.0" N, 073° 58' 10.7" W
Least Depth: 8.58 m (= 28.14 ft = 4.690 fm = 4 fm 4.14 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.394 m
Timestamp: 2007-231.20:10:53.209 (08/19/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-231 / 295_2002
Profile/Beam: 6464/75
Charts Affected: 12401_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-231/295_2002	6464/75	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-227/555_1650	0005	5.07	018.0	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-227/562_1726	0004	6.79	242.7	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

28ft (12401_1, 12327_1, 12326_1)
 4 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 8.6m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 1:depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 8.577 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart Obstn least depth 28 ft.

Feature Images



Figure 1.121.1

1.122) Profile/Beam - 2527/77 from h11709 / tj_3102_reson8101 / 2007-235 / 408_1712

Survey Summary

Survey Position: 40° 30' 40.7" N, 074° 01' 58.3" W
Least Depth: 5.17 m (= 16.96 ft = 2.826 fm = 2 fm 4.96 ft)
TPU (±1.96σ): **THU (TPEh)** ±0.981 m ; **TVU (TPEv)** ±0.392 m
Timestamp: 2007-235.17:16:14.289 (08/23/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-235 / 408_1712
Profile/Beam: 2527/77
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This sounding was found by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-235/408_1712	2527/77	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12401_1, 12402_1, 12327_1, 12326_1)
 2 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.2m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: EXPSOU - 2:shoaler than range of depth of the surrounding depth area
 QUASOU - 6:least depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VERDAT - 12:Mean lower low water

Office Notes

There is a corresponding sidescan target that was not selected. Item not fully developed through skunk-striping alone. Though item looks insignificant, full coverage of item was not attained. Chart designated sounding of 17 ft.

Feature Images

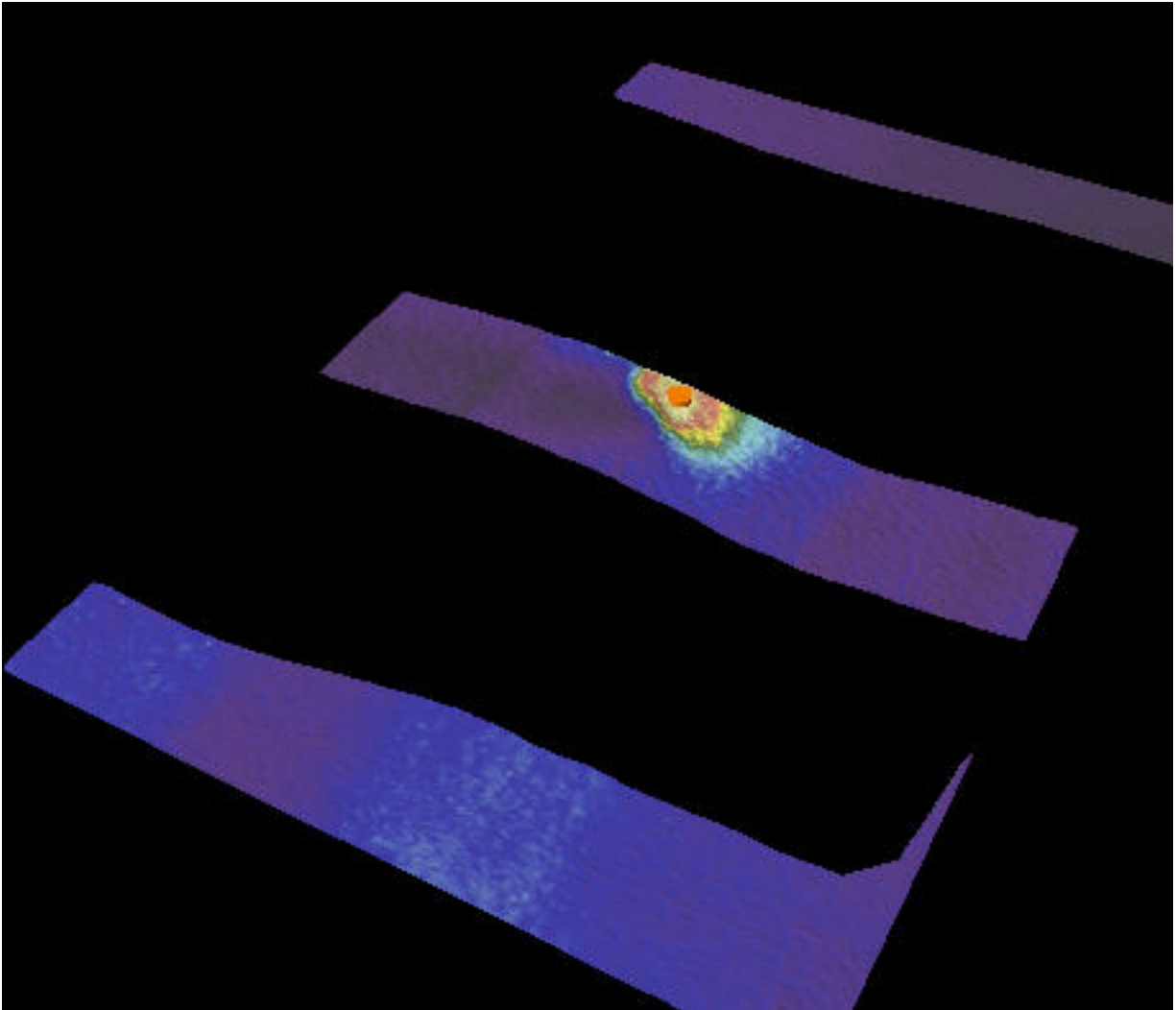


Figure 1.122.1

1.123) Profile/Beam - 9320/92 from h11709 / tj_3102_reson8101 / 2007-235 / 412_1418

Survey Summary

Survey Position: 40° 30' 48.2" N, 074° 01' 53.7" W
Least Depth: 5.39 m (= 17.67 ft = 2.946 fm = 2 fm 5.67 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.982 m ; **TVU (TPEv)** ± 0.394 m
Timestamp: 2007-235.14:47:46.646 (08/23/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-235 / 412_1418
Profile/Beam: 9320/92
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-235/412_1418	9320/92	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-267/134_1359	0001	5.14	265.4	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12401_1, 12402_1, 12327_1, 12326_1)

3fm (12300_1, 13006_1, 13003_1, 14500_1)

5.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 5:found by lead-line
 VALSOU - 5.387 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 17-ft "Rks"

Feature Images



Figure 1.123.1

1.124) Profile/Beam - 3622/41 from h11709 / tj_3102_reson8101 / 2007-268 / 966_1506

Survey Summary

Survey Position: 40° 29' 47.4" N, 074° 00' 13.8" W
Least Depth: 6.93 m (= 22.73 ft = 3.788 fm = 3 fm 4.73 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.393 m
Timestamp: 2007-268.15:11:01.737 (09/25/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-268 / 966_1506
Profile/Beam: 3622/41
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-268/966_1506	3622/41	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss200/2007-235/401_1910	0002	1.64	059.2	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/401_1910	0008	3.50	092.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-235/401_1910	0007	13.81	098.2	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (12401_1, 12324_1, 12327_1, 12326_1)

3 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

6.9m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 6.928 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 22-ft "Rks"

Feature Images

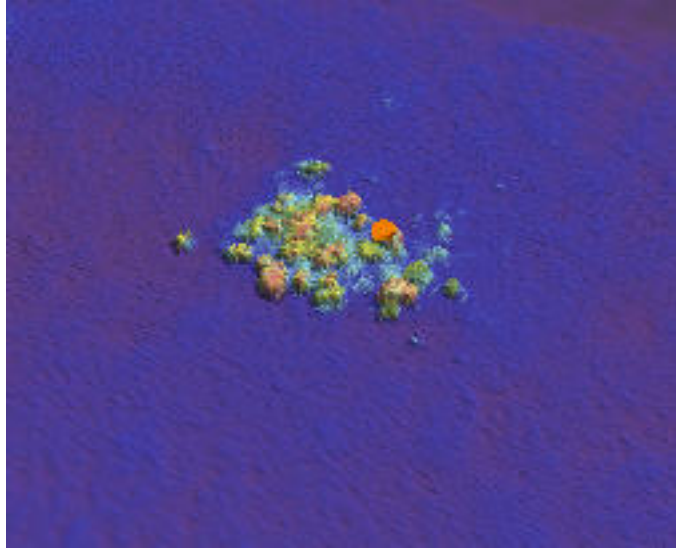


Figure 1.124.1

1.125) Profile/Beam - 1287/32 from h11709 / tj_3102_reson8101 / 2007-270 / 040_1758

Survey Summary

Survey Position: 40° 30' 54.0" N, 074° 00' 48.8" W
Least Depth: 2.29 m (= 7.50 ft = 1.250 fm = 1 fm 1.50 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.391 m
Timestamp: 2007-270.17:59:18.383 (09/27/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-270 / 040_1758
Profile/Beam: 1287/32
Charts Affected: 12401_1, 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-270/040_1758	1287/32	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-184/549_1543	0003	12.62	098.4	Secondary
h11709/tj_3102_klein5000_sss100/2007-187/561_1452	0003	272.03	226.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

7ft (12401_1, 12402_1, 12327_1, 12326_1)
 1 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 2.3m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 9:value reported (not confirmed)
 TECSOU - 3:found by multi-beam
 VALSOU - 2.286 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Item was not fully developed. Chart "Rks" 7-ft "depth reported"

Feature Images

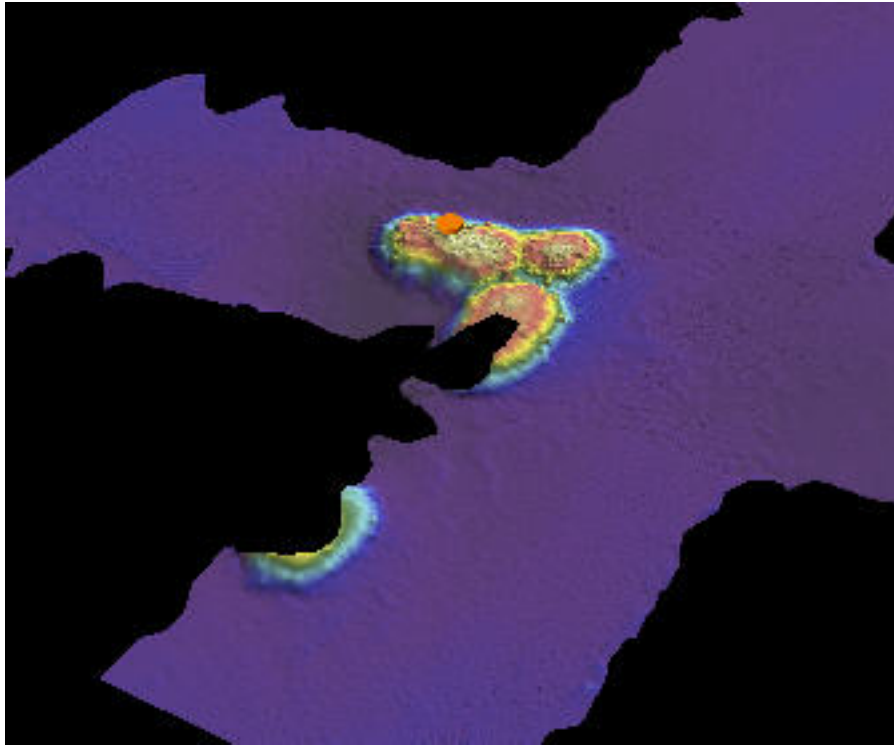


Figure 1.125.1

1.126) Profile/Beam - 75/160 from h11709 / tj_3101_reson8125 / 2007-265 / 284_2022

Survey Summary

Survey Position: 40° 27' 45.2" N, 073° 57' 05.0" W
Least Depth: 12.00 m (= 39.36 ft = 6.560 fm = 6 fm 3.36 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.154 m
Timestamp: 2007-265.20:22:58.839 (09/22/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-265 / 284_2022
Profile/Beam: 75/160
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted obstruction was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation. The obstruction is located in the center of the USACE-maintained channel but its least depth is just below the controlling depth (39.0/38.5 ft - Sandy Hook Channel east).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-265/284_2022	75/160	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-228/525_1958	0001	2.52	259.6	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-265/494_1350	0001	2.91	274.4	Secondary (grouped)
h11709/tj_3102_klein5000_sss200/2007-265/492_1254	0002	4.49	205.6	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 1:depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 11.997 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 39 Obstn

Feature Images

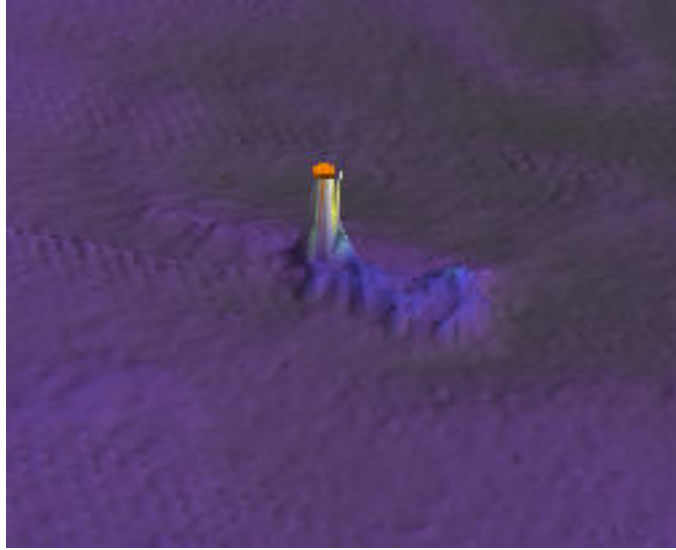


Figure 1.126.1

1.127) GP No. - 10 from ChartGPs - Digitized

Survey Summary

Survey Position: 40° 31' 42.4" N, 074° 01' 08.3" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2008-042.20:53:27 (02/11/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 10
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Disproval AWOIS 1646. The item was covered by 200% Klein 500 Side Scan Sonar and 100% Item detection Reson 8125 Multibeam. No evidence was matching description. Any items found within search radius are considered new items. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	10	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

AWOIS 1646 disproved.

Feature Images

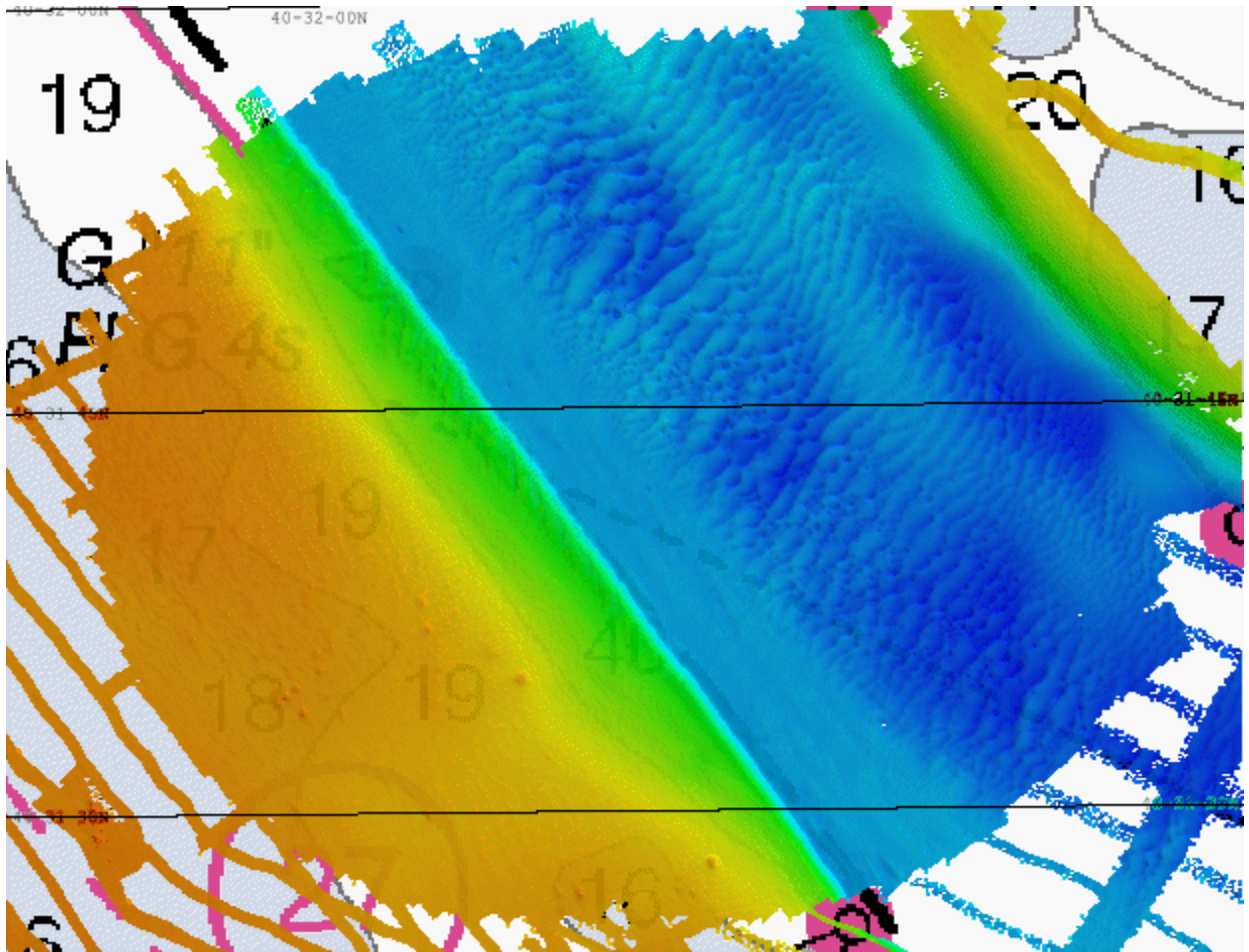


Figure 1.127.1

1.128) GP No. - 11 from ChartGPs - Digitized

Survey Summary

Survey Position: 40° 31' 42.4" N, 074° 00' 58.7" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2008-042.20:59:20 (02/11/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 11
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Disproval AWOIS 1645. The item was covered by 200% Klein 500 Side Scan Sonar and 100% Item detection Reson 8125 Multibeam. No evidence was matching description. Any items found within search radius are considered new items. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	11	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

Item 1645 disproved.

Feature Images

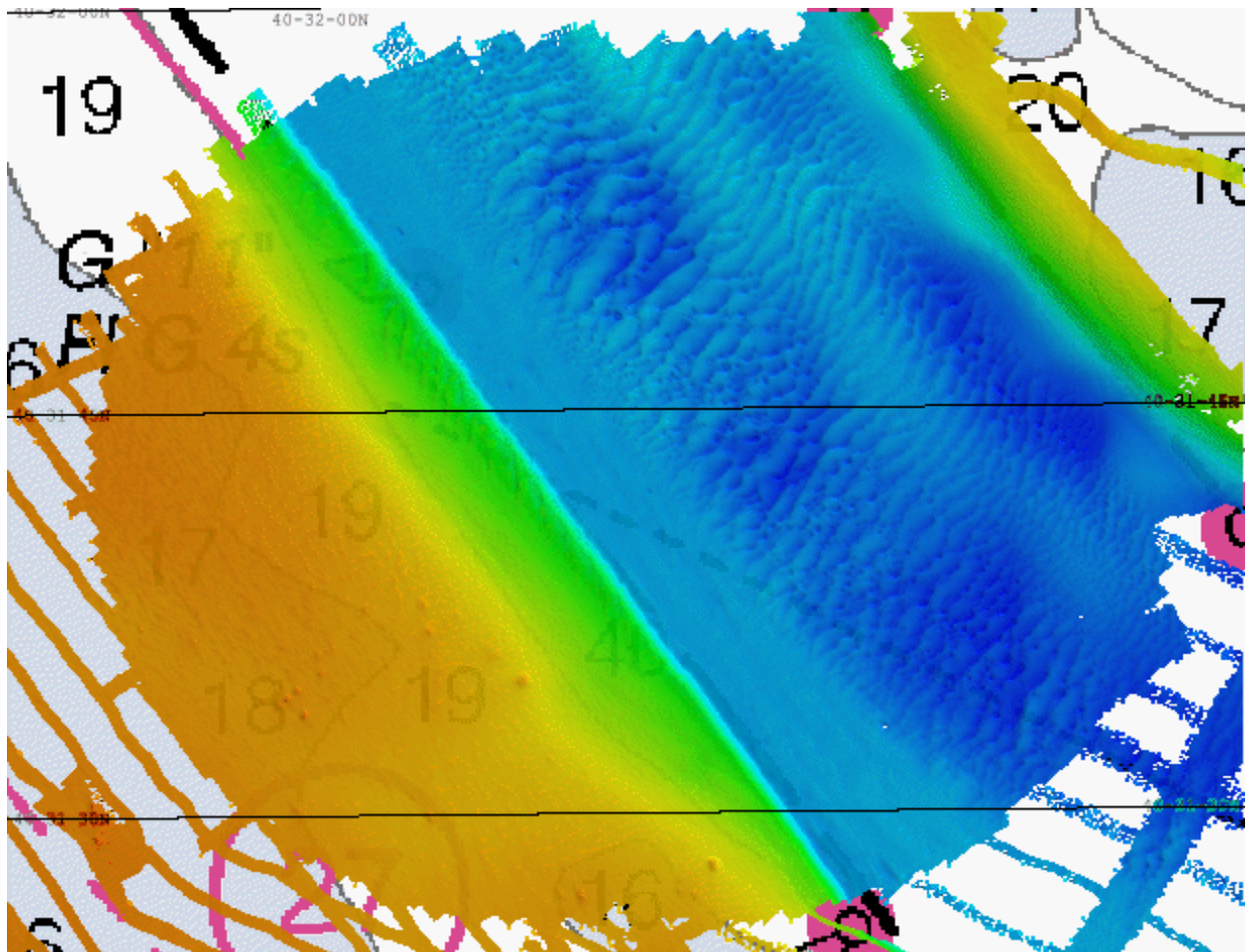


Figure 1.128.1

1.129) Profile/Beam - 314/188 from h11709 / tj_3101_reson8125 / 2007-236 / 732_1924

Survey Summary

Survey Position: 40° 31' 03.6" N, 073° 57' 25.0" W
Least Depth: 4.43 m (= 14.54 ft = 2.424 fm = 2 fm 2.54 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.980 m ; **TVU (TPEv)** ± 0.147 m
Timestamp: 2007-236.19:25:26.994 (08/24/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-236 / 732_1924
Profile/Beam: 314/188
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8125 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-236/732_1924	314/188	0.00	000.0	Primary
h11709/tj_3102_reson8101/2007-229/273_1446	1474/87	1.44	136.0	Secondary
h11709/tj_3102_klein5000_sss200/2007-229/273_1446	0005	3.66	262.3	Secondary
h11709/tj_3102_klein5000_sss100/2007-226/505_1548	0011	4.43	197.1	Secondary
h11709/tj_3101_reson8125/2007-235/127_1743	1731/74	33.64	261.7	Secondary
h11709/tj_3102_klein5000_sss100/2007-226/505_1548	0010	33.92	250.8	Secondary
h11709/tj_3102_klein5000_sss200/2007-229/273_1446	0004	36.64	262.2	Secondary
h11709/tj_3101_reson8125/2007-235/128_1747	756/37	43.28	353.7	Secondary
h11709/tj_3102_klein5000_sss100/2007-226/500_1533	0002	44.46	355.2	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

14ft (12402_1, 12327_1, 12326_1)

2 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

4.4m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 3:found by multi-beam
VALSOU - 4.433 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Chart "Rks" least depth 14 ft.

Feature Images

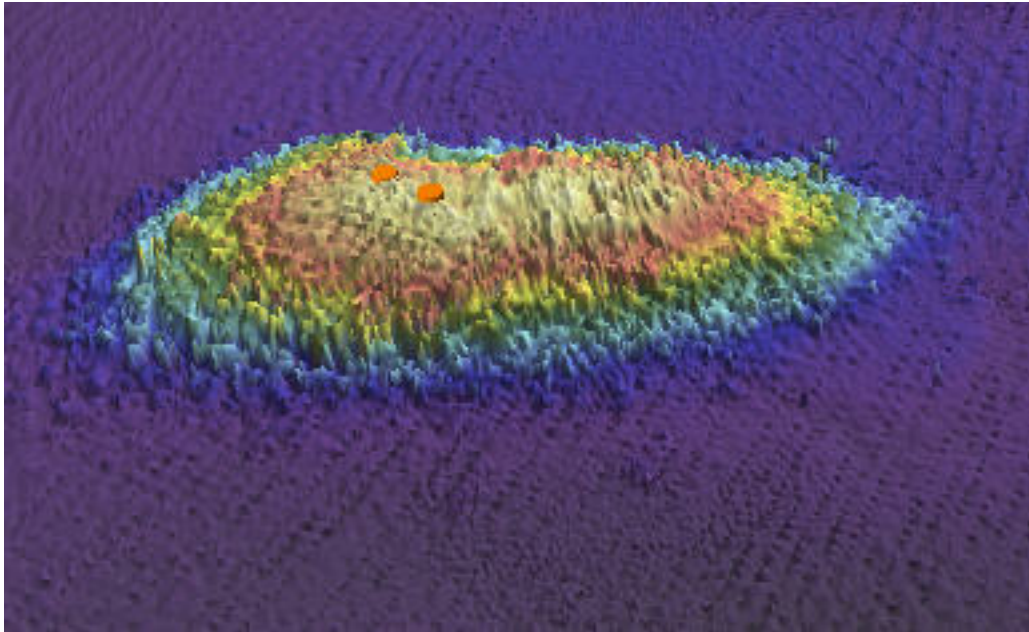


Figure 1.129.1

1.130) Profile/Beam - 177/189 from h11709 / tj_3101_reson8125 / 2007-227 / 021_1708

Survey Summary

Survey Position: 40° 28' 09.2" N, 073° 56' 43.3" W
Least Depth: 5.35 m (= 17.55 ft = 2.924 fm = 2 fm 5.55 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 0.980 m ; TVU (TPEv) ± 0.147 m
Timestamp: 2007-227.17:08:40.942 (08/15/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-227 / 021_1708
Profile/Beam: 177/189
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-227/021_1708	177/189	0.00	000.0	Primary
h11709/tj_3101_reson8125/2007-221/013_1621	3630/25	0.42	233.0	Secondary
h11709/tj_3102_klein5000_sss200/2007-216/001_1309	0002	1.81	230.0	Secondary
h11709/tj_3102_klein5000_sss200/2007-188/256_1407	0002	1.95	193.5	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12401_1, 12324_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.3m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam

VALSOU - 5.348 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 17 Rk.

Feature Images

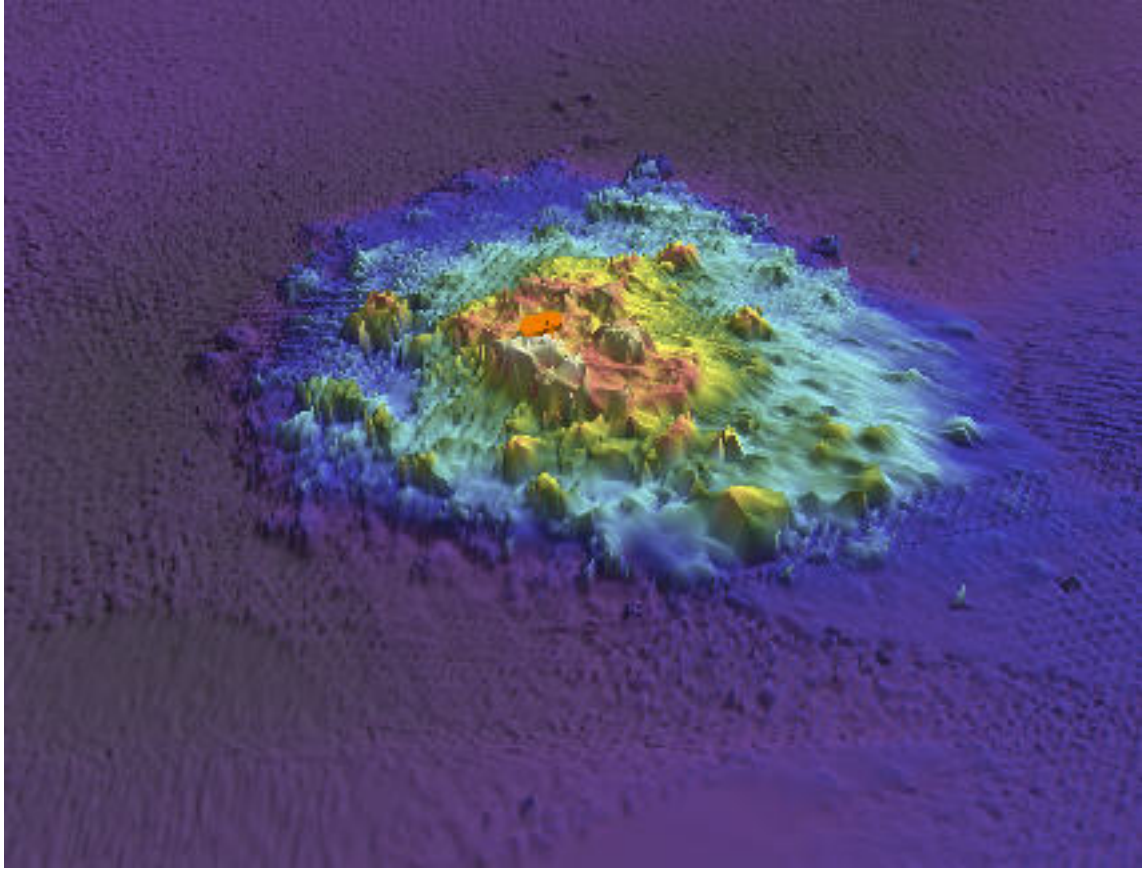


Figure 1.130.1

1.131) Profile/Beam - 168/195 from h11709 / tj_3101_reson8125 / 2007-226 / 166_1659

Survey Summary

Survey Position: 40° 27' 49.5" N, 073° 55' 54.4" W
Least Depth: 11.69 m (= 38.35 ft = 6.391 fm = 6 fm 2.35 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.154 m
Timestamp: 2007-226.16:59:52.566 (08/14/2007)
Survey Line: h11709 / tj_3101_reson8125 / 2007-226 / 166_1659
Profile/Beam: 168/195
Charts Affected: 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-226/166_1659	168/195	0.00	000.0	Primary
h11709/tj_3102_klein5000_sss100/2007-181/330_1719	0004	6.04	097.1	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

38ft (12324_1, 12327_1, 12326_1)

6 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

11.7m (5161_1)

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
 TECSOU - 3:found by multi-beam
 VALSOU - 11.688 m
 VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Chart 38 "Rks"

Feature Images

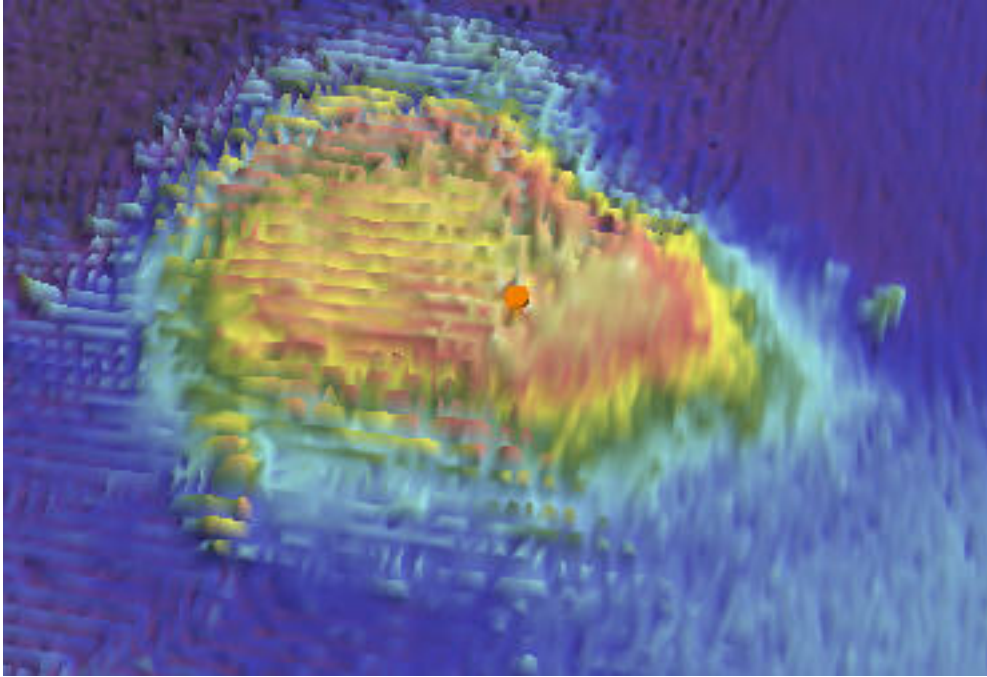


Figure 1.131.1

1.132) Profile/Beam - 1474/87 from h11709 / tj_3102_reson8101 / 2007-229 / 273_1446

Survey Summary

Survey Position: 40° 31' 03.7" N, 073° 57' 25.1" W
Least Depth: 4.68 m (= 15.36 ft = 2.560 fm = 2 fm 3.36 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 0.981 m ; **TVU (TPEv)** ± 0.392 m
Timestamp: 2007-229.14:48:56.756 (08/17/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-229 / 273_1446
Profile/Beam: 1474/87
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This uncharted rock was found by Klein 5000 Side Scan Sonar and covered by Reson 8101 multibeam. Soundings are corrected to MLLW with verified water levels and final TCARI for water level computation.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3101_reson8125/2007-236/732_1924	314/188	0.00	000.0	Primary
h11709/tj_3102_reson8101/2007-229/273_1446	1474/87	1.44	136.0	Secondary
h11709/tj_3102_klein5000_sss200/2007-229/273_1446	0005	3.66	262.3	Secondary
h11709/tj_3102_klein5000_sss100/2007-226/505_1548	0011	4.43	197.1	Secondary
h11709/tj_3101_reson8125/2007-235/127_1743	1731/74	33.64	261.7	Secondary
h11709/tj_3102_klein5000_sss100/2007-226/505_1548	0010	33.92	250.8	Secondary
h11709/tj_3102_klein5000_sss200/2007-229/273_1446	0004	36.64	262.2	Secondary
h11709/tj_3101_reson8125/2007-235/128_1747	756/37	43.28	353.7	Secondary
h11709/tj_3102_klein5000_sss100/2007-226/500_1533	0002	44.46	355.2	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

15ft (12402_1, 12327_1, 12326_1)

2 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

4.7m (5161_1)

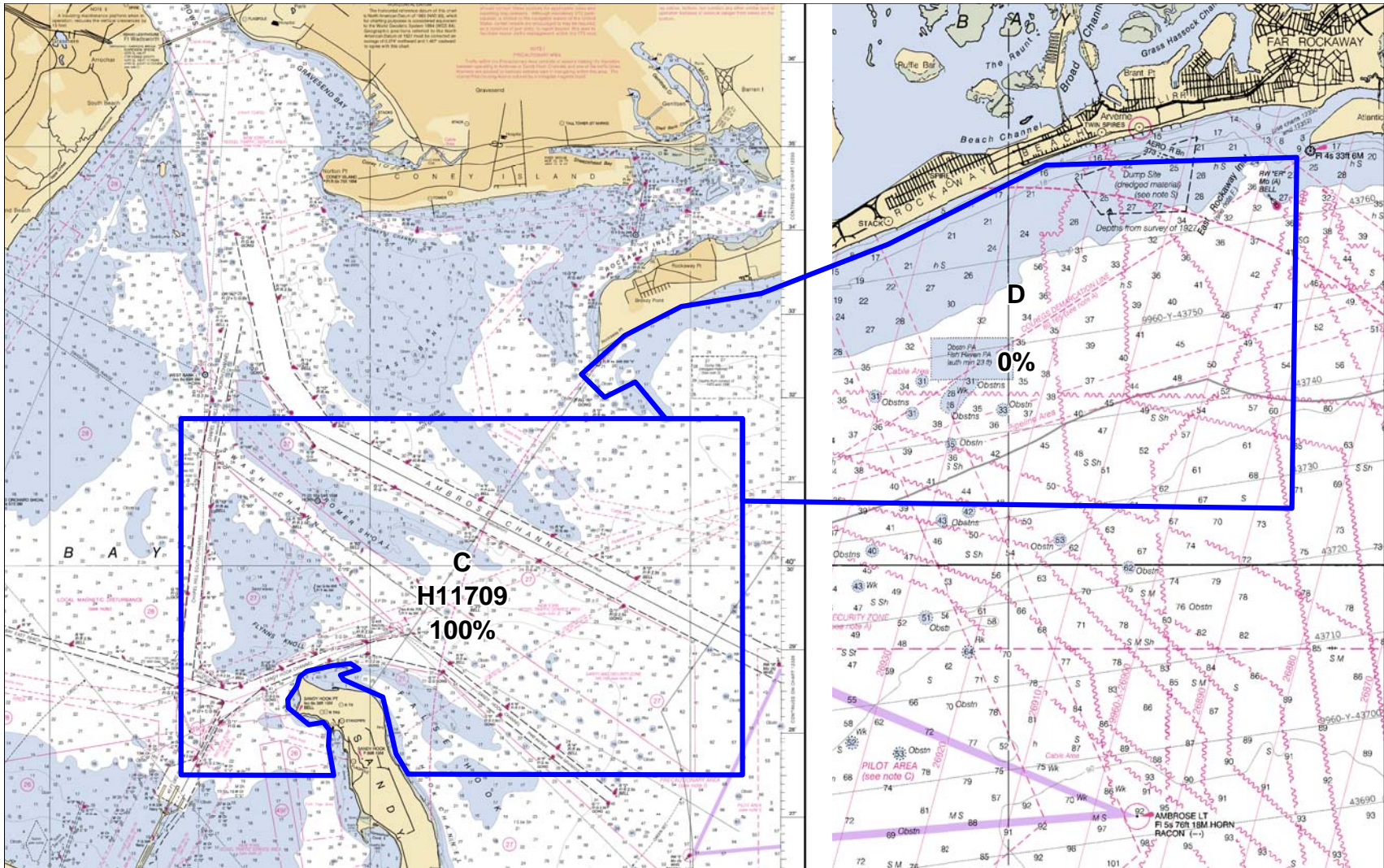
S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 6:least depth known
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 4.682 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

[None]

APPENDIX III
Progress Sketch



Project	Sheet Letter	H_num	HQ_Est_SNM	CumIPercCompPrev	CumIPercCompCur	SNM_CompCurM	CumSNMcomj	CumIPercProsesse
B310	C	H11709	29	90	100	2	28	65
B310	D		26	0	0	0	0	0

**Progress Sketch OPR-B310-TJ-07
September 2007**

APPENDIX IV
Tides and Water Levels



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Ship THOMAS JEFFERSON (MOA-TJ)
439 West York St
Norfolk, VA 23510-1145

September 30, 2007

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

FROM: CDR P. Tod Schattgen, NOAA, NOAA Ship THOMAS JEFFERSON (MOA-TJ)

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)
4. Final TCARI (.tc) file

Transmit data to the following:

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-B310-TJ-07
Registry No.: H11709
State: New York
Locality: New York Harbor and Approaches, NY+NJ
Sublocality: 2 NM Northeast of Sandy Hook

Attachments containing:

- 1) an Abstract of Times of Hydrography,
- 2) digital MID MIF files of the track lines from Pydro

cc: N/CS33



Year_DOY	Min Time	Max Time
2007_180	14:40:46	19:24:17
2007_181	13:33:32	19:12:19
2007_182	12:50:09	19:22:26
2007_183	12:43:01	19:26:23
2007_184	12:41:06	19:05:53
2007_185	12:43:43	16:09:40
2007_186	12:30:41	19:15:03
2007_187	12:43:00	19:16:47
2007_188	12:47:19	19:01:45
2007_216	13:09:11	19:09:09
2007_217	13:09:20	19:03:17
2007_218	13:18:11	19:13:05
2007_219	13:53:29	19:22:35
2007_220	13:02:06	19:08:09
2007_221	13:20:12	19:03:13
2007_225	16:55:15	19:00:15
2007_226	12:57:16	20:44:59
2007_227	13:04:51	19:15:36
2007_228	12:49:44	21:16:26
2007_229	13:14:28	18:59:49
2007_231	12:39:08	21:03:37
2007_234	12:49:48	21:29:23
2007_235	13:11:07	21:29:07
2007_236	13:04:34	21:05:54
2007_237	14:56:35	21:28:51
2007_265	12:50:19	21:25:06
2007_266	12:45:17	21:24:50
2007_267	12:37:57	21:17:14
2007_268	12:49:33	21:25:02
2007_269	12:32:58	21:17:11
2007_270	12:50:51	20:51:58



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : October 25, 2007

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B310-TJ-2007
HYDROGRAPHIC SHEET: H11709

LOCALITY: 2 NM Northeast of Sandy Hook, New York Harbor and Approaches, NY/NJ
TIME PERIOD: June 29 - September 27, 2007

TIDE STATION USED: 853-1680 Sandy Hook, NJ
Lat. 40° 28.0' N Long. 74° 0.6' W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.492 meters

TIDE STATION USED: 851-9483 Bergen Point, NY
Lat. 40° 38.2' N Long. 74° 8.5' W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.582 meters

REMARKS: RECOMMENDED ZONING

Please use the TCARI grid "B310TJ2007-TCARI-F.tc" as the final grid for project OPR-B310-TJ-2007, H11709, during the time period between June 29 to September 27, 2007.

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).

Note 2: Due to uncertain levels at The Battery (8518750) during the period from October, 2006 to September, 2007, Bergen Point and Sandy Hook are used for residuals for the TCARI grid.

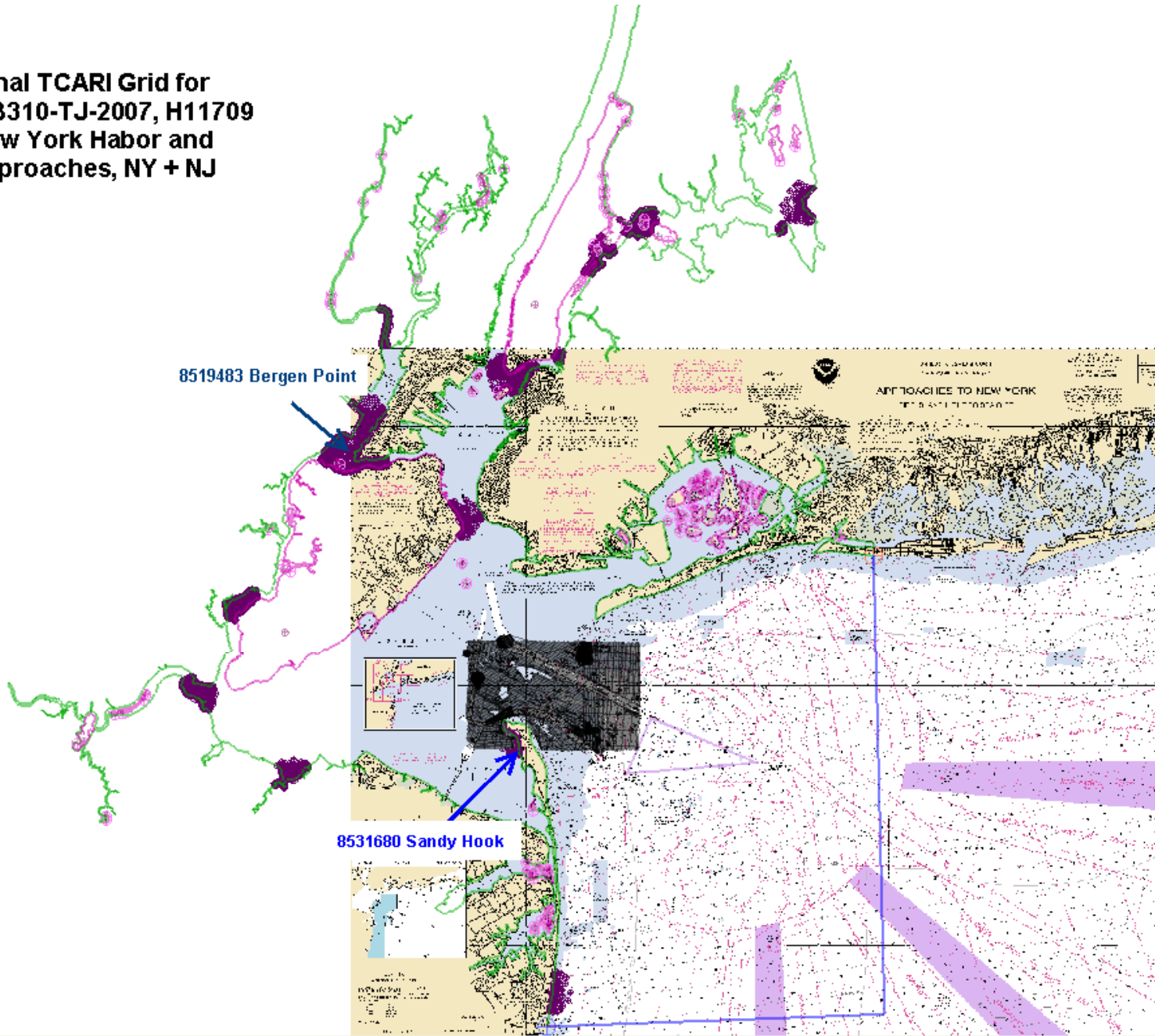
Peter J. Stone

Digitally signed by Peter J. Stone
DN: cn=Peter J. Stone, o=US, ou=CO-OPS,
ou=NOAA/NOS, email=peter.stone@noaa.gov
Reason: I am approving this document
Date: 2007.10.31.12:25:44 -0400

CHIEF, PRODUCTS AND SERVICES DIVISION



**Final TCARI Grid for
OPR-B310-TJ-2007, H11709
New York Harbor and
Approaches, NY + NJ**



8519483 Bergen Point

8531680 Sandy Hook

APPROACHES TO NEW YORK
1:50,000

APPENDIX V
Supplemental Records / Correspondance

Subject: Sandy Hook Shoaling Report

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Sun, 08 Jul 2007 14:36:51 -0400

To: LT Matt Wingate <matt.wingate@noaa.gov>

CC: CAPT Raymond C Slagle <Raymond.C.Slagle@noaa.gov>, SST Peter Lewit <peter.lewit@noaa.gov>

Hi, Matt,

Attached is a preliminary DTON report for review by the US Army Corps of Engineers. While this shoaling area is technically a danger to navigation, anything we find in a Corps-controlled channel we give them a heads-up on, so they have a chance to either acknowledge it before we send the DTON to MCD or dredge out the shoal area (or make another recommendation, as the case may be). We will hold off on sending this to MCD until we hear back from either you or them. Please let me know if you have any questions.

Thanks,
Chris

LT Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

H11709_Special_Report1.pdf

Content-Type: application/pdf

Content-Encoding: base64

Subject: DTON Report #1 - H11709

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Mon, 16 Jul 2007 16:41:33 -0400

To: NOS OCS MCD Navigation Dangers <mcd.dton@noaa.gov>, Lyn Preston <Lyn.Preston@noaa.gov>, Douglas Harpine <DOUGLAS.HARPINE@NOAA.GOV>

CC: LT Matt Wingate <matt.wingate@noaa.gov>, LTjg Matt Jaskoski <Matthew.Jaskoski@noaa.gov>, CAPT Raymond C Slagle <Raymond.C.Slagle@noaa.gov>, CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR Shep Smith <Shep.Smith@noaa.gov>, Gerd Glang <gerd.glang@noaa.gov>, LCDR Mike McBrady <Mike.T.McBrady@uscg.mil>, Brian Willis <Brian.S.Willis@uscg.mil>, LCDR James M Crocker <James.M.Crocker@noaa.gov>

Attached is the first DTON report from survey H11709 (Project OPR-B310-TJ-07). This channel shoaling area was discovered during routine survey operations in Sandy Hook Channel. Please contact me with any questions you may have.

Very Respectfully,

LT Chris van Westendorp

LT Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

H11709_DTON1.zip

Content-Type: application/x-zip-compressed

Content-Encoding: base64

Subject: [Fwd: [Fwd: Re: Sandy Hook Shoal-Vessel Mount Adamello]]
From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>
Date: Tue, 31 Jul 2007 20:43:51 -0400
To: CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR James M Crocker <James.M.Crocker@noaa.gov>
CC: SST Peter Lewit <peter.lewit@noaa.gov>, CST Buck Gardner <Uther.Gardner@noaa.gov>

CO/XO,

It seems the Sandy Hook Channel shoal area we identified and reported as a DTON has received some more interest, mainly by a ship that appears to have "dragged" through it. It also looks like the USACE is dragging their feet on this, so I recommend and intend for us to get a development complete multibeam section over that portion of the channel first thing when we get back to Sandy Hook. I will e-mail Matt and cc the Coast Guard on our intentions, unless you have any objections. Your thoughts?

V/R,
LT vW

Subject: [Fwd: Re: Sandy Hook Shoal-Vessel Mount Adamello]
From: Matt Wingate <matt.wingate@noaa.gov>
Date: Tue, 31 Jul 2007 17:25:12 -0400
To: Christiaan VanWestendorp <Christiaan.VanWestendorp@noaa.gov>

FYI. ~Matt

Subject: RE: Sandy Hook Shoal-Vessel Mount Adamello
From: "McBrady, Mike LCDR" <Mike.T.McBrady@uscg.mil>
Date: Tue, 31 Jul 2007 15:25:23 -0400
To: JOlthuis@SANDYHOOKPILOTS.COM
CC: John Tavolaro <john.f.tavolaro@usace.army.mil>, Matt Wingate <matt.wingate@noaa.gov>

Jack,

If I'm reading this right, Capt. Oldmixon is reporting that the Mt. Adamello's centerline was roughly 104 feet (149-45) LEFT (red side) of the center of the channel and he's reporting observed depths of 38 feet there?

That would mean the shoaling is more substantial than the USACE or NOAA charts I've seen on the area. The Oct '06 USACE sounding charts show a controlling depths of 52 ft + from the centerline toward the red side all through that area between LB13 and LB17.

I've asked KATHERINE WALKER to look at the possibility of a temp buoy.

John,

Can USACE do a survey?

regards,

LCDR Mike McBrady
Sector New York
Waterways Management
work: 718 354 2353
cell: 347 682 0518

fax: 718 354 4190
mike.t.mcbrady@uscg.mil

-----Original Message-----

From: JOlthuis@sandyhookpilots.com [<mailto:JOlthuis@sandyhookpilots.com>]
Sent: Tuesday, July 31, 2007 2:28 PM
To: McBrady, Mike LCDR; John Tavolaro; Matt Wingate
Subject: FW: Sandy Hook Shoal-Vessel Mount Adamello

Below is an email report from Captain John Oldmixon concerning his transit past the point of the hook referred to in my earlier email of today.
Jack

From: Capt.John C. Oldmixon [<mailto:jcoldmixon@comcast.net>]
Sent: Tuesday, July 31, 2007 2:23 PM
To: Jack Olthuis
Subject: Sandy Hook Shoal-Vessel Mount Adamello

Hi Jack, my laptop showed the vessels position 149 left of center on the red side outbound. ships beam 90 ft. 45 ft. offset to port. As we approached the shoal area i noticed the helm at 10 degrees to stbd. and a slight vibration as if she was feeling the bottom a bit. the fathometer read 1.3 meters and stayed there awhile... the ships speed dropped a small amount . speed at the time was 11.4 knots maybe a bit of squat but not much. The draft on the Mount Adamello was 33' 8" It was High water at the Hook you may pass this e=mail along if you like.....JCO

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

Subject: [Fwd: FW: SHOALING AT THE POINT OF SANDY HOOK]
From: Matt Wingate <matt.wingate@noaa.gov>
Date: Tue, 31 Jul 2007 17:21:19 -0400
To: Christiaan VanWestendorp <Christiaan.VanWestendorp@noaa.gov>

Hi Chris,

Looks like there might be more of an issue with the shoaling TJ identified in Sandy Hook Channel. I'll forward you the messages regarding the shoaling (as reported by a Sandy Hook pilot). As it stands right now, the ACOE is looking into surveying the shoal area BUT no word yet. If the ACOE isn't able to do a survey of the area for a while, would the TJ be available? I spoke with Matt J. on NRT-5 and he passed on that his boat is out of the water and Bert, his associate, is on leave until next week. If you think TJ can do the survey soon, I'll run it through the chain of command but first just wanted to ask you your thoughts.

LCDR McBrady has a CG buoy tender standing by to place a temporary green buoy in the channel at 35'. According to the information from the pilot the temporary buoy will need to be near the middle of the channel. Not a pleasant thought if you're a pilot. The tender doesn't have sophisticated sounders so they're hoping to get a good contour plot from the ACOE on where to place the temporary buoy (@ 35'). Another issue is the fact that the tender goes in for extended maintenance starting Aug 6th and won't be available after that.
This is pretty much FYI for now. Hopefully the ACOE will come through.

Best Regards,

Matt

Subject: FW: SHOALING AT THE POINT OF SANDY HOOK
From: "McBrady, Mike LCDR" <Mike.T.McBrady@uscg.mil>
Date: Tue, 31 Jul 2007 12:29:46 -0400
To: Thomas.Creamer@nan02.usace.army.mil, "Tavolaro, John F NAN02" <John.F.Tavolaro@nan02.usace.army.mil>
CC: "Sandy Hook Pilots, Olthuis" <JOlthuis@SANDYHOOKPILOTS.COM>, matt.wingate@noaa.gov, DWheeler@SANDYHOOKPILOTS.COM, RJS@SANDYHOOKPILOTS.COM, "Florentino, Amy LT" <Amy.E.Florentino@uscg.mil>, "Wright, Joseph BMCS" <Joseph.S.Wright@uscg.mil>

Tom/John,

Based on the info provided by Jack below, it seems that the shoaling in Sandy Hook Channel may be significantly different than observed by NOAA about 4 weeks ago, and advertised by them and us in the attached advisory notice.

Given the amount of traffic and type (tank vessels, ammo ships, etc.) can we get another CDR and/or some maintenance dredging in Sandy Hook Channel?

The USACE CDR based on Oct '06 soundings showed left outside and inside quarter controlling depths of 17.2 and 37.7 feet, respectively.

While that's not necessarily inconsistent with NOAA's DTON report, if only half the available channel width is at project depth or better, the USCG would recommend dredging and position additional AtoN temporarily to mark the hazard.

regards,

LCDR Mike McBrady
Sector New York
Waterways Management
work: 718 354 2353
cell: 347 682 0518
fax: 718 354 4190
mike.t.mcbrady@uscg.mil

-----Original Message-----

From: JOlthuis@sandyhookpilots.com [<mailto:JOlthuis@sandyhookpilots.com>]
Sent: Tuesday, July 31, 2007 11:53 AM
To: John Tavolaro
Cc: McBrady, Mike LCDR; Matt Wingate; Dennis Wheeler; Richard Schoenlank
Subject: SHOALING AT THE POINT OF SANDY HOOK

John,

I just hung up the phone with one of our senior pilots that took a tanker out the south way over the weekend. The ship was drawing 34 feet and it was essentially high water when he was passing the point of the hook so he should have expected about 2 meters under the keel. When he passed the point of the hook outbound he purposely remained about 100 feet left of center channel which should have been well off the reported shoaling. He was surprised to see only a meter under his keel. He also reported the ship was sensing the bottom a little with sluggish steering, loss of speed and some rumbling. I checked the 3 days of water level history on PORTS and since the 28th there's been a little more water in the port than predicted so water levels were at or a little above predicted. I would like to strongly urge the Corps to get a survey asset out there immediately so we know exactly what we're dealing with.

Depending on what the survey shows we may request the Coast Guard mark the extent of good water with a buoy until such time as the Corps can either contract out for maintenance or

else possibly get the Sandmaster to mine sand there.

Please let me know what's happening with this.

Thanks,

Jack

J. H. "Jack" Olthuis
Managing Director
Sandy Hook Pilots Equipment and Services Corp.
Training, Waterways Management and Navigation Technology for the Sandy Hook Pilots
201 Edgewater Street
Staten Island, NY 10305
718-448-3900 Ext 214 (office)
609-425-7522 (mobile)
718-447-1582 (fax)
jolthuis@sandyhookpilots.com

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

[Fwd: Re: Sandy Hook Shoal-Vessel Mount Adamello]

Content-Type: message/rfc822
Content-Encoding: 7bit

Re: Sandy Hook Shoal-Vessel Mount Adamello.eml

Content-Type: message/rfc822
Content-Encoding: 7bit

[Fwd: FW: SHOALING AT THE POINT OF SANDY HOOK]

Content-Type: message/rfc822
Content-Encoding: 7bit

FW: SHOALING AT THE POINT OF SANDY HOOK.eml

Content-Type: message/rfc822
Content-Encoding: 7bit

UAN_Sandyhook_Shoal.pdf

Content-Description: UAN_Sandyhook_Shoal.pdf
Content-Type: application/octet-stream
Content-Encoding: base64

Subject: [Fwd: FW: BUOY SET TO MARK SHOALING AT POINT OF HOOK]
From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>
Date: Thu, 02 Aug 2007 14:18:06 -0400
To: CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR James M Crocker <James.M.Crocker@noaa.gov>
CC: CST Buck Gardner <Uther.Gardner@noaa.gov>, SST Peter Lewit <peter.lewit@noaa.gov>

CO/XO,

FYI. Regardless of this, I think it is important to get a development over the area ASAP.

V/R,
LT vW

Subject: FW: BUOY SET TO MARK SHOALING AT POINT OF HOOK
From: "McBrady, Mike LCDR" <Mike.T.McBrady@uscg.mil>
Date: Thu, 02 Aug 2007 11:51:24 -0400
To: Matt Wingate <matt.wingate@noaa.gov>, Matthew.Jaskoski@noaa.gov, Christiaan.VanWestendorp@noaa.gov
CC: "Wester, Richard LCDR" <Richard.J.Wester@uscg.mil>, "Wright, Andrew LT" <Andrew.W.Wright@uscg.mil>

NOAA Partners,

A quick update to let you know that the USCG has set a temp buoy and the USACE was out there yesterday to conduct a survey, results will be available tomorrow perhaps.

From what I got from the buoy tender (CGC KATHERINE WALKER), it looks like the shoaling is largely as your surveys of 2-4 July indicated.

So no further survey assistance is req'd from NOAA at this point.

USACE advises that their correction plan is to get one of their dredges from Philly as soon as funding becomes available in the new FY to remove the shoal. So the buoy will be "temporary", hopefully removed by CGC JUNIPER during an upcoming fall visit.

regards,

LCDR Mike McBrady
Sector New York
Waterways Management
work: 718 354 2353
cell: 347 682 0518
fax: 718 354 4190
mike.t.mcbrady@uscg.mil

-----Original Message-----

From: JOlthuis@sandyhookpilots.com [<mailto:JOlthuis@sandyhookpilots.com>]
Sent: Wednesday, August 01, 2007 6:32 PM
Subject: BUOY SET TO MARK SHOALING AT POINT OF HOOK
Importance: High

NOTICE TO ALL SANDY HOOK PILOTS

The Army Corp surveyed the point of the hook today but have not processed and released the hard copy results. We hope to have them Friday. Based upon receiving verbal information from the Corps the CGC Katherine Walker set an 8X26 LB in 37' of water on what they could

identify as the northern extremity of the shoaling. I prepared the attached chartlet for you. Plotting the position on the Army Corps survey map with a scale of 1 inch equals 200 feet I show approximately 625 feet from the buoy to the red side edge of the channel. Will keep you updated as we find out more.

Pilot Boat: Please print and post.

Dispatchers: Please tell any pilots assigned to Southway jobs to check their email for this notice.

JHO

FW: BUOY SET TO MARK SHOALING AT POINT OF HOOK	Content-Type: message/rfc822 Content-Encoding: 7bit
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Sandy Hook CH Temp LB 15 marking 37' of Water.pdf	Content-Description: Sandy Hook CH Temp LB 15 marking 37' of Water.pdf Content-Type: application/octet-stream Content-Encoding: base64
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Subject: [Fwd: FW: Sandy Hook Channel Shaol - USACE Interim Survey]
From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>
Date: Thu, 02 Aug 2007 20:53:45 -0400
To: SST Peter Lewit <peter.lewit@noaa.gov>
CC: CST Buck Gardner <Uther.Gardner@noaa.gov>

Pete,

Go ahead and base your development line plan around the pdf attached to this e-mail I am forwarding. It looks like there are three separate shoal encroachments into the channel. Also, keep a copy of this e-mail in your correspondence folder, along with the others I have forwarded you.

Thanks,
FOO

Subject: FW: Sandy Hook Channel Shaol - USACE Interim Survey
From: "McBrady, Mike LCDR" <Mike.T.McBrady@uscg.mil>
Date: Thu, 02 Aug 2007 16:30:29 -0400
To: "Mannion, Patrick" <Patrick.J.Mannion@uscg.mil>, Matt Wingate <matt.wingate@noaa.gov>, Matthew.Jaskoski@noaa.gov, Christiaan.VanWestendorp@noaa.gov
CC: "Florentino, Amy LT" <Amy.E.Florentino@uscg.mil>, "Wester, Richard LCDR" <Richard.J.Wester@uscg.mil>, "Blount, Kevin" <Kevin.J.Blount@uscg.mil>, "Mauro, John" <John.J.Mauro@uscg.mil>, "McLaughlin, Jack" <Jack.J.McLaughlin@uscg.mil>, "Casey, Thomas BM1" <Thomas.R.Casey@uscg.mil>, "Pauly, Darren BOSN2" <Darren.A.Pauly@uscg.mil>

VTS/NOAA,

USACE survey confirms that shoal situation is not substantially different than as reported by NOAA and previously advertised by SECNY.

D1 Waterways Management is determining how best to proceed with LNM publication of shoaling and temporary buoy deployment.

At this point, the hazard is very well identified and marked and USACE will be working on maintenance dredging to remove it as funds become available in FY08.

regards,

LCDR Mike McBrady
Sector New York
Waterways Management
work: 718 354 2353
cell: 347 682 0518
fax: 718 354 4190
mike.t.mcbrady@uscg.mil

-----Original Message-----

From: Randall.G.Hintz@nan02.usace.army.mil [<mailto:Randall.G.Hintz@nan02.usace.army.mil>]
Sent: Thursday, August 02, 2007 3:07 PM
To: JOlthuis@sandyhookpilots.com; McBrady, Mike LCDR
Cc: Tavolaro, John F NAN02; Postiglione, Francis NAN02; Donohue, Patricia NAN02
Subject: Sandy Hook Channel Shaol - Interim Survey
Importance: High

Gentlemen -

As a follow-up to my earlier phone call; our interim survey of the shoals in

Sandy Hook Channel has been completed. I've attached a copy (in PDF format) of the results. I'll also be mailing hardcopies to each of you via FedEx, you have them in the morning. The Survey Team will be completing the larger channel survey between buoys 13 and 17 next week. We will provide those results to you as well when they become available.

If you have any questions, feel free to contact me at (917) 790-8550.

Thanks,

Randy Hintz
Randall G. Hintz
Chief, Technical Support Section
US Army Corps of Engineers, New York

(917) 790-8550
(212) 264-1463 (Fax)

FW: Sandy Hook Channel Shoal - USACE Interim Survey	Content-Type: message/rfc822 Content-Encoding: 7bit
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Shoal Survey.pdf	Content-Description: Shoal Survey.pdf Content-Type: application/octet-stream Content-Encoding: base64
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Subject: H11709 DTON?

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Fri, 28 Sep 2007 20:57:30 -0400

To: SST Peter Lewit <peter.lewit@noaa.gov>

CC: CST Buck Gardner <Uther.Gardner@noaa.gov>, ENS Bill Winner <William.Winner@noaa.gov>

Hi, Pete,

I vaguely recall hearing something from one of the survey techs, Dan, or Bill about a possible DTON in the Swash Channel. If there is one, please put together a DTON report and run it through Chief and Bill before they submit it to the CO for release while I'm gone.

Thanks,
FOO

LT Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

Subject: [Fwd: [Fwd: buoy]]
From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>
Date: Fri, 28 Sep 2007 21:04:50 -0400
To: ENS Bill Winner <William.Winner@noaa.gov>
CC: SST Peter Lewit <peter.lewit@noaa.gov>

FYI. If the buoy is in fact off-station by the FPM/HSSD specs, then we need to let Matt Wingate (Nav. Manager) and the CO of CGC KATHERINE WALKER know about it. Call me if you have any questions about this.

- FOO

CO, USCGC KATHERINE WALKER (WLM 552)
LT Amy Florentino
AFlorentino@CGCKWALKER.uscg.mil

Subject: [Fwd: buoy]
From: "tayler.wilkins" <tayler.wilkins@noaa.gov>
Date: Fri, 28 Sep 2007 23:13:16 +0000
To: Christiaan VanWestendorp <christiaan.vanwestendorp@noaa.gov>

This is a buoy that was slightly off position on DN 269. On DN270 I saw a coast guard buoy tender in the vicinity of this buoy. I don't know what you can do with this info but I thought you might want to know.



Tayler

Subject: buoy

From: "tayler.wilkins" <tayler.wilkins@noaa.gov>

Date: Fri, 28 Sep 2007 15:55:35 +0000

To: Peter.lewit@noaa.gov

This is a buoy that was slightly off position on DN 269. On DN270 I saw a coast guard buoy tender in the vicinity of this buoy. I don't know what you can do with this info but I thought you might want to know.



Tayler

LT Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>
Field Operations Officer
NOAA Ship THOMAS JEFFERSON

[Fwd: buoy]	Content-Type: message/rfc822 Content-Encoding: 7bit
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buoy	Content-Type: message/rfc822 Content-Encoding: 7bit
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Subject: DTON Report #2 - H11709

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Tue, 06 Nov 2007 07:19:25 -0500

To: NOS OCS MCD Navigation Dangers <mcd.dton@noaa.gov>, Lyn Preston <Lyn.Preston@noaa.gov>, Douglas Harpine <DOUGLAS.HARPINE@NOAA.GOV>

CC: LT Matt Wingate <matt.wingate@noaa.gov>, LTjg Matt Jaskoski <Matthew.Jaskoski@noaa.gov>, CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR Shep Smith <Shep.Smith@noaa.gov>, CDR Gerd Glang <Gerd.Glang@noaa.gov>, LCDR Mike McBrady <Mike.T.McBrady@uscg.mil>, Brian Willis <Brian.S.Willis@uscg.mil>, LCDR James M Crocker <James.M.Crocker@noaa.gov>

Attached is the second DTON report from survey H11709 (Project OPR-B310-TJ-07). These dangers to navigation were found during routine survey operations in NY Harbor Lower Bay and around Sandy Hook, NJ. Please contact me with any questions you may have.

Very Respectfully,
LT Chris van Westendorp

LT Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

H11709_DTON2.zip

Content-Type: application/x-zip-compressed
Content-Encoding: base64

Subject: DTON Report #3 - H11709

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Wed, 21 Nov 2007 14:01:05 -0500

To: NOS OCS MCD Navigation Dangers <mcd.dton@noaa.gov>, Lyn Preston <Lyn.Preston@noaa.gov>, Douglas Harpine <DOUGLAS.HARPINE@NOAA.GOV>

CC: LT Matt Wingate <matt.wingate@noaa.gov>, LTjg Matt Jaskoski <Matthew.Jaskoski@noaa.gov>, CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR Shep Smith <Shep.Smith@noaa.gov>, CDR Gerd Glang <Gerd.Glang@noaa.gov>, LCDR Mike McBrady <Mike.T.McBrady@uscg.mil>, Brian Willis <Brian.S.Willis@uscg.mil>, LCDR James M Crocker <James.M.Crocker@noaa.gov>

Attached is the third DTON report from survey H11709 (Project OPR-B310-TJ-07). These dangers to navigation were found during routine survey operations in NY Harbor Lower Bay and around Sandy Hook, NJ. Please contact me with any questions you may have.

Very Respectfully,
LT Chris van Westendorp

LT Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

H11709_DTON3.zip

Content-Type: application/x-zip-compressed
Content-Encoding: base64

Subject: DTON Report #4 - H11709

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Tue, 11 Dec 2007 12:47:32 -0500

To: NOS OCS MCD Navigation Dangers <mcd.dton@noaa.gov>, Lyn Preston <Lyn.Preston@noaa.gov>, Douglas Harpine <DOUGLAS.HARPINE@NOAA.GOV>

CC: LT Matt Wingate <matt.wingate@noaa.gov>, LTjg Matt Jaskoski <Matthew.Jaskoski@noaa.gov>, CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR Shep Smith <Shep.Smith@noaa.gov>, CDR Gerd Glang <Gerd.Glang@noaa.gov>, LCDR Mike McBrady <Mike.T.McBrady@uscg.mil>, Brian Willis <Brian.S.Willis@uscg.mil>, LCDR James M Crocker <James.M.Crocker@noaa.gov>

Attached is the fourth DTON report from survey H11709 (Project OPR-B310-TJ-07). These dangers to navigation were found during routine survey operations in NY Harbor Lower Bay and around Sandy Hook, NJ. Please contact me with any questions you may have.

Very Respectfully,
LCDR Chris van Westendorp

LCDR Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

H11709_DTON4.zip

Content-Type: application/x-zip-compressed
Content-Encoding: base64

Subject: Chart Discrepancy 12327 123401

From: "tod schattgen" <tod.schattgen@noaa.gov>

Date: Wed, 12 Dec 2007 10:30:24 -0500

To: douglas.harpine@noaa.gov

CC: Christiaan VanWestendorp <christiaan.vanwestendorp@noaa.gov>, peter.lewit@noaa.gov

Doug,

While conducting the chart comparison on chart 123401 and 12327, Peter Lewitt identified a discrepancy. The raster chart has a note in the turning basin at the Naval Weapons Station Earl New Jersey that states 45 FEET DEC 2002. The ENC of the same area and the TJ's current survey H11709 indicate depths in the turning basin of 35 to 40 feet.

Please check these charts for recent source which may have updated the turning basin depths. Also please advise TJ if you feel a DTON is warranted.

Best Regards,
Tod

Subject: Special Report #2 - H11709, Sandy Hook

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Thu, 13 Dec 2007 16:15:00 -0500

To: LT Matt Wingate <matt.wingate@noaa.gov>

CC: CDR Tod Schattgen <Tod.Schattgen@noaa.gov>

Hi, Matt,

We discovered a discrepancy between the raster chart (12401) and its correlating ENC in the vicinity of the turning basin for the Naval Station Earle finger pier. Details are in the attached report, but we will wait for you to see if the Navy has any problem with it before we submit it as a Danger to Navigation. If they do, then we need to make other arrangements, like the Navy giving us documentation that the basin is cleared to the depth on the raster chart. We would request that they give us an answer as soon as possible, but I'll let you feel that one out with them. (-: Call me or let me know if you have any questions about this.

Thanks,
Chris

LCDR Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

H11709_Special_Report2.pdf

Content-Type: application/pdf

Content-Encoding: base64

Subject: [Fwd: Re: Bronx queen]
From: "Peter.Lewit" <peter.lewit@noaa.gov>
Date: Sun, 09 Dec 2007 14:57:20 +0000
To: tod schattgen <tod.schattgen@noaa.gov>

I did some research on the Bronx Queen Wreck by sending an E-mail to WreckValle.com. I got a response from a Capt Dan Berg who forwarded me some Loran Rates. I did some further research on Loran convertor and found some information that might impact Megan's Loran Project and also the Lobsterman themselves. Take a look at the attached document. Capt Berg also requested some imagery, if wrecks are already charted can that data be provided?

Subject: Re: Bronx queen
From: WreckValle@aol.com
Date: Sat, 08 Dec 2007 16:05:44 -0500 (EST)
To: Peter.Lewit@noaa.gov

Peter,
Its been quite a while since I was on the Bronx Queen. I checked and only have Loran #'s for this wreck.

26968.8
43735.1

These are good numbers but you would have to convert them or run them down to get DGPS #'s.

Any chance I could see the sonar images of this wreck (or any other wrecks in this area). I scan this wreck with a marine sonic side scan but that was about 8 years ago.

Happy Holidays
Capt. Dan Berg

Check out AOL Money & Finance's list of the [hottest products](#) and [top money wasters](#) of 2007.

Info_onLoran.doc	Content-Type: application/msword Content-Encoding: base64
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Re: Bronx queen	Content-Type: message/rfc822 Content-Encoding: 7bit
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Subject: Emailing: SandyHook.zip

From: Shepard Smith <Shep.Smith@noaa.gov>

Date: Fri, 11 Jan 2008 16:58:15 -0500

To: Lyn Preston <Lyn.Preston@noaa.gov>

CC: Joseph Robinson <Joseph.Robinson@noaa.gov>, Jeffrey Ferguson <Jeffrey.Ferguson@noaa.gov>, Castle E Parker <Castle.E.Parker@noaa.gov>, Tod Schattgen <Tod.Schattgen@noaa.gov>, Christiaan VanWestendorp <Christiaan.VanWestendorp@noaa.gov>, Peter Lewit <Peter.Lewit@noaa.gov>

Lyn,

Attached is a small chart letter (with S-57 files) as requested by Joe Robinson to support application of a GC in the vicinity of Sandy Hook.

Have a good weekend,

Shep

SandyHook.zip	Content-Type: application/zip Content-Encoding: base64
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Subject: DTON Report #5 - H11709

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Fri, 25 Jan 2008 11:03:20 -0500

To: NOS OCS MCD Navigation Dangers <mcd.dton@noaa.gov>, Lyn Preston <Lyn.Preston@noaa.gov>, Douglas Harpine <DOUGLAS.HARPINE@NOAA.GOV>

CC: LT Matt Wingate <matt.wingate@noaa.gov>, LTjg Matt Jaskoski <Matthew.Jaskoski@noaa.gov>, CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR Shep Smith <Shep.Smith@noaa.gov>, CAPT Gerd Glang <Gerd.Glang@noaa.gov>, LCDR Mike McBrady <Mike.T.McBrady@uscg.mil>, Brian Willis <Brian.S.Willis@uscg.mil>, LCDR James M Crocker <James.M.Crocker@noaa.gov>

Attached is the fifth DTON report from survey H11709 (Project OPR-B310-TJ-07). These dangers to navigation were found during routine survey operations in NY Harbor Lower Bay, in the vicinity of Sandy Hook, NJ. Please contact me with any questions you may have.

Very Respectfully,
LCDR Chris van Westendorp

LCDR Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON

H11709_DTON5.zip

Content-Type: application/x-zip-compressed
Content-Encoding: base64

Subject: Earle, NJ chart discrepancy

From: "Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date: Tue, 05 Feb 2008 15:57:18 -0500

To: Matt Wingate <matt.wingate@noaa.gov>

CC: SST Peter Lewit <peter.lewit@noaa.gov>, CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LT Jasper Schaer <jasper.schaer@noaa.gov>

Hi, Matt,

I realize that you are at a meeting in NY today, so I went ahead and called Ed Martin over at NSD about this issue. He expressed to me that the raster is the most up-to-date and correct, as the USACE had done some work in there and surveyed it to 50 ft (per the raster chart). There is a lag in the update to the ENC, which NSD is addressing right now. I think with this information, there is no need to pursue this issue anymore. Thanks for the update, and have a good week.

- Chris

Matt Wingate wrote:

Chris - Thanks very much for sending.
Just returning to the office after being away for several weeks and working through all the e-mail. Before leaving, I just didn't have a chance to follow up with the Navy in Earle, NJ (re: the shoal soundings TJ found in the Navy's turning basin). I recall you mentioning a discrepancy between the ENC and RNC. Ed Martin at NSD told me the issue is being resolved. So, my question is do you still need me to contact the Navy in Earle, NJ, to notify them about TJ's shoal soundings? Let me know and I'll get in touch with them. Thanks.

Best regards,
Matt

LCDR Chris van Westendorp, NOAA <christiaan.vanwestendorp@noaa.gov>

Field Operations Officer

NOAA Ship THOMAS JEFFERSON



January

11, 2008

MEMORANDUM TO: Lyn Preston, Chief
Nautical Data Branch

FROM: LCDR Shepard M. Smith, NOAA
Chief, Atlantic Hydrographic Branch

SUBJECT: Preliminary 18 ft Depth Curve from H11709

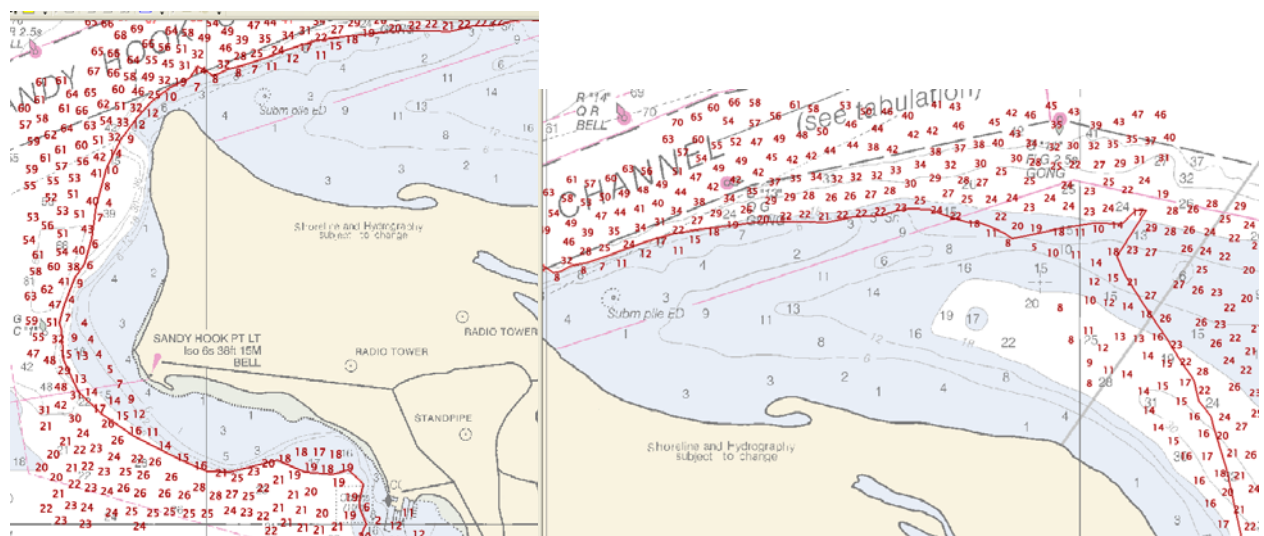
Please find attached two small S-57 files:
H11709_Preliminary_Soundings_18ftCurve.000 (in Meters)
H11709_Preliminary_Soundings_18ftCurve_CU.000 (in Feet)

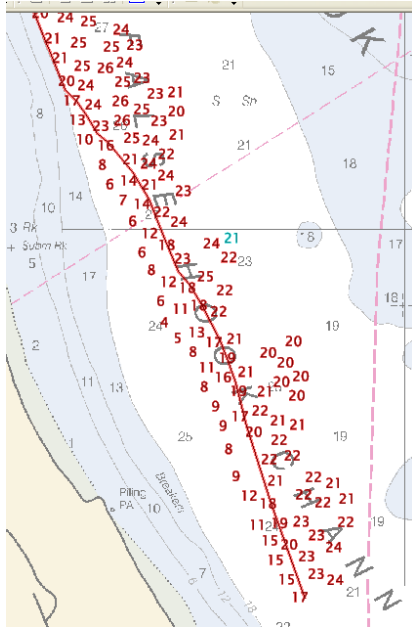
These files contain soundings and an 18ft depth curve in the area of Sandy Hook, NJ. This information was requested by Joe Robinson to support application of new shoreline.

The survey has not yet been fully processed by the THOMAS JEFFERSON, and has not been evaluated by the Atlantic Hydrographic Branch, but is generally believed to be of good quality.

This information will be superseded by the full survey compilation in due course.

The following screenshots are provided for easy reference:





H11709 Channel Shoaling Report

Registry Number: H11709
State: New York
Locality: New York Harbor and Approaches, NY+NJ
Sub-locality: 2 NM Northeast of Sandy Hook
Project Number: OPR-B310-TJ-07
Survey Date: 07/04/2007

This shoaling area of Sandy Hook Channel was found during routine survey operations for survey H11709 (project OPR-B310-TJ-07). The hydrographer will submit a DTON report on this area upon acknowledgment by the US Army Corps of Engineers unless a response from the USACE is received regarding the dredge removal of this shoal from the channel.

Charts Affected

Number	Version	Date	Scale
12401	8th Ed.	02/01/2005	1:15000
12324	32nd Ed.	03/01/2006	1:40000
12327	99th Ed.	10/01/2006	1:40000
12326	50th Ed.	05/01/2006	1:80000
12300	45th Ed.	03/01/2005	1:400000
13006	33rd Ed.	04/01/2006	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000
14500	27th Ed.	10/01/2002	1:1500000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	DTON1 Sounding 54/93	Shoal	7.81 m	040° 28' 45.798" N	74° 01' 01.081" W	---
1.2	DTON1 Sounding 73/1	Shoal	4.39 m	040° 28' 44.701" N	74° 01' 00.735" W	---

1 - Danger To Navigation

1.1) DTON1 Sounding 54/93

DANGER TO NAVIGATION

Survey Summary

Survey Position: 040° 28' 45.798" N, 74° 01' 01.081" W
Least Depth: 7.81 m
Timestamp: 2007-185.13:56:39.783 (07/04/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-185 / 384_1356
Profile/Beam: 54/93
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This shoaling area was found with Reson 8101 multibeam and corrected to MLLW using observed water levels and TCARI for water level computation. The 25 ft sounding is above the Sandy Hook Channel controlling depth of 40.2 FT (left inside quarter). This encroaching spit descends from the 14-foot sounding on the outside left quarter to 17 ft, 19 ft, 22 ft, and 25 ft toward the edge of the left inside quarter of the channel.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-185/384_1356	54/93	0.00	000.0	Primary

Hydrographer Recommendations

Chart dangerous sounding of 25 feet. Update tabulated controlling depth of left inside quarter to 25 feet.

Cartographically-Rounded Depth (Affected Charts):

- 25ft (12401_1, 12324_1, 12327_1, 12326_1)
- 4 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
- 7.8m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 1:depth known
 SORDAT - 20070704
 SORIND - Bathymetry

TECSOU - 1:found by echo-sounder

VERDAT - 12:Mean lower low water

1.2) DTON1 Sounding 73/1

DANGER TO NAVIGATION

Survey Summary

Survey Position: 040° 28' 44.701" N, 74° 01' 00.735" W
Least Depth: 4.39 m
Timestamp: 2007-185.13:56:45.054 (07/04/2007)
Survey Line: h11709 / tj_3102_reson8101 / 2007-185 / 384_1356
Profile/Beam: 73/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

This shoaling area was found with Reson 8101 multibeam and corrected to MLLW using observed water levels and TCARI for water level computation. The 14 ft sounding is above the Sandy Hook Channel controlling depth of 19.6 FT (Controlling Depth Table Note B). This shoaling "spit" descends from the 14-foot sounding on the left outside quarter to 17 ft, 19 ft, 22 ft, and 25 ft toward the edge of the left inside quarter of the channel.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-185/384_1356	73/1	0.00	000.0	Primary
h11709/tj_3102_reson8101/2007-185/384_1356	63/11	9.21	173.1	Secondary (grouped)
h11709/tj_3102_klein5000_sss100/2007-183/520_1448	0002	14.26	340.9	Secondary
h11709/tj_3102_reson8101/2007-185/384_1356	60/26	15.23	171.4	Secondary (grouped)
h11709/tj_3102_reson8101/2007-185/384_1356	57/54	20.73	171.2	Secondary (grouped)

Hydrographer Recommendations

Update Note B of the tabulated controlling depths to "EXCEPT FOR SHOALS TO 14 FT AT 40/28/44.7 N 74/01/01.1 W ALONG THE LEFT OUTSIDE QUARTER OF REACH."

Cartographically-Rounded Depth (Affected Charts):

14ft (12401_1, 12324_1, 12327_1, 12326_1)
 2 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)
 4.4m (5161_1)

S-57 Data

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

Feature Images

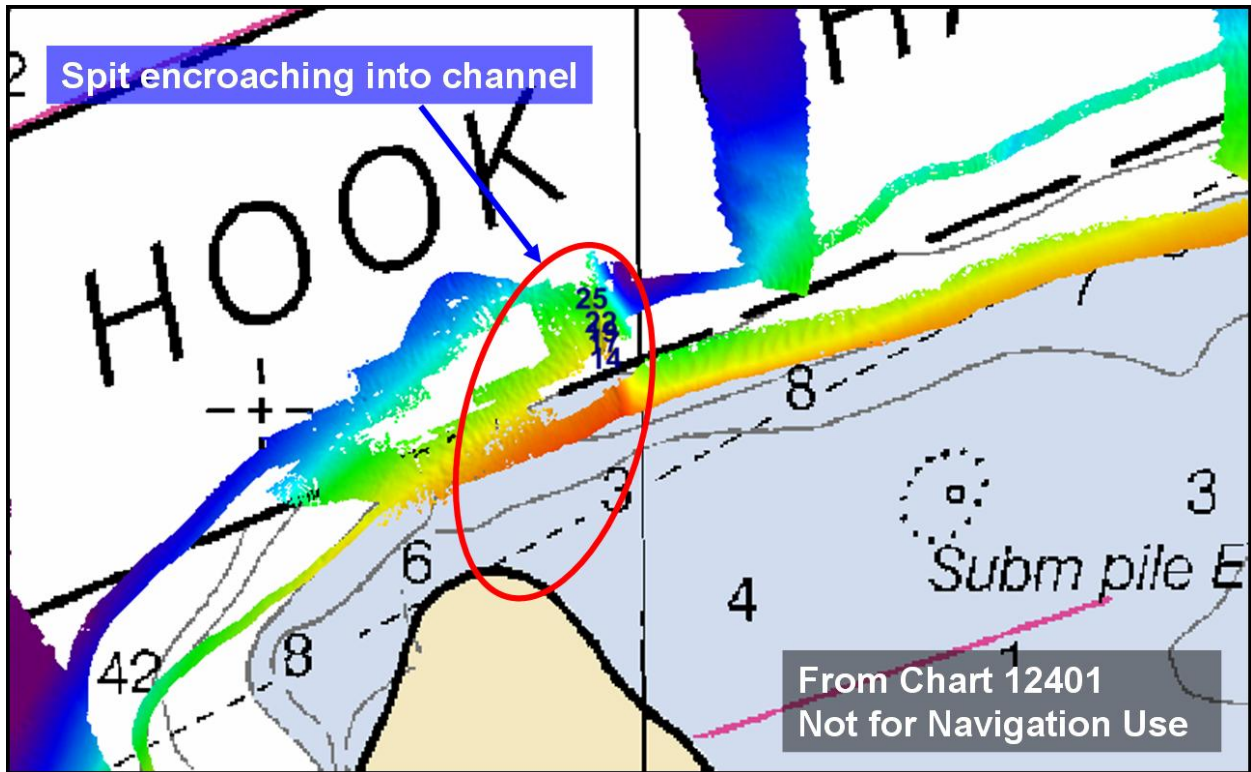


Figure 1.2.1

H11709 Special Report #2

Registry Number: H11709
State: New York
Locality: New York Harbor and Approaches, NY+NJ
Sub-locality: 2 NM Northeast of Sandy Hook
Project Number: OPR-B310-TJ-07
Survey Date: 12/13/2007

This charting discrepancy was identified during processing of survey H11709 (project OPR-B310-TJ-07). This report will be submitted to the Marine Charting Division as a Danger to Navigation upon receipt of concurrence and acknowledgment by the U.S. Navy or in the absence of an acknowledgment.

Charts Affected

Number	Version	Date	Scale
12401	8th Ed.	02/01/2005	1:15000
12324	32nd Ed.	03/01/2006	1:40000
12327	99th Ed.	10/01/2006	1:40000
12326	50th Ed.	05/01/2006	1:80000
12300	45th Ed.	03/01/2005	1:400000
13006	33rd Ed.	04/01/2006	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000
14500	27th Ed.	10/01/2002	1:1500000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	DToN5 Chart Discrepancy	Shoal	[None]	40° 27' 18.191" N	074° 02' 59.392" W	---

1 - Danger To Navigation

1.1) DToN5 Chart Discrepancy

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 27' 18.191" N, 074° 02' 59.392" W
Least Depth: [None]
Timestamp: 2007-347.16:15:00.000 (12/13/2007)
DP Dataset: h11709 / tj_3102_reson8101 / 2007-347 / 3102_12132007_chartdp
Profile/Beam: 1/1
Charts Affected: 12401_1, 12324_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

The charted and tabulated project depth of this turning basin on raster chart 12401 is 45 ft. Comparison of corresponding ENC US5NY18M shows several depths inside the basin shoaler than 45 ft, of which the shoalest is 35 ft (10.6 meters) at position 40/27/18.192 N 074/02/59.392 W.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11709/tj_3102_reson8101/2007-347/3102_12132007_chartdp	1/1	0.00	000.0	Primary
ChartGPs - Digitized	36	0.40	092.3	Secondary (grouped)

Hydrographer Recommendations

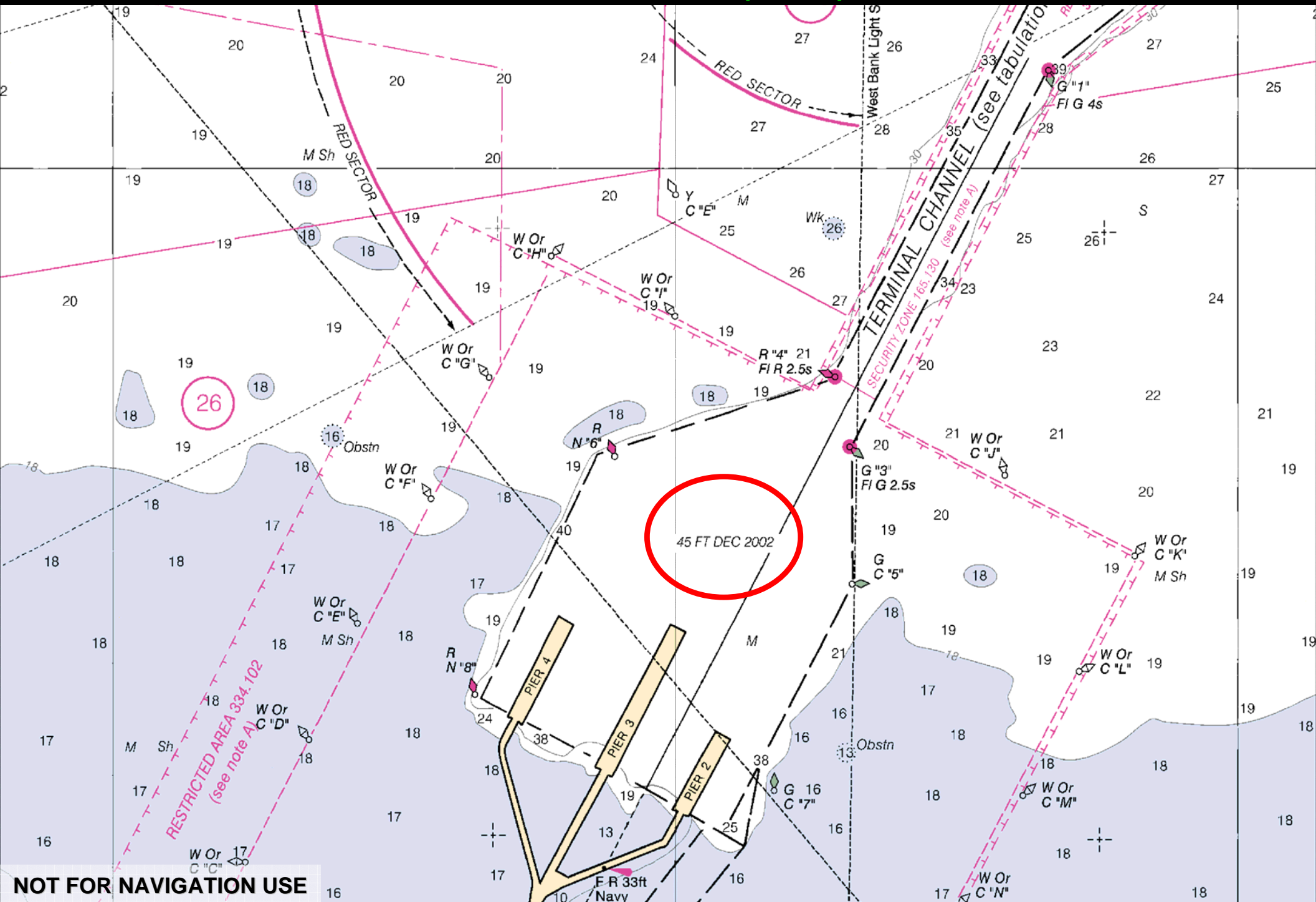
Recommend revising channel tabulation to reflect best available information. ENC reflects basin least depth of 35 ft.

S-57 Data

[None]

NAVSTA Earle, NJ Terminal Turning Basin

From Chart 12401 (raster)



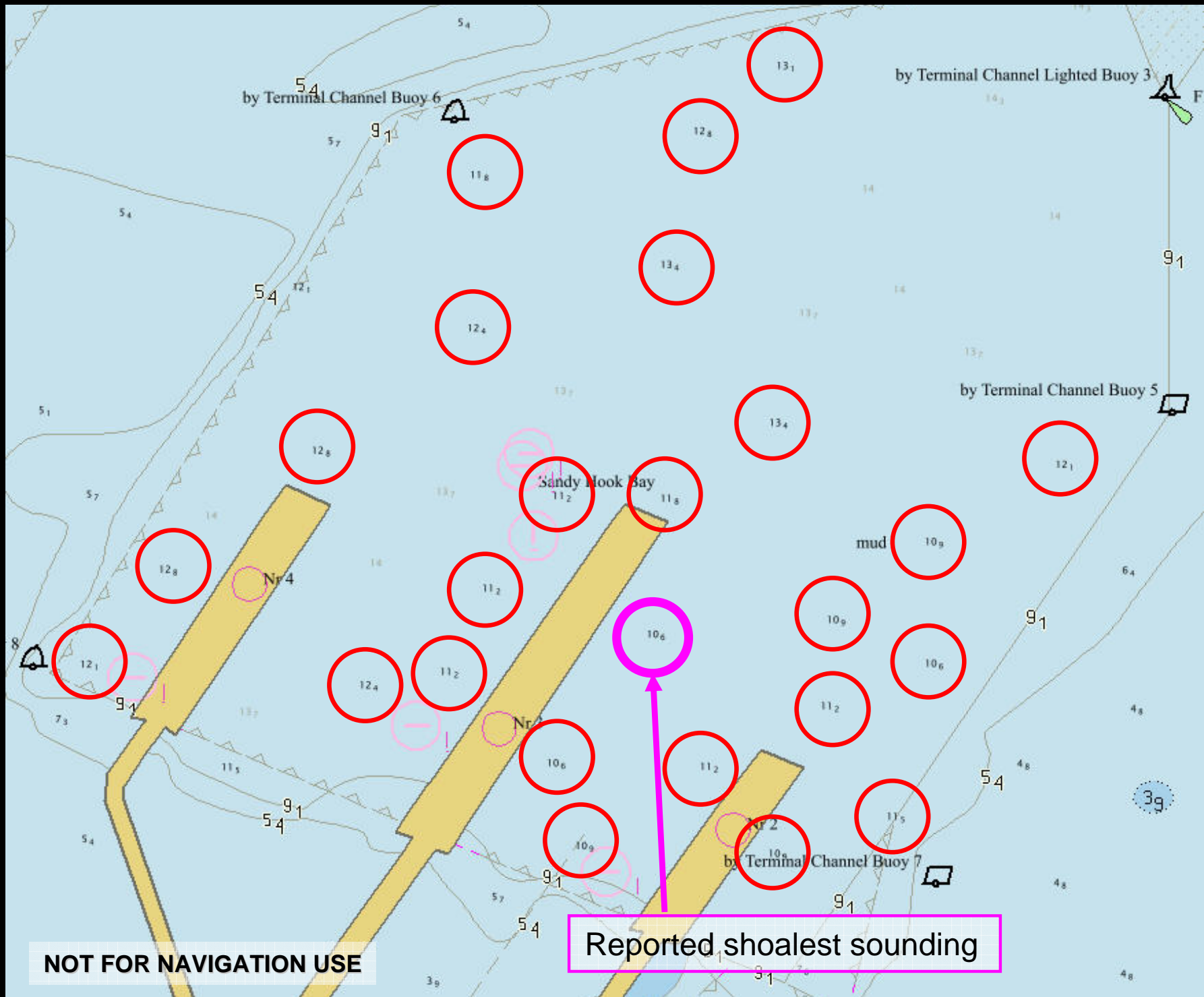
NOT FOR NAVIGATION USE

NAVSTA Earle, NJ Terminal Turning Basin

From ENC
US5NY18M

ENC depths
are in meters

Depths less
than 45 ft
(13.7 m) are
circled



NOT FOR NAVIGATION USE

Reported shoalest sounding

Subject: Re: Earle, NJ chart discrepancy

From: Matt Wingate <matt.wingate@noaa.gov>

Date: Fri, 08 Feb 2008 16:17:18 -0500

To: Christiaan VanWestendorp <Christiaan.VanWestendorp@noaa.gov>

Hi Chris,

Received this e-mail from Travis Newman (MCD) re. RNC / ENC agreement issue.... Glad the issue is resolved. Best regards, ~Matt

Ed,

That was probably the case with the previous edition of the ENC. While checking the current ENC on the web, it is in agreement with the raster.

Travis

Christiaan VanWestendorp wrote:

Hi, Matt,

I realize that you are at a meeting in NY today, so I went ahead and called Ed Martin over at NSD about this issue. He expressed to me that the raster is the most up-to-date and correct, as the USACE had done some work in there and surveyed it to 50 ft (per the raster chart). There is a lag in the update to the ENC, which NSD is addressing right now. I think with this information, there is no need to pursue this issue anymore. Thanks for the update, and have a good week.

- Chris

Matt Wingate wrote:

Chris - Thanks very much for sending.

Just returning to the office after being away for several weeks and working through all the e-mail. Before leaving, I just didn't have a chance to follow up with the Navy in Earle, NJ (re: the shoal soundings TJ found in the Navy's turning basin). I recall you mentioning a discrepancy between the ENC and RNC. Ed Martin at NSD told me the issue is being resolved. So, my question is do you still need me to contact the Navy in Earle, NJ, to notify them about TJ's shoal soundings? Let me know and I'll get in touch with them. Thanks.

Best regards,
Matt

--

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

[Fwd FW BUOY SET TO MARK SHOALING AT POINT OF HOOK].eml.txt

Subject:
[Fwd: FW: BUOY SET TO MARK SHOALING AT POINT OF HOOK]
From:
"Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>
Date:
Thu, 02 Aug 2007 14:18:06 -0400
To:
CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR James M Crocker
<James.M.Crocker@noaa.gov>
CC:
CST Buck Gardner <Uther.Gardner@noaa.gov>, SST Peter Lewit <peter.lewit@noaa.gov>

CO/XO,

FYI. Regardless of this, I think it is important to get a development over the area ASAP.

V/R,
LT vW

Subject:
FW: BUOY SET TO MARK SHOALING AT POINT OF HOOK
From:
"McBrady, Mike LCDR" <Mike.T.McBrady@uscg.mil>
Date:
Thu, 02 Aug 2007 11:51:24 -0400
To:
Matt Wingate <matt.wingate@noaa.gov>, Matthew.Jaskoski@noaa.gov,
Christiaan.VanWestendorp@noaa.gov
CC:
"Wester, Richard LCDR" <Richard.J.Wester@uscg.mil>, "Wright, Andrew LT"
<Andrew.W.Wright@uscg.mil>

NOAA Partners,

A quick update to let you know that the USCG has set a temp buoy and the USACE was out there yesterday to conduct a survey, results will be available tomorrow perhaps.

From what I got from the buoy tender (CGC KATHERINE WALKER), it looks like the shoaling is largely as your surveys of 2-4 July indicated.

So no further survey assistance is req'd from NOAA at this point.

USACE advises that their correction plan is to get one of their dredges from Philly as soon as funding becomes available in the new FY to remove the shoal. So the buoy will be "temporary", hopefully removed by CGC JUNIPER during an upcoming fall visit.

regards,

LCDR Mike McBrady
Sector New York
Waterways Management
work: 718 354 2353
cell: 347 682 0518
fax: 718 354 4190
mike.t.mcbrady@uscg.mil

-----Original Message-----

From: JOI thui s@sandyhookpilots.com [mailto:JOI thui s@sandyhookpilots.com]
Sent: Wednesday, August 01, 2007 6:32 PM

[Fwd FW BUOY SET TO MARK SHOALING AT POINT OF HOOK].eml.txt
Subject: BUOY SET TO MARK SHOALING AT POINT OF HOOK
Importance: High

NOTICE TO ALL SANDY HOOK PILOTS

The Army Corp surveyed the point of the hook today but have not processed and released the hard copy results. We hope to have them Friday. Based upon receiving verbal information from the Corps the CGC Katherine Walker set an 8X26 LB in 37' of water on what they could identify as the northern extremity of the shoaling. I prepared the attached chartlet for you. Plotting the position on the Army Corps survey map with a scale of 1 inch equals 200 feet I show approximately 625 feet from the buoy to the red side edge of the channel. Will keep you updated as we find out more.

Pilot Boat: Please print and post.
Dispatchers: Please tell any pilots assigned to Southway jobs to check their email for this notice.

JHO

FW: BUOY SET TO MARK SHOALING AT POINT OF HOOK

Content-Type:
message/rfc822
Content-Encoding:
7bit

Sandy Hook CH Temp LB 15 marking 37' of Water.pdf

Content-Description:
Sandy Hook CH Temp LB 15 marking 37' of Water.pdf
Content-Type:
application/octet-stream
Content-Encoding:
base64

[Fwd FW Sandy Hook Channel Shoal - USACE Interim Survey].eml.txt

Subject:
[Fwd: FW: Sandy Hook Channel Shoal - USACE Interim Survey]
From:
"Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>
Date:
Thu, 02 Aug 2007 20:53:45 -0400
To:
SST Peter Lewit <peter.lewit@noaa.gov>
CC:
CST Buck Gardner <Uther.Gardner@noaa.gov>

Pete,

Go ahead and base your development line plan around the pdf attached to this e-mail I am forwarding. It looks like there are three separate shoal encroachments into the channel. Also, keep a copy of this e-mail in your correspondence folder, along with the others I have forwarded you.

Thanks,
FOO

Subject:
FW: Sandy Hook Channel Shoal - USACE Interim Survey
From:
"McBrady, Mike LCDR" <Mike.T.McBrady@uscg.mil>
Date:
Thu, 02 Aug 2007 16:30:29 -0400
To:
"Mannion, Patrick" <Patrick.J.Mannion@uscg.mil>, Matt Wingate
<matt.wingate@noaa.gov>, Matthew Jaskoski@noaa.gov,
Christiaan.VanWestendorp@noaa.gov
CC:
"Florentino, Amy LT" <Amy.E.Florentino@uscg.mil>, "Wester, Richard LCDR"
<Richard.J.Wester@uscg.mil>, "Blount, Kevin" <Kevin.J.Blount@uscg.mil>, "Mauro,
John" <John.J.Mauro@uscg.mil>, "McLaughlin, Jack" <Jack.J.McLaughlin@uscg.mil>,
"Casey, Thomas BM1" <Thomas.R.Casey@uscg.mil>, "Pauly, Darren B0SN2"
<Darren.A.Pauly@uscg.mil>

VTS/NOAA,

USACE survey confirms that shoal situation is not substantially different than as reported by NOAA and previously advertised by SECNY.

D1 Waterways Management is determining how best to proceed with LNM publication of shoaling and temporary buoy deployment.

At this point, the hazard is very well identified and marked and USACE will be working on maintenance dredging to remove it as funds become available in FY08.

regards,

LCDR Mike McBrady
Sector New York
Waterways Management
work: 718 354 2353
cell: 347 682 0518
fax: 718 354 4190
mike.t.mcbrady@uscg.mil

-----Original Message-----

From: Randal I. G. Hintz@nan02.usace.army.mil

Page 1

[Fwd FW Sandy Hook Channel Shoal - USACE Interim Survey].eml.txt
[mailto:Randall.G.Hintz@nan02.usace.army.mil]
Sent: Thursday, August 02, 2007 3:07 PM
To: JOlthuis@sandyhookpilots.com; McBrady, Mike LCDR
Cc: Tavolaro, John F NAN02; Postiglione, Francis NAN02; Donohue, Patricia NAN02
Subject: Sandy Hook Channel Shoal - Interim Survey
Importance: High

Gentlemen -

As a follow-up to my earlier phone call; our interim survey of the shoals in Sandy Hook Channel has been completed. I've attached a copy (in PDF format) of the results. I'll also be mailing hardcopies to each of you via FedEx, you have them in the morning. The Survey Team will be completing the larger channel survey between buoys 13 and 17 next week. We will provide those results to you as well when they become available.

If you have any questions, feel free to contact me at (917) 790-8550.

Thanks,

Randy Hintz
Randall G. Hintz
Chief, Technical Support Section
US Army Corps of Engineers, New York

(917) 790-8550
(212) 264-1463 (Fax)

FW: Sandy Hook Channel Shoal - USACE Interim Survey

Content-Type:
message/rfc822
Content-Encoding:
7bit

Shoal Survey.pdf

Content-Description:
Shoal Survey.pdf
Content-Type:
application/octet-stream
Content-Encoding:
base64

[Fwd [Fwd Re Sandy Hook Shoal -Vessel Mount Adamello]].eml.txt

Subject:

[Fwd: [Fwd: Re: Sandy Hook Shoal -Vessel Mount Adamello]]

From:

"Christiaan VanWestendorp" <christiaan.vanwestendorp@noaa.gov>

Date:

Tue, 31 Jul 2007 20:43:51 -0400

To:

CDR Tod Schattgen <Tod.Schattgen@noaa.gov>, LCDR James M Crocker
<James.M.Crocker@noaa.gov>

CC:

SST Peter Lewit <peter.lewit@noaa.gov>, CST Buck Gardner <Uther.Gardner@noaa.gov>

CO/XO,

It seems the Sandy Hook Channel shoal area we identified and reported as a DTON has received some more interest, mainly by a ship that appears to have "dragged" through it. It also looks like the USACE is dragging their feet on this, so I recommend and intend for us to get a development complete multi-beam section over that portion of the channel first thing when we get back to Sandy Hook. I will e-mail Matt and cc the Coast Guard on our intentions, unless you have any objections. Your thoughts?

V/R,

LT vW

Subject:

[Fwd: Re: Sandy Hook Shoal -Vessel Mount Adamello]

From:

Matt Wingate <matt.wingate@noaa.gov>

Date:

Tue, 31 Jul 2007 17:25:12 -0400

To:

Christiaan VanWestendorp <Christiaan.VanWestendorp@noaa.gov>

FYI. ~Matt

Subject:

RE: Sandy Hook Shoal -Vessel Mount Adamello

From:

"McBrady, Mike LCDR" <Mike.T.McBrady@uscg.mil>

Date:

Tue, 31 Jul 2007 15:25:23 -0400

To:

JOIthuis@SANDYHOOKPILOTS.COM

CC:

John Tavolaro <john.f.tavolaro@usace.army.mil>, Matt Wingate <matt.wingate@noaa.gov>

Jack,

If I'm reading this right, Capt. Oldmixon is reporting that the Mt. Adamello's centerline was roughly 104 feet (149-45) LEFT (red side) of the center of the channel and he's reporting observed depths of 38 feet there?

That would mean the shoaling is more substantial than the USACE or NOAA charts I've seen on the area. The Oct '06 USACE sounding charts show a controlling depths of 52 ft + from the centerline toward the red side all through that area between LB13 and LB17.

I've asked KATHERINE WALKER to look at the possibility of a temp buoy.

John,

[Fwd [Fwd Re Sandy Hook Shoal -Vessel Mount Adamello]].eml.txt
Can USACE do a survey?

regards,

LCDR Mike McBrady
Sector New York
Waterways Management
work: 718 354 2353
cell: 347 682 0518
fax: 718 354 4190
mike.t.mcbrady@uscg.mil

-----Original Message-----

From: Jolthuis@sandyhookpilots.com [mailto:Jolthuis@sandyhookpilots.com]
Sent: Tuesday, July 31, 2007 2:28 PM
To: McBrady, Mike LCDR; John Tavoraro; Matt Wingate
Subject: FW: Sandy Hook Shoal -Vessel Mount Adamello

Below is an email report from Captain John Oldixon concerning his transit past the point of the hook referred to in my earlier email of today.
Jack

From: Capt. John C. Oldixon [mailto:jcol Dixon@comcast.net]
Sent: Tuesday, July 31, 2007 2:23 PM
To: Jack Olthuis
Subject: Sandy Hook Shoal -Vessel Mount Adamello

Hi Jack, my laptop showed the vessel's position 149 left of center on the red side outbound. ship's beam 90 ft. 45 ft. offset to port. As we approached the shoal area I noticed the helm at 10 degrees to stbd. and a slight vibration as if she was feeling the bottom a bit. the fathometer read 1.3 meters and stayed there awhile... the ship's speed dropped a small amount. speed at the time was 11.4 knots maybe a bit of squat but not much. The draft on the Mount Adamello was 33' 8" It was High water at the Hook you may pass this e-mail along if you like....JCO

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

Subject:
[Fwd: FW: SHOALING AT THE POINT OF SANDY HOOK]
From:
Matt Wingate <matt.wingate@noaa.gov>
Date:
Tue, 31 Jul 2007 17:21:19 -0400
To:
Christiaan VanWestendorp <Christiaan.VanWestendorp@noaa.gov>

Hi Chris,

Looks like there might be more of an issue with the shoaling TJ identified in Sandy Hook Channel. I'll forward you the messages regarding the shoaling (as reported by a Sandy Hook pilot). As it stands right now, the ACOE is looking into surveying the shoal area BUT no word yet. If the ACOE isn't able to do a survey of the area for a while, would the TJ be available? I spoke with Matt J. on NRT-5 and he passed on that his boat is out of the water and Bert, his associate, is on leave until next

[Fwd [Fwd Re Sandy Hook Shoal -Vessel Mount Adamello]].eml.txt
week. If you think TJ can do the survey soon, I'll run it through the chain of command but first just wanted to ask you your thoughts.

LCDR McBrady has a CG buoy tender standing by to place a temporary green buoy in the channel at 35'. According to the information from the pilot the temporary buoy will need to be near the middle of the channel. Not a pleasant thought if you're a pilot. The tender doesn't have sophisticated sounders so they're hoping to get a good contour plot from the ACOE on where to place the temporary buoy (@ 35'). Another issue is the fact that the tender goes in for extended maintenance starting Aug 6th and won't be available after that. This is pretty much FYI for now. Hopefully the ACOE will come through.

Best Regards,
Matt

Subject:
FW: SHOALING AT THE POINT OF SANDY HOOK
From:
"McBrady, Mike LCDR" <Mike.T.McBrady@uscg.mil>
Date:
Tue, 31 Jul 2007 12:29:46 -0400
To:
Thomas.Creamer@nan02.usace.army.mil, "Tavolaro, John FNAN02"
<John.F.Tavolaro@nan02.usace.army.mil>
CC:
"Sandy Hook Pilots, Olthuis" <Olthuis@SANDYHOOKPILOTS.COM>, matt.wingate@noaa.gov,
DWheeler@SANDYHOOKPILOTS.COM, RJS@SANDYHOOKPILOTS.COM, "Florentino, Amy LT"
<Amy.E.Florentino@uscg.mil>, "Wright, Joseph BMCS" <Joseph.S.Wright@uscg.mil>

Tom/John,

Based on the info provided by Jack below, it seems that the shoaling in Sandy Hook Channel may be significantly different than observed by NOAA about 4 weeks ago, and advertised by them and us in the attached advisory notice.

Given the amount of traffic and type (tank vessels, ammo ships, etc.) can we get another CDR and/or some maintenance dredging in Sandy Hook Channel?

The USACE CDR based on Oct '06 soundings showed left outside and inside quarter controlling depths of 17.2 and 37.7 feet, respectively.

While that's not necessarily inconsistent with NOAA's DTON report, if only half the available channel width is at project depth or better, the USCG would recommend dredging and position additional AtoN temporarily to mark the hazard.

regards,

LCDR Mike McBrady
Sector New York
Waterways Management
work: 718 354 2353
cell: 347 682 0518
fax: 718 354 4190
mike.t.mcbrady@uscg.mil

-----Original Message-----

From: Olthuis@sandyhookpilots.com [mailto:Olthuis@sandyhookpilots.com]
Sent: Tuesday, July 31, 2007 11:53 AM
To: John Tavolaro
Cc: McBrady, Mike LCDR; Matt Wingate; Dennis Wheeler; Richard Schoenlank

[Fwd [Fwd Re Sandy Hook Shoal -Vessel Mount Adamello]].eml.txt
Subject: SHOALING AT THE POINT OF SANDY HOOK

John,

I just hung up the phone with one of our senior pilots that took a tanker out the south way over the weekend. The ship was drawing 34 feet and it was essentially high water when he was passing the point of the hook so he should have expected about 2 meters under the keel. When he passed the point of the hook outbound he purposely remained about 100 feet left of center channel which should have been well off the reported shoaling. He was surprised to see only a meter under his keel. He also reported the ship was sensing the bottom a little with sluggish steering, loss of speed and some rumbling. I checked the 3 days of water level history on PORTS and since the 28th there's been a little more water in the port than predicted so water levels were at or a little above predicted. I would like to strongly urge the Corps to get a survey asset out there immediately so we know exactly what we're dealing with.

Depending on what the survey shows we may request the Coast Guard mark the extent of good water with a buoy until such time as the Corps can either contract out for maintenance or else possibly get the Sandmaster to mine sand there.

Please let me know what's happening with this.

Thanks,

Jack

J. H. "Jack" Olthuis
Managing Director
Sandy Hook Pilots Equipment and Services Corp.
Training, Waterways Management and Navigation Technology for the Sandy Hook
Pilots
201 Edgewater Street
Staten Island, NY 10305
718-448-3900 Ext 214 (office)
609-425-7522 (mobile)
718-447-1582 (fax)
jolthuis@sandyhookpilots.com

Matthew Wingate, LT, NOAA <matt.wingate@noaa.gov>
Navigation Manager, Northeast Region
Office of Coast Survey
NMFS Narragansett Laboratory
[Fwd: Re: Sandy Hook Shoal -Vessel Mount Adamello]

Content-Type:
message/rfc822
Content-Encoding:
7bit

Re: Sandy Hook Shoal -Vessel Mount Adamello.eml

Content-Type:
message/rfc822
Content-Encoding:
7bit

[Fwd [Fwd Re Sandy Hook Shoal -Vessel Mount Adame llo]].eml.txt
[Fwd: FW: SHOALING AT THE POINT OF SANDY HOOK]

Content-Type:
message/rfc822
Content-Encoding:
7bit

FW: SHOALING AT THE POINT OF SANDY HOOK.eml

Content-Type:
message/rfc822
Content-Encoding:
7bit

UAN_Sandyhook_Shoal.pdf

Content-Description:
UAN_Sandyhook_Shoal.pdf
Content-Type:
application/octet-stream
Content-Encoding:
base64

Subject: FW: Dredge Dodge Island back in the area
From: "Kucera, Mark J NAN02" <Mark.J.Kucera@nan02.usace.army.mil>
Date: Mon, 13 Aug 2007 08:36:45 -0400
To: Christiaan VanWestendorp <Christiaan.VanWestendorp@noaa.gov>

Chris,

The first dredge for Ambrose is back - The Dodge Island is working the outbound southern half of Ambrose - from around buoy Green 3 to Green 1.

Dredge Liberty Island is due back around the end of the month. She will be working the northern half of the outbound channel - from about G 21 to G 13.

We also hope the contractor is removing the obstruction(s?) on the north end of Ambrose - AWOIS Items 11500 and 744.

Thanks.

Mark Kucera
201 433-9228/32

-----Original Message-----

From: Kucera, Mark J NAN02
Sent: Friday, August 10, 2007 6:57 PM
To: Jalowski, Paul S NAN02; DiDato, Salvatore J NAN02; Wilson, Doug D NAN02; Hawkins, Harold J NAN02; 'Costanzo, Thomas'; McBrady, Mike LCDR; J0lthuis@sandyhookpilots.com
Cc: 'DJJohanson@gldd.com'; 'SRMorrison@gldd.com'
Subject: Dredge Dodge Island back in the area

The Great Lakes dredge is back to continue Ambrose dredging. She is ready but the sea conditions are too rough to begin dredging. She is currently anchored in Sandy Hook Bay waiting out the weather.

When she starts dredging - it will be in Area 1. That's the extreme south end of the outbound half of the channel.

Thanks

M. Kucera
W: 201 433-9228/32
C: 917 816-3342

Correspondence From Thomas Jefferson
Joe Branin
Belford Seafood Co-Op
Highland New Jersey
732 787 6509

A Mr Joe Branin was called on Feb 8 2008 to find out about the Fish Traps . The Pilings and traps have been in the Sandy Hook Bay for some time and are owned by varios commercial fisherman. They are supposed to be seasonal and taken down in winter. They are lit and have reflecting tape on them. The piles that are there seem rather large and it may be that the stakes in between are only removed. New Jersey Marine Fisheries maintains a station log and licensing for the traps. There are currently 6 -7 traps in the vicinity

New Jersey State Marine Fishery
609 292 2083
Called NJ marine Fishery and they are considered a stake.

Further information is being sought by marine fisheries. Attn Barbera
New Jersey State Marine Fishery
Buraue of marine Fishery

Peter Himchack
NJ Marine Fisheries Acting Chief
501 East State Street, 3rd Floor
Trenton NY
609 292 3093
Feb 15th 20-07 Received Fax of the Fish Trap Regulations
Flashing Amber Light on West pole and East Pole

New Jersey Division of Fish and Wildlife
Marine Fisheries Administration
Rancocas Creek Research Station
PO Box 418, Route 9
Port Republic, NJ 08241
Visit our Website: www.njfishandwildlife.com

Teletypewriter Data Transmittal Sheet

Document sent to: Peter Hewitt

Sending Address: 757-441-6495

Date: 2/15/08 Number of pages including cover: 3

Contact person to confirm receipt of document, if necessary:

Name: Peter Hinchak Telephone No: 609-748-2020
FAX: 609-748-2032

Office: Rancocas Creek Research Station

COMMENTS:

New Jersey regulation on setting
pound nets enclosed.

See: 37 N.J.R. 742(a), 37 N.J.R. 4408(a).

In (a), added common name "Striped Bass" and scientific name *Morone saxatilis*; in (c), added species "Striped Bass" and open season information "refer to N.J.S.A. 23:5-45.1"; in (f)3vii, increased number of days suspension to 60 for first offense and 120 for second offense; added (f)3viii; recodified former (f)3viii as (f)3ix.

Administrative change.

See: 38 N.J.R. 1731(a).

Administrative correction.

See: 38 N.J.R. 2797(b).

Administrative change.

See: 39 N.J.R. 1479(b).

Amended by R.2008 c.15, effective January 7, 2008.

See: 39 N.J.R. 143(a), 40 N.J.R. 126(a).

In the tables in (a) and (c), inserted the entries for "Dolphin" and "Hybrid striped bass"; in the table in (b), inserted the entry for "Dolphin"; in the introductory paragraph of (e), inserted "(e)2 and"; added (e)2; in the introductory paragraph of (f)3v, inserted "fish of any species less than the minimum size limit specified in (c) above shall be filleted and no"; and in the table in (f)3v, inserted the entries for "Hybrid striped bass" and "Striped bass"; in (g), substituted "(d) or (e)" for "(d), (e) or (f)"; in (p), inserted "or to maintain consistency with any Mid-Atlantic Fishery Management Council plan adopted by the National Marine Fisheries Service"; and in (q), inserted the second and third sentences.

Administrative change.

See: 40 N.J.R. 150(c).

7:25-18.2 Pound nets

(a) The following words and terms shall have the following meanings unless the context clearly indicates otherwise.

"Department" means the New Jersey Department of Environmental Protection.

"Heart" means an upright fence of netting forming a heart-shaped (round or square) compartment located between the leader and the pocket. It is designed to cause fish to circle in front of and eventually enter the pocket of a pound net.

"Leader" means an upright fence of netting that acts as a barrier to fish and guides them toward a trap; the netting is made of heavy twine, not designed to catch fish by the gills.

"Navigable channel" means a channel marked with navigational markers including poles, piling or buoys, by the Coast Guard or the State.

"Pocket" means an upright fence of netting forming the final compartment of a pound net in which trapped fish accumulate.

"Pound net" means a large fish trap, consisting of a leader, pocket and one or more hearts, held in place with poles, the netting of which reaches from the bottom to above the surface of the water.

"Staked or anchored gill net" means an upright fence of monofilament or nylon netting, held in place at each end by stakes or anchors, that catches fish by snagging their gill covers as they try to pass through the mesh of the net.

"Submarine pound net" means a pound net that is totally submerged beneath the water and held in place by anchors.

(b) General requirements for all pound net users are as follows:

1. No person may install, operate or maintain a pound net in the marine waters of the State without having first obtained a license from the Department.

2. The Department may establish limits on the number of licenses to be issued for pound nets in Raritan Bay and Sandy Hook Bay and in the Atlantic Ocean within three nautical miles of the coastline.

3. Licenses must be renewed annually.

4. Holders of pound net licenses from the previous year shall have first priority in obtaining a new license, provided they apply before March 1 of the current year.

5. Any person operating any fish pound net in the marine waters of New Jersey, must, at the time of emptying the net, return to the waters wherein the net is located all species less than the minimum size limits specified pursuant to N.J.A.C. 7:25-18.1.

6. No person may, by boat, anchor, dredge or otherwise, willfully and without reasonable cause, interfere with, break, damage or destroy any fish net or associated equipment being lawfully used by a license holder.

7. The Department may require any licensee to submit a money surety bond to insure removal of pound net poles and apparatus as required by these rules.

8. Violation of the rules in this section will subject the violator to money penalties, loss of license and/or injunctive relief under N.J.S.A. 23:2B-14.

(c) Specific requirements for pound net users in Raritan, Sandy Hook and Delaware Bays are as follows:

1. Any person applying for a pound net license must indicate the specific proposed site for the net, as designated by a chart developed by the Department. Sites which have not previously been located on the approved chart must be approved by the Department prior to issuance of a license.

2. New pound net sites must be at least 3,000 feet from a previously located pound net site, when measured parallel to the shoreline, and must be at least 1,000 feet from any navigable channel.

3. Any pound net license holder has priority in retaining a pound net site previously licensed by him or her, provided that he or she has actively and lawfully fished that site during the previous year and has submitted a license application prior to March 1 of the current year. After March 1, any citizen may apply for any available site on a first-come basis.

4. No staked or anchored shad net may be placed within 3,000 feet of an operating pound net. However, shad nets may be set on licensed pound net sites by the license holder or on unoccupied, approved pound net sites, pro-

vided the shad nets are set end-to-end with and in line with any existing pound nets.

5. Pound nets must be placed end-to-end so as to form a straight line, perpendicular to the shoreline.

6. The maximum allowable length of a pound net, including leader and hearts, is 750 feet.

7. A minimum distance of 50 feet must be maintained between any two pound nets, shad nets or combination thereof, when measured perpendicular to the shoreline.

8. A pound net license holder must maintain a nameplate, on the offshore pole of the net not less than six inches square, on which shall be legibly marked the identification number of the pound, as assigned by the Department.

9. A flashing, amber light must be displayed between sunset and sunrise on each of the two end poles of a pound net or a continuous row of pound nets. These lights must be placed at least 10 feet above the mean high water level and must be of sufficient brightness to be visible for at least three miles in all directions (360 degrees) at such times and under such weather conditions as would allow visibility of 10 miles.

10. Within 30 days of the termination of fishing activities for that year, all poles and stakes must be removed by the pound net license holder.

11. The pound net license holder will be responsible for the cost of pole and/or stake removal where the Department accepts responsibility for such removal, due to the licensee's failure to comply with 10 above.

(d) Specific requirements for pound net users in the Atlantic Ocean are as follows:

1. When submitting a request for an ocean or submarine pound net license, the applicant must specify the specific proposed site-location for placement of each net. Upon site approval, the Department may issue the license. (Note: Permission for location of ocean pound nets is also required from the United States Army Corps of Engineers.)

2. No portion of a pound net may be set within 1,500 feet or greater than 7,000 feet from the mean low water line on the ocean shoreline.

3. No row of pound nets may be erected or operated within one and one-half miles of any other row of pound nets, when measured parallel with the coastline.

4. No more than two pound nets may be joined together.

5. A minimum distance of 1,000 feet, when measured perpendicular to the coastline, must be maintained between individual or paired pound nets set in a row.

6. A row of ocean or submarine pound nets must form a straight line with the nets placed end-to-end.

7. The maximum allowable length of an ocean or submarine pound net, including leader and pocket, is 1,100 feet.

8. The minimum mesh size for ocean or submarine pound nets is two inches, stretched.

9. Ocean pound nets shall be maintained in compliance with the following additional requirements:

i. White reflectors must be placed around the top of each pole so as to reflect in all directions;

ii. Flashing amber lights must be displayed on the inshore and offshore poles of nets or rows of nets, between sunset and sunrise; these lights must be placed at least 10 feet above the mean high water level and must be of sufficient brightness to be visible for at least three miles in all directions (360 degrees) at such times and under such weather conditions as would allow visibility of 10 miles.

10. Submarine pound nets shall be maintained in compliance with the following additional requirements:

i. At least eight fluorescent orange floats, at least 12 inches in diameter, shall be maintained along the length of each net, including the inshore and offshore ends.

ii. The pound net license holder shall maintain a nameplate, not less than 12 inches square, on which shall be legibly marked the identification number of the pound, as assigned by the Department.

11. The license holder must completely remove all pound net poles and stakes, within ten months of the termination of fishing activities.

12. The pound net license holder will be responsible for the cost of pole and/or stake removal, where the Department accepts responsibility for such removal, due to the licensee's failure to comply with 11 above.

Amended by R.1984 d.439, effective October 1, 1984.

See: 16 N.J.R. 1866(a), 16 N.J.R. 2543(b).

Amended by R.1991 d.132, effective March 18, 1991.

See: 23 N.J.R. 37(a), 23 N.J.R. 848(b).

Lighting requirements affecting pound nets increased on (c)9 and (d)9ii.

Amended by R.1994 d.248, effective May 16, 1994.

See: 26 N.J.R. 291(a), 26 N.J.R. 2021(b).

7:25-18.3 Net identification tags

(a) Any identification tag furnished by the Division for a licensed net shall be displayed in a prominent and easily accessible place on such net.

(b) No identification tag furnished by the division may be counterfeited or transferred.



Fish Traps Looking East
toward Sandy Hook

E
N --- S
W

**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to ACCOMPANY
SURVEY H11709 (2007)**

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

B. DATA ACQUISITION AND PROCESSING

B.1 DATA PROCESSING

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

HSTP PYDRO version 8.7 r2537
CARIS HIPS/SIPS version 6.1 SP2 HF 1-4
CARIS Bathy Manager version 2.1 SP1
CARIS HOM version 3.3 SP3 HF 1-8
CARIS S57 Composer version 2.0 HF 1-2

B.2. QUALITY CONTROL

B.2.1. H-Cell

The AHB source depth grid for the survey's nautical chart update product entailed the field's original 1m grids, combined at 2 meter resolution, then using them to create a product surface grid with a resolution of 5m. The survey scale selected soundings were extracted from the 5m product surface. The selected sounding set is approximately 10 to 20 times the number of charted depths. The chart scale selected soundings are a subset of the survey scale selected soundings. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

18-ft and 30-ft curves were hand-digitized to visually aid in sounding selection only and are not included with the H-Cell.

The SAHOB files included sounding selections (SOUNDG), features (SBDARE), Meta objects (M_COVR, M_QUAL, M_CSCL), and cartographic Blue Notes. The individual SAHOB files were inserted into one BASE Manager feature layer and exported to S57 format in order to create the H-Cell deliverable.

The completed H-Cell was exported as a Base Cell File (ENC.000) in S-57 format with all values in metric units. The metric equivalent ENC.000 file was then converted to NOAA chart units (ENC_CU.000) with all values measured in feet following NOAA sounding rounding rules.

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

The H11709 CARIS H-Cell final deliverables include the following products:

US511709_CS.000	1: <u>15</u> ,000 Scale	H11709 H-Cell with Chart Scale Selected Soundings and Bluenotes
US511709_SS.000	1: <u>10</u> ,000 Scale	H11709 Selected Soundings (Survey Scale)

B.2.4. Junctions

Survey H11709 (2007) junctions with surveys H11601 (2006) to the north and H11916 (2008) to the east. Present survey soundings compare within 1 to 2 feet with junctional surveys. Present survey depths are in harmony with the charted hydrography to the east and west. See Descriptive Report section B 2.4.

C. VERTICAL AND HORIZONTAL CONTROL

Sounding datum is Mean Lower Low Water (MLLW). Vertical datum is Mean High Water (MHW). See Descriptive Report C1.2 for discussion of water levels and TCARI.

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 18. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

12401 (9th Edition, JUL/07)

Corrected through NM 7/14/2007
Corrected through LNM 7/03/2007
Scale 1:15,000

12402 (10th Edition, MAY/06)

Corrected through NM 5/06/2006
Corrected through LNM 5/02/2006
Scale 1:15,000

12327 (101st Edition, APR/08)

Corrected through NM 4/26/2008

Corrected through LNM 4/15/2008
Scale 1:40,000

12326 (50th Edition, MAY/06)
Corrected through NM 5/13/2006
Corrected through LNM 5/09/2006
Scale 1:80,000

ENC Comparison

US5NY18M

New York Lower Bay – Southern Part
Edition 17
Application Date 2008-10-27
Issue Date 2008-10-27
Chart 12401

US5NY19M

New York Lower Bay – Northern Part
Edition 11
Application Date 2008-11-14
Issue Date 2008-11-14
Chart 12402

US5NY1BM

New York Harbor
Edition 17
Application Date 2008-11-18
Issue Date 2008-11-18
Chart 12327

D.1.1 Hydrography

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section “D” and Appendix 1&2 of the Descriptive Report. The following exceptions are noted:

a. The field unit did not obtain bottom samples as stated in the Letter of Instructions, therefore all charted sea bed characteristic (SBDARE) objects were retained as charted. The spatial and feature attributes of the SBDARE point features were carried forward from the ENC US5NY18M.

b. Many of the rocks or obstructions in the feature report correspond with current charted soundings. On current charts these are not depicted as rocks or obstructions, only as soundings.

c. For more discussion on Chart Comparison and Results please see Descriptive Report D.

D.6. MISCELLANEOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. See Section D.1. of this report for a list of the Raster Charts and Electronic Navigation Charts (ENC) used for compiling the present survey:

D.8. ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell BASE Cell File or the Blue Notes should be retained as charted. Refer to the Descriptive Report for further recommendations by the hydrographer.

APPROVAL SHEET
H11709

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, representation of critical depths, cartographic symbolization, and verification or disproof of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with National Ocean Service and Office of Coast Survey requirements except where noted in the Descriptive Report and the Evaluation Report.

All final products have undergone a comprehensive reviews per the Hydrographic surveys Division Office Processing Manual and are verified to be accurate and complete except where noted.

Wesley Kitt
Physical Scientist
Atlantic Hydrographic Branch

I have reviewed the H-Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet National Ocean Service requirements and standards for products in support of nautical charting except where noted.

Approved: _____
Shepard Smith
Commander, NOAA
Chief, Atlantic Hydrographic Branch