H11361

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: **H11361**

LOCALITY

State: New York & Connecticut

General Locality: Long Island Sound

Sub-locality: Sixmile Reef

2004

CHIEF OF PARTY
CDR Emily B. Christman, NOAA

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 (11-72)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
	HYDROGRAPHIC TITLE SHEET	**H11361**

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

State:	**New York & Connecticut**		
General Locality:	**Long Island Sound**		
Sub-Locality:	**Sixmile Reef**		
Scale:	**1:10,000**	Date of Survey:	**10/11/04 to 11/15/04**
Instructions Dated:	**08/06/04**	Project Number:	**OPR-B370-TJ-04**
Vessel:	**NOAA Ship THOMAS JEFFERSON, S-222**		
Chief of Party:	**CDR Emily B. Christman, NOAA**		
Surveyed by:	**NOAA Ship THOMAS JEFFERSON Personnel**		
Soundings by:	**Reson SeaBat 8101 multibeam echosounder**		
	Reson SeaBat 8125 multibeam echosounder		
	Kongsberg Simrad EM1002 multibeam echosounder		
Graphic record scaled by:	**N/A**		
Graphic record checked by:	**N/A**		
Protracted by:	**N/A**	Automated Plot:	**N/A**
Verification by:	**Atlantic Hydrographic Branch Personnel**		
Soundings in:	**Meters at MLLW** ***Charted depths in feet at MLLW***		

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

1) All Times are UTC.
2) This is a Navigable Area Hydrographic Survey.
3) Projection is NAD-83 UTM Zone 18.

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Data filed with original field records.

DESCRIPTIVE REPORT

to accompany
HYDROGRAPHIC SURVEY H11361

Scale of Survey: 1:10,000
Year of Survey: 2004
NOAA Ship THOMAS JEFFERSON
CDR Emily B. Christman, Commanding

A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project OPR-B370-TJ-04, Eastern Long Island Sound, New York and Connecticut. The original instructions* are dated August 6, 2004. ***Concur.***

This Descriptive Report pertains to sheet "U" of project OPR-B370-TJ-04, which includes Sixmile Reef, New York and Connecticut. The assigned registry number for this sheet is H11361, as prescribed in the Letter Instructions*.

The purpose of FY 2004 survey operations in the Eastern Long Island Sound is two-fold: (1) to provide contemporary surveys to update National Ocean Service (NOS) nautical charts thus reducing the critical survey backlog in the Long Island Sound region, and (2) to provide a modern survey coverage of the major traffic routes and approaches to the Tosco Corporation Riverhead Terminal located one nautical mile north of Jacob's Point in the southern Long Island Sound. Modern survey coverage in this area will ensure safe navigation for deep draft petroleum tankers bound for the Tosco Corporation Riverhead Terminal.

**** Letter Instructions filed at the Atlantic Hydrographic Branch (AHB).***

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

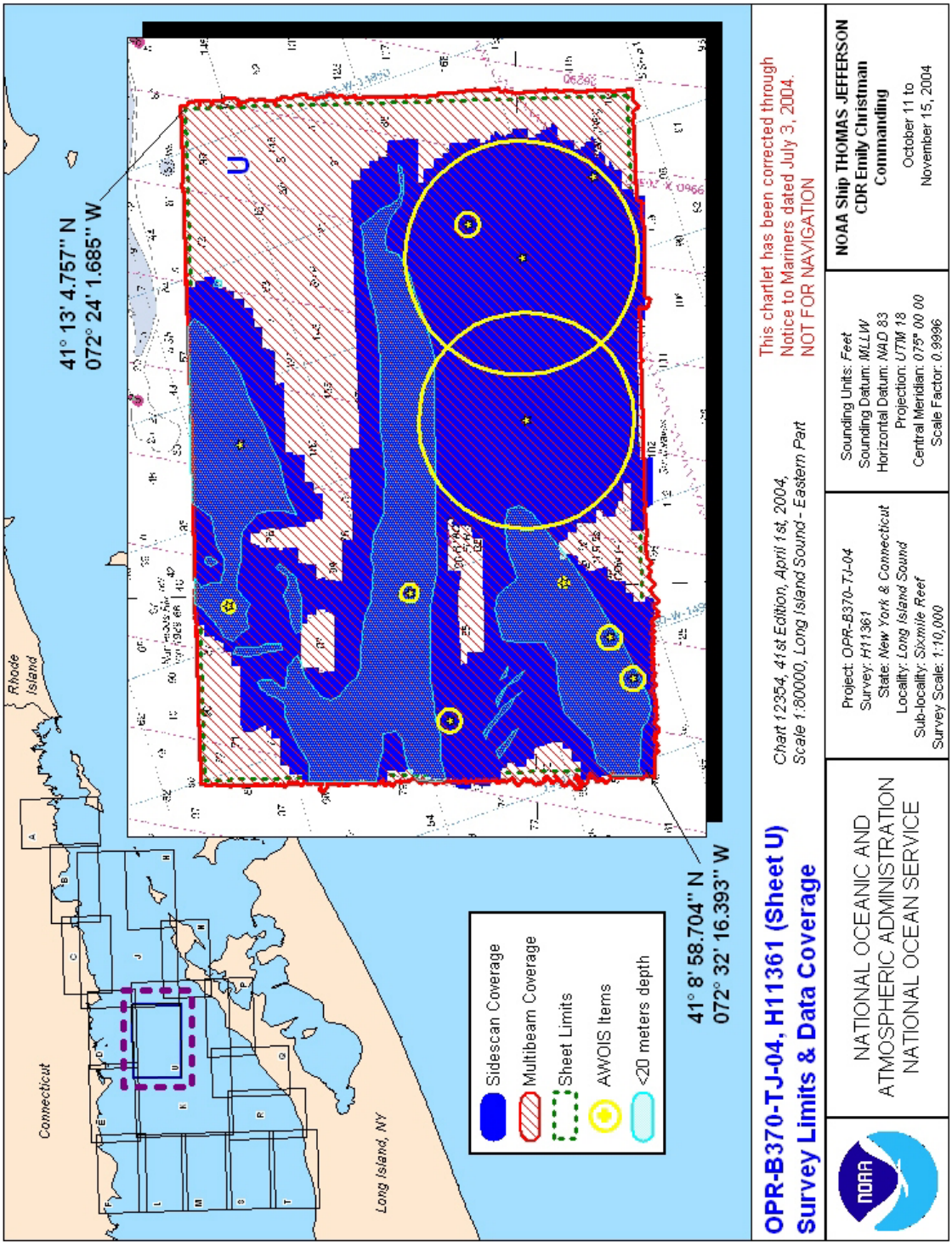

Figure 1: Complete Survey Limits & Data Coverage

B. DATA ACQUISITION AND PROCESSING ***See also Evaluation Report.***

EQUIPMENT

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

NOAA Ship THOMAS JEFFERSON acquired multibeam echosounder (MBES) data with a SIMRAD 1002 and side scan sonar (SSS) data with a towed KLEIN 5500. Launch 1014 acquired MBES data with a RESON 8125. Launch 1005 acquired MBES data with a RESON 8101 and SSS data with a KLEIN 5500.

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

Refer to the Data Acquisition and Processing Report (DAPR)* for detailed equipment and vessel configuration information.
**** Data filed with original field records.***

QUALITY CONTROL

Side Scan Sonar Quality Control

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. A good check consisted of distinguishing contacts or sand waves across the entire range of the side scan trace. The SSS data were slant range corrected using CARIS's additional "Use Height Source" option. No unusual problems were encountered.

As per letter instructions, areas with 20 meters or less water depth were examined with 200% bottom coverage (the combination of 100% MBES and 100% SSS option), and areas with water depths greater than 20 meters were examined with 100% coverage (the 100% MBES option). ***Concur.***

Shallow Water Multibeam Quality Control

There were no faults with the SWMB system which affected data integrity. Refer to this project's DAPR* for detailed discussion of SWMB system calibrations, data acquisition, and data processing. ***Concur.***
**** Data filed with original field records.***

BASE Surfaces

CARIS HIPS BASE (*B*athymetry *A*ssociated with *S*tatistical *E*rror) surfaces, which incorporate each sounding's total propagated error (TPE), were created according to depth intervals. Each finalized BASE surface contains seven layers: depth, uncertainty (using the "greater of the two" option), density, mean, standard deviation, shoal, and deep.

Depths of 0-15 meters are contained in a series of seven finalized 0.5-meter resolution BASE surfaces (contained within fieldsheets of the same name):

H11361_p5m_A_Final
H11361_p5m_B_Final
H11361_p5m_C_Final
H11361_p5m_D_Final
H11361_p5m_E_Final
H11361_p5m_F_Final
H11361_p5m_G_Final

Depths of 14-30 meters are contained in a series of four finalized 1-meter resolution surfaces (contained within fieldsheets of the same name):

H11361_1m_A_Final
H11361_1m_B_Final
H11361_1m_C_Final
H11361_1m_D_Final

Depths of 29 meters and deeper (the deepest depth is 63.254 meters) are contained in a single finalized 2-meter resolution surface (contained within a fieldsheet of the same name):

H11361_2m_Final

All 12 BASE surfaces were "combined" into a single 2-meter BASE surface (contained within the fieldsheet name *B370_TJ_04_H11361U*) that is the source of the soundings in this survey's PSS weighted grid bathy layer, which was excessed using the character over-plot method with an over-plot removal character size of 3.0 and an over-plot removal scale of 1:10,000. ***Concur.***

Refer to this project's DAPR***** for detailed discussion of MBES system calibrations, data acquisition, and data processing. ***Concur.***

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

Crosslines

NOAA Ship THOMAS JEFFERSON, Launch 1005, and Launch 1014 acquired 48.89 nautical miles of crosslines (about 5.4% of the 900.85 nm of mainscheme MBES data). No traditional crossline comparison was performed on the multibeam data because quality control procedures have been incorporated into the depth and uncertainty models produced by CARIS 5.4. The crosslines have excellent agreement with mainscheme data. ***Concur.***

Junctions

Hydrographic survey H11361 junctions with hydrographic survey H11252, which was run concurrently. H11361 overlaps H11252's eastern edge. There is excellent agreement between soundings from both surveys. ***Concur.***

CORRECTIONS TO ECHO SOUNDING

All methods or instruments used were as described in the project DAPR***.** The positions of all 74 sound velocity casts are loaded into the survey's PSS as individual chart GP features, with the depth versus sound velocity information contained in the remarks. **** Data filed with original field records.***

C. VERTICAL AND HORIZONTAL CONTROL

VERTICAL CONTROL

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

The preliminary zones and correctors used for this survey are as follows:

Table 1: Preliminary Tide Zones & Correctors

ZONE NAME	CORRECTOR (min)	RATIO	REFERENCE
LIS73	12	1.68	846-1490

LISI72	11	1.68	846-1490
LIS62	-4	0.80	846-5705
LIS69	-5	0.73	846-5705
LIS76	12	1.60	846-1490
LIS75	10	1.60	846-1490
LIS66	-5	0.76	846-5705

A Request for Approved Tides letter was sent to N/OPS1 on 16 November 2004 (Appendix IV) ***. Verified water levels from the N/OPS1 CO-OPS website were downloaded on November 23, 2004, and applied to all sounding data. Refer to the July-November 2004 DAPR* for a summary of the methods used to determine, evaluate, and apply tide corrections to sounding data. ***Final water level corrections were applied during office processing. See also Evaluation Report.***
**** Data filed with the original field records.***

HORIZONTAL CONTROL

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

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

Horizontal dilution of precision (HDOP) was monitored daily on the ship and both launches. The observed HDOP values did not exceed 4.00.
See also Evaluation Report.

D. RESULTS AND RECOMMENDATIONS

CHART COMPARISON

There are four charts affected by this survey:

Table 2: Affected Charts

Number	Version	Edition Date	Scale
12354	41	04/01/2004	1:80,000
12358	19	09/01/2002	1:40,000
12372_11	33	08/01/2004	1:40,000
12374	13	10/28/2000	1:20,000

General Agreement with Charted Soundings

The survey soundings vary substantially from the charted depths. Overall, the survey is deeper than the chart, with a maximum difference of approximately 54 feet; however, there are areas in which the survey is shoaler than the chart by up to approximately 14 feet. ***Concur.***

Dangers to Navigation (DtoN's)

There are no DtoN's for this survey. ***Concur.***

AWOIS Items

The item investigation reports describing this survey's 10 full investigation AWOIS items and one information-only AWOIS item are contained in Appendix 1-b. ***Concur.***

Significant Uncharted Features

The item investigation reports describing eight significant uncharted features are contained in Appendix I-c. ***Concur.***

Non-AWOIS Charted Features & Notes

The item investigation reports describing two non-AWOIS charted features are contained in Appendix I-d. ***Concur.***

ADDITIONAL RESULTS

Prior Surveys

This survey overlaps four prior NOAA surveys: ***Concur.***

Table 3: Prior NOAA surveys

Survey	Year
H00040	1838
H01591	1883

H09089	1969
H09181	1971

Aids to Navigation and Other Detached Positions

All identified floating aids to navigation within the survey area are consistent with the chart and serve their intended purpose. The positions of the lighted floating aids to navigation are consistent with the positions published in the *Light List*. ***Concur.***

Bridges and Overhead Cables

There are no bridges or overhead cables in the survey area. ***Concur.***

Ferry Routes

There are no ferry routes in the survey area. ***Concur.***

Submarine Cables and Pipelines

There is one charted ~~pipeline~~ ***submarine cable*** within the survey limits; however, no ~~pipeline~~ ***submarine cable*** was positioned or observed in either the MBES or SSS data. The hydrographer recommends retaining ~~pipeline~~ ***submarine cable*** as charted. ***Concur.***

Shoreline

There is no shoreline in the survey area. ***Concur.***

E. APPROVAL SHEET

OPR-B370-TJ-04
Eastern Long Island Sound
New York & Connecticut

Survey Registry No. H11361

Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All bathymetry models, this Descriptive Report, and all accompanying records and data are approved.

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

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

- SEPARATES TO ACCOMPANY PROJECT OPR-B370-TJ-04, SHEET U, H11361
- OPR-B370-TJ-04 HORIZONTAL AND VERTICAL CONTROL REPORT (*submitted 12/09/04)*
- JULY-NOVEMBER 2004 DATA ACQUISITION AND PROCESSING REPORT (*submitted 12/15/04)*

Respectfully Submitted:

Nicholas A. Forfinski
Hydrographer

Approved and Forwarded:

LT(jg) Marc Moser, NOAA
Field Operations Officer

CDR Emily B. Christman, NOAA
Commanding Officer

APPENDIX I: ITEM INVESTIGATION REPORTS

Following are item investigation reports detailing four groups of features:

a) Dangers to Navigation (DtoN's)
~~b)~~ AWOIS Items
~~c)~~ Significant Uncharted Features
~~d)~~ Non-AWOIS Charted Features & Notes

Appendix I-a: **DANGERS TO NAVIGATION**

H11361 has no DtoN's.

Registry Number: H11361

State: New York Connecticut

Locality: Long Island Sound

Sub-locality: Sixmile Reef

Project Number: OPR-B370-TJ-04

Survey Dates: 10/11/2004 - 11/15/2004

Charts Affected

Number	Version	Date	Scale
12374	13th Ed.	10/28/2000	1:20000
12358	19th Ed.	09/01/2002	1:40000
12372	32nd Ed.	10/01/2003	1:40000
12354	41st Ed.	04/01/2004	1:80000
12300	43rd Ed.	03/01/2003	1:400000
13006	31st Ed.	06/01/2003	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	47th Ed.	06/01/2003	1:1200000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Bottom Sample	21.03 m	41.21755509° N	072.49414622° W	---
1.2	Bottom Sample	12.93 m	41.21092288° N	072.46394464° W	---
1.3	Bottom Sample	13.68 m	41.18592668° N	072.49716073° W	---
2.1	Wreck	24.16 m	41.21653649° N	072.51300364° W	---
2.2	Rock	14.39 m	41.21773288° N	072.49850889° W	---
2.3	Rock	21.14 m	41.21565683° N	072.43474849° W	---
2.4	Rock	20.81 m	41.21179572° N	072.43823855° W	---
2.5	Bottom Sample	36.42 m	41.19923964° N	072.46286267° W	---
2.6	Bottom Sample	9.21 m	41.21331240° N	072.50477722° W	---
2.7	Wreck	51.84 m	41.16653005° N	072.41787935° W	---
2.8	Wreck	41.63 m	41.15645482° N	072.42496466° W	---
3.1	Shoal	32.82 m	41.16676158° N	072.46618972° W	1814

3.2	Wreck	18.93 m	41.17989412° N	072.52716022° W	1818
3.3	Rock	6.73 m	41.21349987° N	072.50085791° W	11917
3.4	Shoal	10.41 m	41.15486520° N	072.51101507° W	11919
3.5	Shoal	9.08 m	41.21118672° N	072.46959412° W	11916
3.6	Wreck	55.23 m	41.16756269° N	072.41836723° W	1813
3.7	Wreck	37.25 m	41.15535835° N	072.41683084° W	2729
3.8	Wreck	37.42 m	41.17472203° N	072.42545884° W	2730
3.9	Shoal	12.46 m	41.15148951° N	072.51950310° W	1806
3.10	Shoal	13.02 m	41.16175130° N	072.49954538° W	1809
3.11	Shoal	10.23 m	41.18560851° N	072.50068321° W	11918

1 - Charted Features

1.1) Profile/Beam - 1079/230 from h11361 / 1014_mb / 2004-302 / 604_1955

Survey Summary

Survey Position: 41.21755509° N, 072.49414622° W

Least Depth: 21.03 m

Timestamp: 2004-302.19:59:01.255 (10/28/2004)

Survey Line: h11361 / 1014_mb / 2004-302 / 604_1955

Profile/Beam: 1079/230

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-302/604_1955	1079/230	0.00	000.0	Primary
ChartGPs - ENC US4NY1GM	Danger 2	3.07	137.0	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

69ft (12374_1, 12372_11, 12354_1)

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

21m (5161_1)

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: INFORM - Revise 63 foot sounding on "Rock" to Seabed Area "Rocky"

NATSUR - 9:rock

SORDAT - 20041115

Office Notes

Revise 63 foot sounding on "Rock" to Seabed Area "Rky" at Latitude 41°13'03.270"N, Longitude 072°29'39.001"W. Chart present survey H11361 soundings.

1.2) Profile/Beam - 575/77 from h11361 / 1014_mb / 2004-315 / 290_1613

Survey Summary

Survey Position: 41.21092288° N, 072.46394464° W

Least Depth: 12.93 m

Timestamp: 2004-315.16:15:13.042 (11/10/2004)

Survey Line: h11361 / 1014_mb / 2004-315 / 290_1613

Profile/Beam: 575/77

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature represents a charted "rky". The 100% MBES (RESON 8125) and 100% SSS (KLEIN 5500) data in the area do not indicate a rocky area (only sandwaves).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-315/290_1613	575/77	0.00	000.0	Primary
ChartGPs - ENC US4NY1GM	Seabed 12	2.19	264.6	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends deleting the charted "rky".

Cartographically-Rounded Depth (Affected Charts):

42ft (12374_1, 12372_11, 12354_1)

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

12.9m (5161_1)

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: INFORM - The feature represents a charted "rky". The 100% MBES (RESON 8125) and 100% SSS (KLEIN 5500) data in the area do not indicate a rocky area (only sandwaves).

Office Notes

Concur. Delete "Rky" at approximate Latitude 41°12'39.322"N, Longitude 072°27'50.201"W.
Chart sandwaves at Latitude 41°12'39.324"N, Longitude 072°27'50.220"W.

1.3) Profile/Beam - 1439/40 from h11361 / 1005_mb / 2004-315 / 218_1926

Survey Summary

Survey Position: 41.18592668° N, 072.49716073° W

Least Depth: 13.68 m

Timestamp: 2004-315.19:28:21.824 (11/10/2004)

Survey Line: h11361 / 1005_mb / 2004-315 / 218_1926

Profile/Beam: 1439/40

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature represents a charted "rky". The 100% MBES (RESON 8125) and 100% SSS (KLEIN 5500) data in the area do not indicate a rocky area (only sandwaves).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-315/218_1926	1439/40	0.00	000.0	Primary
ChartGPs - ENC US4NY1GM	Seabed 13	41.70	331.6	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends deleting the charted "rky".

Cartographically-Rounded Depth (Affected Charts):

45ft (12374_1, 12372_11, 12354_1)

7 ½fm (12300_1, 13006_1, 13003_1)

13.7m (5161_1)

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: INFORM - The feature represents a charted "rky". The 100% MBES (RESON 8125) and 100% SSS (KLEIN 5500) data in the area do not indicate a rocky area (only sandwaves).

Office Notes

Concur. Delete "Rky" at Latitude 41°11'09.336"N, Longitude 072°29'49.779"W. Chart present survey H11361 soundings.

2 - New Features

2.1) Profile/Beam - 2558/227 from h11361 / 1014_mb / 2004-299 / 644_2105

Survey Summary

Survey Position: 41.21653649° N, 072.51300364° W

Least Depth: 24.16 m

Timestamp: 2004-299.21:13:52.239 (10/25/2004)

Survey Line: h11361 / 1014_mb / 2004-299 / 644_2105

Profile/Beam: 2558/227

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over an uncharted wreck located with 100% MBES (RESON 8105 and RESON 8125; least depth is from RESOM 8125) and developed with 100% SSS (KLEIN 5500).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-299/644_2105	2558/227	0.00	000.0	Primary
h11361/s222_100/2004-320/101_1713	0001	10.30	244.8	Secondary
h11361/s222_100/2004-320/100_1656	0001	14.04	022.8	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as per digital data.

Cartographically-Rounded Depth (Affected Charts):

79ft (12374_1, 12372_11, 12354_1)

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

24m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: INFORM - The feature is the least depth over an uncharted wreck located with 100% MBES (RESON 8105 and RESON 8125; least depth is from RESOM 8125) and developed with 100% SSS (KLEIN 5500).

TECSOU - 3:found by multi-beam

VALSOU - 24.162 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart non-dangerous sunken wreck, least depth known 79 feet at the present survey position in Latitude 41°12'59.531"N, Longitude 072°30'46.813"W.

2.2) Profile/Beam - 18/45 from h11361 / 1014_mb / 2004-302 / 607_1923

Survey Summary

Survey Position: 41.21773288° N, 072.49850889° W

Least Depth: 14.39 m

Timestamp: 2004-302.19:23:19.773 (10/28/2004)

Survey Line: h11361 / 1014_mb / 2004-302 / 607_1923

Profile/Beam: 18/45

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over a rock located with 100% SSS (KLEIN 5500) and developed with 100% MBES (RESON 8125).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-302/607_1923	18/45	0.00	000.0	Primary
h11361/1014_mb/2004-314/361_1333	350/32	0.47	071.9	Secondary
h11361/1005_100/2004-300/012_1743	0001	4.45	042.4	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as per digital data.

Cartographically-Rounded Depth (Affected Charts):

47ft (12374_1, 12372_11, 12354_1)

7 ¾fm (12300_1, 13006_1, 13003_1)

14.4m (5161_1)

S-57 Data

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

Attributes: INFORM - The feature is the least depth over a rock located with 100% SSS (KLEIN 5500) and developed with 100% MBES (RESON 8125).

TECSOU - 3:found by multi-beam

VALSOU - 14.394 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart dangerous rock, least depth known 47 feet, and text "Rk" at the present survey position in Latitude 41°13'03.838"N, Longitude 072°29'54.632"W.

2.3) Profile/Beam - 2971/92 from h11361 / 1005_mb / 2004-315 / 314_1502

Survey Summary

Survey Position: 41.21565683° N, 072.43474849° W

Least Depth: 21.14 m

Timestamp: 2004-315.15:07:42.849 (11/10/2004)

Survey Line: h11361 / 1005_mb / 2004-315 / 314_1502

Profile/Beam: 2971/92

Charts Affected: 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over a rock located with 100% MBES (EM 1002).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-315/314_1502	2971/92	0.00	000.0	Primary
h11361/1005_100/2004-300/020_1546	0001	11.13	141.0	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as per digital data.

Cartographically-Rounded Depth (Affected Charts):

69ft (12372_11, 12354_1)

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

21m (5161_1)

S-57 Data

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

Attributes: INFORM - The feature is the least depth over a rock located with 100% MBES (EM 1002).

QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

VALSOU - 21.139 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart non-dangerous rock, least depth known 69 feet, and text "Rk" at the present survey position in Latitude 41°12'56.365"N, Longitude 072°26'05.095"W.

2.4) Profile/Beam - 2397/28 from h11361 / 1005_mb / 2004-315 / 318_1340

Survey Summary

Survey Position: 41.21179572° N, 072.43823855° W

Least Depth: 20.81 m

Timestamp: 2004-315.13:46:12.459 (11/10/2004)

Survey Line: h11361 / 1005_mb / 2004-315 / 318_1340

Profile/Beam: 2397/28

Charts Affected: 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over an uncharted rock located with 100% MBES (EM 1002).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-315/318_1340	2397/28	0.00	000.0	Primary
h11361/1005_100/2004-300/066_1444	0001	3.32	107.5	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as per digital data.

Cartographically-Rounded Depth (Affected Charts):

68ft (12372_11, 12354_1)

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

20.8m (5161_1)

S-57 Data

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

Attributes: INFORM - The feature is the least depth over an uncharted rock located with 100% MBES (EM 1002).

QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

VALSOU - 20.807 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart non-dangerous rock, least depth known 68 feet, and text "Rk" at the present survey position in Latitude 41°12'42.465"N, Longitude 072°26'17.659"W.

2.5) Profile/Beam - 1610/50 from h11361 / s222_mb / 2004-285 / 0706_20041011_150854_raw

Survey Summary

Survey Position: 41.19923964° N, 072.46286267° W

Least Depth: 36.42 m

Timestamp: 2004-285.15:16:27.397 (10/11/2004)

Survey Line: h11361 / s222_mb / 2004-285 / 0706_20041011_150854_raw

Profile/Beam: 1610/50

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature represents a rocky area located with 100% MBES (EM 1002) and developed with 100% SSS (KLEIN 5500).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/s222_mb/2004-285/0706_20041011_150854_raw	1610/50	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends charting "rky" at the feature's position.

Cartographically-Rounded Depth (Affected Charts):

119ft (12374_1, 12372_11, 12354_1)

20fm (12300_1, 13006_1, 13003_1)

36m (5161_1)

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: INFORM - The feature represents a rocky area located with 100% MBES (EM 1002) and developed with 100% SSS (KLEIN 5500).

Office Notes

Concur, Chart "Rky" at Latitude 41°11'57.266"N, Longitude 72°27'46.321"W.

2.6) Profile/Beam - 608/147 from h11361 / 1014_mb / 2004-309 / 623_2028

Survey Summary

Survey Position: 41.21331240° N, 072.50477722° W

Least Depth: 9.21 m

Timestamp: 2004-309.20:30:39.606 (11/04/2004)

Survey Line: h11361 / 1014_mb / 2004-309 / 623_2028

Profile/Beam: 608/147

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature represents a rocky area located with 100% MBES (RESON 8125).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-309/623_2028	608/147	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends charting "rky".

Cartographically-Rounded Depth (Affected Charts):

30ft (12374_1, 12372_11, 12354_1)

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

9.2m (5161_1)

S-57 Data

Geo object 1: Seabed area (SBDARE)

Attributes: INFORM - The feature represents a rocky area located with 100% MBES (RESON 8125).

Office Notes

Concur, Chart "Rky" at Latitude 41°12'47.925"N, Longitude 72°30'17.182"W.

2.7) Profile/Beam - 156/37 from h11361 / 1005_mb / 2004-320 / 107_1620

Survey Summary

Survey Position: 41.16653005° N, 072.41787935° W

Least Depth: 51.84 m

Timestamp: 2004-320.16:20:55.111 (11/15/2004)

Survey Line: h11361 / 1005_mb / 2004-320 / 107_1620

Profile/Beam: 156/37

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over what appears to be a wreck located with 100% MBES (EM 1002) and 100% SSS (KLEIN 5500) and developed with 100% MBES (RESON 8101). The apparent wreck is approximately 7.5 meters long and 2-4 meters wide. The feature is within the 2000-meter search radius of AWOIS 1813; however, the current feature does not fit the description of AWOIS 1813. (Two other wrecks located within or very near AWOIS 1813's search radius do closely match the description of AWOIS 1813.)

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-320/107_1620	156/37	0.00	000.0	Primary
h11361/s222_100/2004-293/148_1707	0002	27.27	154.8	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the current feature as per digital data.

Cartographically-Rounded Depth (Affected Charts):

170ft (12358_1, 12354_1)

28fm (12300_1, 13006_1, 13003_1)

52m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 1:non-dangerous wreck

INFORM - The feature is the least depth over what appears to be a wreck located with 100% MBES (EM 1002) and 100% SSS (KLEIN 5500) and developed with 100% MBES (RESON 8101). The apparent wreck is approximately 7.5 meters long and 2-4 meters wide. The feature is within the 2000-meter search radius of AWOIS 1813; however, the current feature does not fit the description of AWOIS 1813. (Two other wrecks located within or very near AWOIS 1813's search radius do closely match the description of AWOIS 1813.)

TECSOU - 3:found by multi-beam

VALSOU - 51.836 m

Office Notes

Concur with clarification. Chart non-dangerous sunken wreck, least depth known 170 feet at the present survey position in Latitude 41°09'59.508"N, Longitude 072°25'04.366"W.

2.8) Profile/Beam - 151/57 from h11361 / 1005_mb / 2004-320 / 109_1637

Survey Summary

Survey Position: 41.15645482° N, 072.42496466° W

Least Depth: 41.63 m

Timestamp: 2004-320.16:38:20.312 (11/15/2004)

Survey Line: h11361 / 1005_mb / 2004-320 / 109_1637

Profile/Beam: 151/57

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the best approximation of the least depth over what appears to be the remains of a wreck located with 100% SSS (KLEIN) and developed with 100% MBES (EM 1002 and RESON 8101). Although the wreck is evident is the SSS data, the wreck has such little height that it does not show up in the MBES data; however, by comparing landmarks and reference points in both the SSS and MBES data, the hydrographer concluded that the current feature's position is the position of the wreck, within approximately 10 meters. The wreck/pile of debris is approximately 29.5 meters long and 7.5-10 meters wide and 0.5-0.6 meters high at the tallest point. The feature is within the 2000-meter search radius of AWOIS 1813; however, the length and width of the current feature does not fit the description of AWOIS 1813.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-320/109_1637	151/57	0.00	000.0	Primary
h11361/s222_100/2004-294/140_1354	0001	23.12	278.3	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the current feature as per digital data.

Cartographically-Rounded Depth (Affected Charts):

136ft (12358_1, 12354_1)

23fm (12300_1, 13006_1, 13003_1)

41m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

INFORM - The feature is the best approximation of the least depth over what appears to be the remains of a wreck located with 100% SSS (KLEIN) and developed with 100% MBES (EM 1002 and RESON 8101). Although the wreck is evident is the SSS data, the wreck has such little height that it does not show up in the MBES data; however, by comparing landmarks and reference points in both the SSS and MBES data, the hydrographer concluded that the current feature's position is the position of the wreck, within approximately 10 meters. The wreck/pile of debris is approximately 29.5 meters long and 7.5-10 meters wide and 0.5-0.6 meters high at the tallest point. The feature is within the 2000-meter search radius of AWOIS 1813; however, the length and width of the current feature does not fit the description of AWOIS 1813.

TECSOU - 3:found by multi-beam

VALSOU - 41.635 m

Office Notes

Concur with clarification. Chart non-dangerous sunken wreck, least depth known 136 feet at the present survey position in Latitude 41°09'23.237"N, Longitude 072°25'29.873"W.

3 - AWOIS Features

3.1) Profile/Beam - 5684/40 from h11361 / s222_mb / 2004-288 / 0688_20041014_150255_raw

Primary Feature for AWOIS Item #1814

Search Position:	41.16676389° N, 072.46619722° W
Historical Depth:	[None]
Search Radius:	1850
Search Technique:	ES,S2,MB,DI,SD
Technique Notes:	[None]

History Notes:

LNM40/73--TUG, 55 FT L, IN 100 FT OF WATER, POS.41-10N, 72-28W. RU/HE MAR 10/26/82--DELETE WK AT POS.41-10N, 72-28W. (FE-241 WD) ITEM 5. RU/HE MAR 9/30/82--NEGATIVE SSS SEARCH FOR 1 MILE RADIUS; 175M SPACING AT 200M RANGE SCALE FE241WD/89--OPR-B660-RU/HE-82; ITEM 5; WRECK NOT FOUND DURING INVESTIGATION BUT NOT DISPROVED; TWO CONTACTS WHICH THE HYDROGRAPHER BELIEVES ARE THE BARATARIA AND THE THAMES WERE FOUND DURING INVESTIGATION OF ITEM 4 (SEE AWOIS 1813, 2729 AND 2730); EVALUATOR RECOMMENDED RETAINING AS CHARTED AND ADDING TWO WRECK SYMBOLS IN POSITIONS OF SONARGRAM CONTACTS. (UPDATED MSM 9/89) FE257/83-84WD--OPR-B660-RU/HE-83-84; WK NOT FOUND, CHARTING RECOMMENDATION WILL BE ADDRESSED IN REVIEW OF FE241/82WD (SEE ENTRY ABOVE). (UPDATED 5/87 RWD) DESCRIPTION 01 TUG, 37 GT, 57 FT L, 14 FT W, 6.6 FT D, BUILT 1886, IRON HULL OWNER; INTERNATIONAL UNDERWATER CONTRACTORS, 38-25 127TH ST, FLUSHING, NY 11368 Refer to AWOIS 2729 and 2730

Survey Summary

Survey Position:	41.16676158° N, 072.46618972° W
Least Depth:	32.82 m
Timestamp:	2004-288.15:29:53.973 (10/14/2004)
Survey Line:	h11361 / s222_mb / 2004-288 / 0688_20041014_150255_raw
Profile/Beam:	5684/40
Charts Affected:	12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth at the position of AWOIS 1814. All of AWOIS 1814's search radius was covered with 100% SSS (KLEIN 5500) and 100% MBES (a combination of EM 1002, RESON 8101, and RESON 8125). No wreck was found. NOTE: A past hydrographer believed that AWOIS item #2729 may be the wreck of AWOIS item #1814 (refer to the feature report for AWOIS #2729 for a more detailed explanation).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/s222_mb/2004-288/0688_20041014_150255_raw	5684/40	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 1814	1.10	098.8	Secondary
ChartGPs - ENC US4NY1GM	Danger 4	37.61	172.1	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends deleting the charted dangerous wreck PA at the position of AWOIS 1814.

Cartographically-Rounded Depth (Affected Charts):

107ft (12358_1, 12354_1)

18fm (12300_1, 13006_1, 13003_1)

33m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: INFORM - The feature is the least depth at the position of AWOIS 1814. All of AWOIS 1814's search radius was covered with 100% SSS (KLEIN 5500) and 100% MBES (a combination of EM 1002, RESON 8101, and RESON 8125). No wreck was found. NOTE: A past hydrographer believed that AWOIS item #2729 may be the wreck of AWOIS item #1814 (refer to the feature report for AWOIS #2729 for a more detailed explanation).

Office Notes

Concur. Delete AWOIS Item #1814 dangerous sunken wreck, least depth unknown, and text "PA" in Latitude 41°10'00.350" N, Longitude 072°27'58.310" W. Chart present survey soundings.

3.2) Profile/Beam - 582/109 from h11361 / 1014_mb / 2004-313 / 366_2104

Primary Feature for AWOIS Item #1818

Search Position: 41.17998333° N, 072.52704167° W

Historical Depth: 17.07 m

Search Radius: 200

Search Technique: ES,S2,MB,DI,SD

Technique Notes: [None]

History Notes:

NM3/58--COAL BARGE, 260 FT L, 35 FT W, COVERED 40 FT AT APPROX. POSITION 41-10-36N, 72-31-39W, BUOY EST. IN 95 FT OF WATER ABOUT 8,300 YDS 192 DEGREES FROM KELSEY POINT BREAKWATER LIGHT. NM13/58--BUOY DISCONTINUED H9089/69--BS; NOT FOUND, FATHO SEARCH, FURTHER WORK REQUIRED. RU/HE MAR 9/30/82--LOCATED BY SSS, DIVE NOT POSSIBLE DUE TO CURRENTS. WD TO BE ATTEMPTED. (FE-241 WD). R/H MAR 10/26/82--WD TWO DIRECTIONS SUCCESSFUL TO 56 FT. EFFECTIVE DEPTH. POS.41-10-47.6N, 72-31-39.03W. FE241WD/82--OPR-B660-RU/HE-82; MAR INFO ABOVE VERIFIED; POSITION REFINED TO LAT 41-10-47.598N, LONG 72-31-39.033W; EVALUATOR RECOMMENDED CHARTING WK WITH WIRE DRAG CLEARANCE OF 56 FT IN SURVEY POSITION. (UPDATED MSM 9/89) DESCRIPTION 206 LORAN C RATES: 9960-W 14902.3; 9960-Y 43978.1. (ENTERED MSM 3/89)

Survey Summary

Survey Position: 41.17989412° N, 072.52716022° W

Least Depth: 18.93 m

Timestamp: 2004-313.21:06:06.977 (11/08/2004)

Survey Line: h11361 / 1014_mb / 2004-313 / 366_2104

Profile/Beam: 582/109

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

This feature is the least depth over a charted wreck that was located with 100% MBES (RESON 8125) and developed with 100% SSS (KLEIN 5500). The wreck is approximately 82 meters long and 18 meters wide. The feature is centrally located within the 200-meter radius of AWOIS 1818.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-313/366_2104	582/109	0.00	000.0	Primary
ChartGPs - ENC US4NY1GM	Danger 3	1.05	072.3	Secondary (grouped)

h11361/s222_100/2004-295/113_1919	0001	10.15	233.1	Secondary
opr-b370-tj-04_awois	AWOIS # 1818	13.60	225.0	Secondary
h11361/1005_100/2004-299/087_1732	0001	33.03	229.4	Secondary

Hydrographer Recommendations

The hydrographer recommends deleting the charted 56-foot dangerous wreck and charting the current feature as per digital data (in effect, changing the least depth of the charted wreck).

Cartographically-Rounded Depth (Affected Charts):

62ft (12374_1, 12372_11, 12354_1)

10 ¼fm (12300_1, 13006_1, 13003_1)

18.9m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: INFORM - This feature is the least depth over a charted wreck that was located with 100% MBES (RESON 8125) and developed with 100% SSS (KLEIN 5500). The wreck is approximately 82 meters long and 18 meters wide. The feature is centrally located within the 200-meter radius of AWOIS 1818.

OBJNAM - Lake Hemlock

TECSOU - 3:found by multi-beam

VALSOU - 18.927 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Delete AWOIS Item #1818 dangerous sunken wreck, least depth known 56 feet by wiredrag, and text "Wk" at Latitude 41°10'47.940"N, Longitude 072°31'37.350"W. Chart AWOIS Item #1818 dangerous sunken wreck, least depth known 62 feet, and text "Wk" at the present survey position in Latitude 41°10'47.629"N, Longitude 072°31'37.762"W.

3.3) Profile/Beam - 582/208 from h11361 / 1014_mb / 2004-314 / 355_1352

Primary Feature for AWOIS Item #11917

Search Position: 41.21361111° N, 072.50238889° W

Historical Depth: 7.32 m

Search Radius: 100

Search Technique: ES,S2,MB,DI,SD

Technique Notes: [None]

History Notes:

H09089/69 -- 24-foot sounding now charted in location 41/12/49.0 north latitude, 072/30/08.6 west longitude (NAD83). (Entered 8/03 by CG)

Survey Summary

Survey Position: 41.21349987° N, 072.50085791° W

Least Depth: 6.73 m

Timestamp: 2004-314.13:54:43.393 (11/09/2004)

Survey Line: h11361 / 1014_mb / 2004-314 / 355_1352

Profile/Beam: 582/208

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over a rock located with 100% MBES (RESON 8125) and developed with 100% SSS (KLEIN 5500). The feature correlates to AWOIS #11917 (a 24-foot charted depth).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-314/355_1352	582/208	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 11917	128.84	095.5	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends charting the feature as per digital data.

Cartographically-Rounded Depth (Affected Charts):

22ft (12374_1, 12372_11, 12354_1)

3 ½fm (12300_1, 13006_1, 13003_1)

6.7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - The feature is the least depth over a rock located with 100% MBES (RESON 8125) and developed with 100% SSS (KLEIN 5500). The feature correlates to AWOIS #11917 (a 24-foot charted depth). TECSOU - 3:found by multi-beam VALSOU - 6.729 m WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete AWOIS Item #11917 24 foot sounding located on chart 12374 at Latitude 41°12'48.230"N, Longitude 072°30'02.900"W (AWOIS database position of Latitude 41°12'49.000"N, Longitude 072°30'08.600"W is incorrect). Chart AWOIS Item #11917 dangerous rock, least depth known 22 feet, and text Rk at the present survey position in Latitude 41°12'48.599"N, Longitude 072°30'03.105"W.

3.4) Profile/Beam - 794/127 from h11361 / 1014_mb / 2004-315 / 176_2030

Primary Feature for AWOIS Item #11919

Search Position: 41.15488889° N, 072.51102778° W

Historical Depth: 7.32 m

Search Radius: 200

Search Technique: ES,S2,MB,DI,SD

Technique Notes: [None]

History Notes:

Unknown Source -- An extensive review of historical documents did not reveal the original source of this wire drag clearance. The clearance appears on the 1st Edition of Chart 12358 which was used as reference to update Chart 12354. The item most likely came from a field examination that was not properly documented. The 24-foot clearance is now charted at 41/09/17.6 north latitude, 072/30/39.7 west longitude (NAD83). (Entered 8/03 by CG)

Survey Summary

Survey Position: 41.15486520° N, 072.51101507° W

Least Depth: 10.41 m

Timestamp: 2004-315.20:33:20.623 (11/10/2004)

Survey Line: h11361 / 1014_mb / 2004-315 / 176_2030

Profile/Beam: 794/127

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over a charted 24-foot wire-dragged dangerous rock (AWOIS item #11919). One hundred percent of the AWOIS search radius was covered with 100% MBES (RESON 8125) and 100% SSS (KLEIN 5500). No rock was found.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-315/176_2030	794/127	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 11919	2.78	151.3	Secondary
ChartGPs - ENC US4NY1GM	Danger 1	21.88	230.1	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends deleting the charted 24-foot dangerous rock and charting representative soundings from the current survey.

Cartographically-Rounded Depth (Affected Charts):

34ft (12358_1, 12354_1)

5 ¾fm (12300_1, 13006_1, 13003_1)

10.4m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: INFORM - The feature is the least depth over a charted 24-foot wire-dragged dangerous rock (AWOIS item #11919). One hundred percent of the AWOIS search radius was covered with 100% MBES (RESON 8125) and 100% SSS (KLEIN 5500). No rock was found.

TECSOU - 3:found by multi-beam

Office Notes

Concur. Delete AWOIS Item #11919 dangerous rock, least depth known 24 feet by wiredrag, and text "Rk" at Latitude 41°09'17.600"N, Longitude 072°30'39.700"W.

3.5) Profile/Beam - 274/54 from h11361 / 1014_mb / 2004-315 / 280_1600

Primary Feature for AWOIS Item #11916

Search Position: 41.21119444° N, 072.46961111° W

Historical Depth: 6.71 m

Search Radius: 100

Search Technique: ES,S2,MB,DI,SD

Technique Notes: [None]

History Notes:

H09089/69 -- 22-foot sounding now charted in location 41/12/40.3 north latitude, 072/28/10.6 west longitude (NAD83). (Entered 8/03 by CG)

Survey Summary

Survey Position: 41.21118672° N, 072.46959412° W

Least Depth: 9.08 m

Timestamp: 2004-315.16:01:36.901 (11/10/2004)

Survey Line: h11361 / 1014_mb / 2004-315 / 280_1600

Profile/Beam: 274/54

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth at the position of AWOIS 11916, a charted 22-foot depth. No rocks or obstructions were found within the 100-meter radius of AWOIS 11916; however, the least depth of a large northeast-to-southwest-orientated sandwave is within the 100-meter radius.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-315/280_1600	274/54	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 11916	1.94	117.0	Secondary

Hydrographer Recommendations

The hydrographer recommends charting representative soundings from the current survey.

Cartographically-Rounded Depth (Affected Charts):

30ft (12374_1, 12372_11, 12354_1)

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

9.1m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: INFORM - The feature is the least depth at the position of AWOIS 11916, a charted 22-foot depth. No rocks or obstructions were found within the 100-meter radius of AWOIS 11916; however, the least depth of a large northeast-to-southwest-orientated sandwave is within the 100-meter radius.

TECSOU - 3:found by multi-beam

Office Notes

Concur. Delete AWOIS 11916 22 foot sounding in approximate Latitude 41°12'40.300"N, Longitude 072°28'10.600"W. Chart present survey H11361 soundings.

3.6) Profile/Beam - 234/60 from h11361 / 1005_mb / 2004-320 / 108_1623

Primary Feature for AWOIS Item #1813

Search Position:	41.16676389° N, 072.43286389° W
Historical Depth:	[None]
Search Radius:	1850
Search Technique:	ES,S2,MB,,DI,SD
Technique Notes:	[None]

History Notes:

LNM50/71--TUG, IN 127 FT OF WATER AT APPROX. POS.41-10N, 72-26W. H9181/70-71--OPR-474; NOT FOUND, NO SPECIFIC INVESTIGATION RU/HE MAR 9/30/82--WKS FOUND AT POSITION 41-09-19.5N, 72-25-04.1W AND AT POS.41-10-29.5N, 75-25-34.4W. NOT SUBSTANTIATED AS BARATARIA (FE-241 WD) ITEM 4. THESE WKS WERE ENTERED INTO AWOIS AS 2729 AND 2730, RESPECTIVELY. FE241WD/82--OPR-B660-RU/HE-82; ITEM 4; ONLY TWO SIGNIFICANT CONTACTS WERE FOUND DURING SSS INVESTIGATION AND THESE CONTACTS WERE NOT DIVER INVESTIGATED; HYDROGRAPHER BELIEVES THAT THE CONTACT IN LAT 41-10-29.52N, LONG 72-25-34.40W IS THE BARATARIA AND THE OTHER CONTACT IS THE THAMES (ITEM 1814); INSUFFICIENT SSS ACCOMPLISHED FOR DISPROVAL; EVALUATOR RECOMMENDED RETAINING THE ORIGINAL SYMBOL AS CHARTED AND ADDING A WRECK IN THE POSITION LISTED ABOVE (SEE AWOIS ITEM 2730). (UPDATED MSM 9/89) FE257/83-84WD--OPR-B660-RU/HE-83-84; TWO WKS WERE LOCATED BY 100% SSS, HOWEVER THEY DO NOT SUBSTANTIATE WHETHER THEY ARE EITHER THE BARATARIA(1813) OR THE THAMES(1814). NO DIVER INVESTIGATION WAS CONDUCTED. INSUFFICIENT WORK ACCOMPLISHED FOR DISPROVAL; POSITION OF ITEM 1813 HAS BEEN CLEARED BY 79 FT. IN ONE DIRECTION; CHARTING RECOMMENDATION FOR 1813 WILL BE ADDRESSED IN REPORT OF FE241/82WD, WHEN REVIEWED (SEE ENTRY ABOVE). (UPDATED 5/87 RWD) DESCRIPTION 01 64 GT, 68.7 FT L, 18 FT W, 7.6 FT D, STEEL, BUILT 1937 OWNER; THOMAS W. KIDD JR, DBA PIRATE COVE MARINA, POINT RD, PORTSMOUTH, RI 02871

Survey Summary

Survey Position:	41.16756269° N, 072.41836723° W
Least Depth:	55.23 m
Timestamp:	2004-320.16:23:50.526 (11/15/2004)
Survey Line:	h11361 / 1005_mb / 2004-320 / 108_1623
Profile/Beam:	234/60
Charts Affected:	12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over a wreck located with 100% MBES (EM 1002) and developed with 100% SSS (KLEIN 5500) and 100% MBES (RESON 8101). The wreck is approximately 21 meters long and 3-5 meters wide. The feature is located within the 2000-meter search radius of and closely matches the length and width dimensions of AWOIS 1813; however, the hydrographer is unable to definatively substantiate that the current feature is the

wreck of AWOIS 1813 because no diver investigation was performed and another wreck (of the five located within or very near the search radius of AWOIS 1813) also closely matches the dimensions of AWOIS 1813. NOTE: Although two different wrecks closely match the length and width dimensions of AWOIS 1813, a recommendation addressing AWOIS 1813 is included in only the current feature report since a feature can be a secondary feature to only one primary feature.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-320/108_1623	234/60	0.00	000.0	Primary
h11361/s222_mb/2004-288/0688_20041014_150255_raw	1341/96	11.34	155.6	Secondary
h11361/s222_100/2004-293/148_1707	0001	35.79	141.2	Secondary
ChartGPs - ENC US4NY1GM	Danger 5	1210.68	086.6	Secondary (grouped)
opr-b370-tj-04_awois	AWOIS # 1813	1221.17	085.8	Secondary

Hydrographer Recommendations

The hydrographer recommends deleting the non-dangerous wreck at the position of AWOIS 1813 and charting the current feature as per digital data.

Cartographically-Rounded Depth (Affected Charts):

181ft (12358_1, 12354_1)

30fm (12300_1, 13006_1, 13003_1)

55m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: INFORM - The feature is the least depth over a wreck located with 100% MBES (EM 1002) and developed with 100% SSS (KLEIN 5500) and 100% MBES (RESON 8101). The wreck is approximately 21 meters long and 3-5 meters wide. The feature is located within the 2000-meter search radius of and closely matches the length and width dimensions of AWOIS 1813; however, the hydrographer is unable to definatively substantiate that the current feature is the wreck of AWOIS 1813 because no diver investigation was performed and another wreck (of the five located within or very near the search radius of AWOIS 1813) also closely matches the dimensions of AWOIS 1813. NOTE: Although two different wrecks closely match the length and width dimensions of AWOIS 1813, a recommendation addressing AWOIS 1813 is included in only the current feature report since a feature can be a secondary feature to only one primary feature.

TECSOU - 3:found by multi-beam

VALSOU - 55.233 m

Office Notes

Concur with clarification. Delete AWOIS Item #1813 non-dangerous sunken wreck, least depth unknown at Latitude 41°10'00.350"N, Longitude 072°25'58.310"W. Chart AWOIS Item #1813 non-dangerous sunken wreck, least depth known 181 feet at the present survey position in Latitude 41°10'03.226"N, Longitude 072°25'06.122"W.

3.7) Profile/Beam - 209/48 from h11361 / 1005_mb / 2004-320 / 114_1632

Primary Feature for AWOIS Item #2729

Search Position:	41.15536111° N, 072.41684167° W
Historical Depth:	36.88 m
Search Radius:	0
Search Technique:	ES,S2,MB,DI,SD
Technique Notes:	[None]

History Notes:

S-B600-RU -- SWMB AND SSS DATA INDICATE THAT THIS ITEM IS A SHIPWRECK SURVEYED IN POSITION: 41-09-19.30 N 072-25-00.632 W. THIS ITEM IS APPROXIMATELY 22 METERS LONG BY 7 METERS ABEAM WITH A LEAST DEPTH OF 120 FEET. HYDROGRAPHER BELIEVES THIS WRECK TO BE THE THAMES DUE TO THE DIMINSIONS AND LOCATION OF THE WRECK AND RECOMMENDS REMOVING THE "118 Wk Rep (1983)" FROM THE CHART AND CHARTING "121 Wk" IN THE SURVEYED POSITION. [ENETERED 8/5/2004 JCM] This item was completed by the RUDE while performing homeland security survey S-B600. Whether they proved or disproved the item is unclear. MAR 9/30/82-R/H--UNIDENTIFIED WK LOCATED BY SSS AT POS. 41-09-19.25N, 72-25-04.09W PROTRUDING 9.5 FT OFF BOTTOM IN 131 FT OF WATER. NO DIVER INVESTIGATION. HYDROGRAPHER THINKS WK MAY BE THAMES, NO.01814 MAR--8/83, OPR-B660-RU/HE-83; NON DANG. WK, CLEARED TO AN ESTIMATED DEPTH OF 75 FT BASED ON PREDICTED TIDES, WAS LOCATED IN GENERAL DEPTHS OF 106FT, IN LAT. 41-09-19.25N, LONG.72-25-04.09W FE241WD/82--OPR-B660-RU-82; WHILE INVESTIGATING ITEM 4 (AWOIS #1813) TWO SIGNIFICANT CONTACTS WERE FOUND ON THE SONARGRAMS; HYDROGRAPHER BELIEVES THESE CONTACTS ARE THE BARATARIA (1813) AND THE THAMES (1814) BUT THEY WERE NOT DIVER INVESTIGATED TO VERIFY IDENTITY DUE TO THE DEPTHS OF WATER; EVALUATOR RECOMMENDED RETAINING ITEMS 1813 AND 1814 AS CHARTED AND ADDING A NONDANGEROUS WRECK IN LAT 41-09-19.25N, LONG 72-25-04.09W. (UPDATED MSM 11/89) FE257/83-84WD--OPR-B660-RU/HE-83-84; NON-DANG SUBM WK, WAS CLEARED TO 75FT IN 1983 AND 73FT IN 1984. THE WK LIES IN APPROX 128FT OF WATER (FROM H9181) AND EXTENDS APPROX 10FT OFF THE BOTTOM COMPUTED FROM SSS. (UPDATED 5/87 RWD) DESCRIPTION 206 LORAN C RATES: 9960-W 14863.7; 9960-Y 43955.6. (ENTERED MSM 3/89)

Survey Summary

Survey Position:	41.15535835° N, 072.41683084° W
Least Depth:	37.25 m
Timestamp:	2004-320.16:32:42.927 (11/15/2004)
Survey Line:	h11361 / 1005_mb / 2004-320 / 114_1632
Profile/Beam:	209/48
Charts Affected:	12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

This feature is the least depth over a wreck that was located with 100% MBES (EM 1002) and developed with 100% SSS (KLEIN 5500). The wreck is approximately 23 meters long and 5 meters wide. The feature is located 1.1 meters from the position of AWOIS 2729 and approximately 10 meters outside the 1850-meter search radius of AWOIS 1813. Although the current feature does not lie within the 1850-meter search radius of another AWOIS item, #1814, the history for AWOIS 2729 indicates that a past hydrographer believed that AWOIS 2729 may have been the wreck of AWOIS 1814 (the tug "Thames"), whose 1850-meter search radius (1) is centered 4240 meters to the northwest and (2) does not contain any wrecks. The current hydrographer is unable to definitively substantiate the past claim that the wreck of AWOIS 2729 is the wreck of AWOIS 1814 because (1) no diver investigation was done and (2) the current feature does not precisely match the description of the tug "Thames" provided in AWOIS 1814's proprietary section; however, the current feature does closely match the length and width dimensions of AWOIS 1813 (believed to the tug "Barataria"), although the hydrographer can not definately say wether or not the current feature is indeed the wreck of AWOIS 1813 because no diver investigation was performed and another wreck also closely matches the description of AWOIS 1813.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-320/114_1632	209/48	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 2729	0.96	108.7	Secondary
h11361/s222_100/2004-294/139_1522	0001	8.92	269.1	Secondary
h11361/s222_100/2004-294/140_1354	0002	15.18	284.8	Secondary
h11361/s222_100/2004-297/102_1953	0001	24.62	217.5	Secondary
ChartGPs - ENC US4NY1GM	Danger 6	83.89	112.9	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends deleting the charted 118-foot reported non-dangerous wreck at the position of this feature's secondary 'Chart GP' and charting the current feature as per digital data (in effect changing [1] the least depth of the charted non-dangerous reported wreck from 118 feet to 121 feet and [2] the position of the charted non-dangeous wreck by 83.89 meters). (AWOIS item #1813, whose description the current feature closely matches, is addressed in another feature report.)

Cartographically-Rounded Depth (Affected Charts):

122ft (12358_1, 12354_1)

20fm (12300_1, 13006_1, 13003_1)

37m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

INFORM - This feature is the least depth over a wreck that was located with 100% MBES (EM 1002) and developed with 100% SSS (KLEIN 5500). The wreck is approximately 23 meters long and 5 meters wide. The feature is located 1.1 meters from the position of AWOIS 2729 and approximately 10 meters outside the 1850-meter search radius of AWOIS 1813. Although the current feature does not lie within the 1850-meter search radius of another AWOIS item, #1814, the history for AWOIS 2729 indicates that a past hydrographer believed that AWOIS 2729 may have been the wreck of AWOIS 1814 (the tug "Thames"), whose 1850-meter search radius (1) is centered 4240 meters to the northwest and (2) does not contain any wrecks. The current hydrographer is unable to definitively substantiate the past claim that the wreck of AWOIS 2729 is the wreck of AWOIS 1814 because (1) no diver investigation was done and (2) the current feature does not precisely match the description of the tug "Thames" provided in AWOIS 1814's proprietary section; however, the current feature does closely match the length and width dimensions of AWOIS 1813 (believed to the tug "Barataria"), although the hydrographer can not definately say wether or not the current feature is indeed the wreck of AWOIS 1813 because no diver investigation was performed and another wreck also closely matches the description of AWOIS 1813.

TECSOU - 3:found by multi-beam

VALSOU - 37.254 m

Office Notes

Concur with clarification. Delete AWOIS Item #2729 non-dangerous sunken wreck, least depth 118 feet, and text "Wk (rep 1983)" at Latitude 41°09'19.300"N, Longitude 072°25'00.630"W. Chart AWOIS Item #2729 non-dangerous sunken wreck, least depth known 122 feet, and text "Wk" at the present survey position in Latitude 41°09'19.290"N, Longitude 072°25'00.591"W.

3.8) Profile/Beam - 121/62 from h11361 / 1005_mb / 2004-320 / 115_1612

Primary Feature for AWOIS Item #2730

Search Position:	41.17496389° N, 072.42575000° W
Historical Depth:	24.08 m
Search Radius:	200
Search Technique:	ES,S2,MB,DI,SD
Technique Notes:	[None]

History Notes:

MAR 9/30/82-R/H--UNIDENTIFIED WK LOCATED BY SSS AT POS.41-10-29.52N 72-25-34.4W PROTRUDING 8.0 FT OFF BOTTOM IN 136 FT OF WATER. NO DIVER INVESTIGATION. HYDROGRAPHER THINKS WK MAY BE BARATARIA, NO.01813 MAR--8/83, OPR-B660-RU/HE-83; NON DANG. WK CLEARED TO AN ED OF 79FT BASED ON PREDICTED TIDES, WAS LOCATED IN GENERAL DEPTHS OF 104FT, IN LAT. 41-10-29.52N, LONG.72-25-34.40W. FE241WD/82--OPR-B660-RU-82; WHILE INVESTIGATING ITEM 4 (AWOIS #1813) TWO SIGNIFICANT CONTACTS WERE FOUND ON THE SONARGRAMS; HYDROGRAPHER BELIEVES THESE CONTACTS ARE THE BARATARIA (1813) AND THE THAMES (1814) BUT WERE NOT DIVER INVESTIGATED TO VERIFY IDENTITY DUE TO THE DEPTHS OF WATER; EVALUATOR RECOMMENDED RETAINING ITEM 1813 AS CHARTED AND ADDING A N0NDANGEROUS WRECK IN LAT 41-10-29.52N, LONG 72-25-34.40W. (UPDATED MSM 11/89) FE257/83-84WD--OPR-B660-RU/HE-83-84; NON-DANG SUBM WK, WAS CLEARED TO 79FT IN ONE DIRECTION ONLY; EVALUATOR STATES THAT SINCE THIS WRECK LIES IN 131 FT. OF WATER AND EXTENDS APPROXIMATELY 8 FT. OFF THE BOTTOM (COMPUTED FROM SIDE SCAN SONARGRAMS) IT IS REASONABLE TO NOTE 79 FT. CLEARANCE DEPTH. (UPDATED 5/87 RWD) DESCRIPTION 206 LORAN C RATES: 9960-W 14863.9; 9960-Y 43965.9. (ENTERED MSM 3/89)

Survey Summary

Survey Position:	41.17472203° N, 072.42545884° W
Least Depth:	37.42 m
Timestamp:	2004-320.16:12:30.127 (11/15/2004)
Survey Line:	h11361 / 1005_mb / 2004-320 / 115_1612
Profile/Beam:	121/62
Charts Affected:	12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

This feature is the least depth over a wreck that appears to be a submerged barge. The wreck was located with 100% MBES (EM 1002) and developed with 100% SSS (KLEIN 5500) and 100% MBES (RESON 8101). The wreck is 32.5 meters long and 5 meters wide. The feature is located within the 200-meter search radius for AWOIS 2730 (a charted 123-foot reported non-dangerous wreck) and the 2000-meter search raduis for AWOIS 1813 (a charted wreck believed to be the tug "Barataria"). The history for AWOIS 2730 indicates that a past hydrographer believed that AWOIS 2730 may have been the wreck represented by AWOIS 1813; however, the current hydrographer is unable to definitively substantiate this claim since (1) no diver investigation was done and (2) the current feature

does not correspond to the description of the Barataria included in the proprietary section of AWOIS 1813 (which describes a wreck 20.9 by 5.5 meters). NOTE: From the AWOIS descriptions, it appears the past hydrographer based his claim on knowing about only two wrecks. The current survey data show a total of five wrecks within or very near the search radii of AWOIS 1813, two of which (addressed in other feature reports) do indeed correspond to the AWOIS description.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-320/115_1612	121/62	0.00	000.0	Primary
ChartGPs - ENC US4NY1GM	Danger 7	22.52	216.3	Secondary (grouped)
h11361/s222_100/2004-289/153_1237	0001	36.00	212.1	Secondary
opr-b370-tj-04_awois	AWOIS # 2730	36.38	137.7	Secondary

Hydrographer Recommendations

The hydrographer recommends deleting the 123-foot reported non-dangerous wreck corresponding to AWOIS 2730 and charting the current feature as per digital data (in effect changing the least depth of the existing charted reported non-dangerous wreck).

Cartographically-Rounded Depth (Affected Charts):

123ft (12358_1, 12354_1)

20fm (12300_1, 13006_1, 13003_1)

37m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: INFORM - This feature is the least depth over a wreck that appears to be a submerged barge. The wreck was located with 100% MBES (EM 1002) and developed with 100% SSS (KLEIN 5500) and 100% MBES (RESON 8101). The wreck is 32.5 meters long and 5 meters wide. The feature is located within the 200-meter search radius for AWOIS 2730 (a charted 123-foot reported non-dangerous wreck) and the 2000-meter search raduis for AWOIS 1813 (a charted wreck believed to be the tug "Barataria"). The history for AWOIS 2730 indicates that a past hydrographer believed that AWOIS 2730 may have been the wreck represented by AWOIS 1813; however, the current hydrographer is unable to definitively substantiate this claim since (1) no diver investigation was done and (2) the current feature does not correspond to the description of the Barataria included in the proprietary section of AWOIS 1813 (which describes a wreck 20.9 by 5.5 meters). NOTE: From the AWOIS descriptions, it appears the past hydrographer based his claim on knowing about only two wrecks. The current survey data show a total of five wrecks within or very near the search radii of AWOIS 1813, two of which (addressed in other feature reports) do indeed correspond to the AWOIS description.

TECSOU - 3:found by multi-beam

VALSOU - 37.424 m

Office Notes

Concur. Delete AWOIS Item #2730 non-dangerous sunken wreck, least depth known 123 feet, and text "Wk (rep 1983)" at Latitude 41°10'29.870"N, Longitude 072°25'32.700"W. Chart AWOIS Item #2730 non-dangerous sunken wreck, least depth known 123 feet, and text "Wk" at the present survey position in Latitude 41°10'28.999"N, Longitude 072°25'31.652"W. Update AWOIS Item #2730 database position and depth (AWOIS database estimated depth was incorrect with a value of 79ft while raster chart 12354 (41st Ed., Apr./04) portrays the correct depth value of 123 feet.

3.9) Profile/Beam - 600/126 from h11361 / 1014_mb / 2004-315 / 114_2121

Primary Feature for AWOIS Item #1806

Search Position: 41.15148611° N, 072.51953333° W

Historical Depth: 10.06 m

Search Radius: 200

Search Technique: ES,S2,MB,DI,SD

Technique Notes: [None]

History Notes:

H1591A/11WD--LL SNDG. 33 FT, NO CLEARANCE H9089/69--BOAT SHEET; SURVEY NOT PROCESSED; 36 FT (PREDICTED) FOUND NEARBY, FURTHER WORK REQUIRED.

Survey Summary

Survey Position: 41.15148951° N, 072.51950310° W

Least Depth: 12.46 m

Timestamp: 2004-315.21:23:25.491 (11/10/2004)

Survey Line: h11361 / 1014_mb / 2004-315 / 114_2121

Profile/Beam: 600/126

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth at the position of AWOIS item #1806, a charted 33-foot depth. The 200-meter search radius was covered with 100% MBES (a combination of RESON 8101 and RESON 8125) and 100% SSS (KLEIN 5500). No discrete feature/obstruction was located within or near the search radius (only sandwaves).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-315/114_2121	600/126	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 1806	2.24	085.7	Secondary

Hydrographer Recommendations

The hydrographer recommends charting representative soundings from the current survey.

Cartographically-Rounded Depth (Affected Charts):

41ft (12358_1, 12354_1)

6 ¾fm (12300_1, 13006_1, 13003_1)

12.4m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: INFORM - The feature is the least depth at the position of AWOIS item #1806, a charted 33-foot depth. The 200-meter search radius was covered with 100% MBES (a combination of RESON 8101 and RESON 8125) and 100% SSS (KLEIN 5500). No discrete feature/obstruction was located within or near the search radius (only sandwaves).

TECSOU - 3:found by multi-beam

Office Notes

Concur with clarification. Delete AWOIS Item #1806 33 foot sounding located at Latitude 41°09'05.350"N, Longitude 072°31'10.320"W. Chart present survey H11361 soundings.

3.10) Profile/Beam - 148/235 from h11361 / 1014_mb / 2004-316 / 111_0108

Primary Feature for AWOIS Item #1809

Search Position: 41.16176667° N, 072.49953056° W

Historical Depth: 10.97 m

Search Radius: 75

Search Technique: ES,S2,MB,DI,SD

Technique Notes: [None]

History Notes:

H1591A/11WD--LL SNDG. 36 FT, NO CLEARANCE H9089/69--BOAT SHEET; NOT DISPROVED BUT SIMILAR DEPTHS IN AREA, FURTHER WORK REQUIRED.

Survey Summary

Survey Position: 41.16175130° N, 072.49954538° W

Least Depth: 13.02 m

Timestamp: 2004-316.01:09:09.748 (11/11/2004)

Survey Line: h11361 / 1014_mb / 2004-316 / 111_0108

Profile/Beam: 148/235

Charts Affected: 12358_1, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth at the position of AWOIS item #1809, a charted 36-foot depth. The 75-meter search radius was covered with 100% MBES (a combination of RESON 8101 and RESON 8125) and 100% SSS (KLEIN 5500). No discrete feature/obstruction was located (only sandwaves).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1014_mb/2004-316/111_0108	148/235	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 1809	1.75	215.6	Secondary

Hydrographer Recommendations

The hydrographer recommends charting soundings as per current survey.

Cartographically-Rounded Depth (Affected Charts):

42ft (12358_1, 12354_1)

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

13.0m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: INFORM - The feature is the least depth at the position of AWOIS item #1809, a charted 36-foot depth. The 75-meter search radius was covered with 100% MBES (a combination of RESON 8101 and RESON 8125) and 100% SSS (KLEIN 5500). No discrete feature/obstruction was located (only sandwaves).

TECSOU - 3:found by multi-beam

Office Notes

Concur with clarification. Delete AWOIS Item #1809 36 foot sounding located at Latitude 41°09'42.360"N, Longitude 072°29'58.310"W. Chart present survey H11361 soundings.

3.11) Profile/Beam - 2028/79 from h11361 / 1005_mb / 2004-317 / 107_1311

Primary Feature for AWOIS Item #11918

Search Position: 41.18561111° N, 072.50069444° W

Historical Depth: 5.79 m

Search Radius: 150

Search Technique: ES,S2,MB,DI,SD

Technique Notes: [None]

History Notes:

H09089/69 -- The 19-foot sounding on Chart 12354 was not found, but shoaler soundings than those shown on the chart over a wider area indicate a continuation of the sand ridge along the southern face of Six Mile Reef suggesting the reef has undergone some changes in its configuration. H01591/1883 -- A 19-foot sounding was obtained during leadline operations. The item is currently charted at 41/11/08.2 north latitude, 072/30/02.5 west longitude (NAD83). (Entered 8/03 by CG).

Survey Summary

Survey Position: 41.18560851° N, 072.50068321° W

Least Depth: 10.23 m

Timestamp: 2004-317.13:14:30.561 (11/12/2004)

Survey Line: h11361 / 1005_mb / 2004-317 / 107_1311

Profile/Beam: 2028/79

Charts Affected: 12374_1, 12372_11, 12354_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

The feature is the least depth over the position of AWOIS item #11918. The 150-meter search radius was covered with 100% MBES (a combination of RESON 8101 and RESON 8125) and 100% SSS (KLEIN 5500). No discrete feature was located (only sandwaves).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11361/1005_mb/2004-317/107_1311	2028/79	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 11918	0.99	107.1	Secondary

Hydrographer Recommendations

The hydrographer recommends charting soundings as per current survey.

Cartographically-Rounded Depth (Affected Charts):

33ft (12374_1, 12372_11, 12354_1)

5 ½fm (12300_1, 13006_1, 13003_1)

10.2m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: INFORM - The feature is the least depth over the position of AWOIS item #11918. The 150-meter search radius was covered with 100% MBES (a combination of RESON 8101 and RESON 8125) and 100% SSS (KLEIN 5500). No discrete feature was located (only sandwaves).

TECSOU - 3:found by multi-beam

Office Notes

Concur with clarification. Delete AWOIS Item #11918 19 foot sounding located at Latitude 41°11'08.200"N, Longitude 072°30'02.500"W. Chart present survey H11361 soundings.

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: February 3, 2005

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B370-TJ-2004
HYDROGRAPHIC SHEET: H11361

LOCALITY: Sixmile Reef, Long Island Sound, NY/CT

TIME PERIOD: October 11 - November 15, 2004

TIDE STATION USED: 851-2668 Mattituck Inlet, NY
Lat. 41° 00.9'N Lon. 72° 33.7'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.620 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: LIS62, LIS66, LIS69, LIS72, LIS73, LIS75, LIS76 & LIS78

Refer to attachments for zoning information.

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

Thomas N. Moe 3/8/05

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H11361 (2004)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Reports. Sections in this report refer to the corresponding sections of the Descriptive Reports.

B. DATA ACQUISITION AND PROCESSING

B.1 EQUIPMENT

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

MAPINFO, version 6.5
CARIS HIPS/SIPS version 6.0 SP2
CARIS BASE Editor Version 1.0
CARIS HOM ENC Version 3.3 SP3
PYDRO, version 6.4.9
DKART INSPECTOR, version 5.0

B.2 PROCESSING

H-CELL

H-Cell **H11361_hcell.des** was created in HOM to produce the following Base Cell final products:

US411361_CU.000	1:20,000 Scale	Chart 12374
US411361_FF.000	1:20,000 Scale	Chart 12374
US411361_SS.000	1:10,000 Scale	H11361 Survey Scale

H-cell layers in CARIS HOM are organized as follows:

Layer 100	Soundings
Layer 200	SOTE
Layer 300	Wrecks
Layer 330	Rocks
Layer 370	Sandwaves
Layer 380/390	Seabed Areas
Layer 400	Meta Objects
Layer 1000	Excess Layer

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

Office processing entailed the use of CARIS BASE Editor to generate a Bathymetry Associated with Statistical Error BASE navigation surface model. The BASE Surface model serves as source for all cartographic components incorporated within the submitted Base Cell file.

The field unit submitted a series of surface models generated at different resolutions based upon depth ranges that allowed the highest resolution possible. AHB generated surface models at 0.5 meter, 1 meter, and 2 meter resolutions; the three individual surface models were combined into one surface with a resolution of 2 meters. AHB selected the resolutions of 0.5, 1, and 2 meters to maximize the horizontal resolution of shoal areas and minimize the data gaps in deeper areas where high resolution cannot be supported.

BASE Editor processing included the generation of the combined surface model and creation of contours and extraction of sounding data sets for survey scale and chart scale. The combined 2 meter resolution surface model was used to produce a generalized product surface at the chart scale of 1:20,000 using a 5K meter radius, 10 meter resolution, and 50 meter defocusing. Two feature layers were created from the product surface to produce the contour feature layer at the chart scale of 1:20,000 and the sounding feature layer at the survey scale of 1:10,000.

Before the HOM file was exported to S-57 format, the file was converted from metric to NOAA chart values. This conversion renames the DRVAL1 and DRVAL2 attributes (for depth areas) and VALDCO attributes (for the contours) from the metric equivalent values to the standard NOAA chart contour values to accommodate NOAA traditional rounding standards on charts. This renaming convention assures all soundings fall on the shoal side of the properly charted contour.

Soundings during HOM processing were selected with the CARIS GIS Environmental Variable set to a metric scale (-1,-1, T) to accommodate millimeter precision of the sounding value. This environmental variable was reset to

NOAA standard charting values (0, 0, N) to convert the metric sounding values to whole feet.

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 values (ENC_CU.000) with all values measured in feet.

BASE CELL TESTING

The base cell files *US411361_CU.000 and US411361_CU_NoContours.000* were examined using dKart Inspector. Warnings and errors received were all inconsequential. The DSPM.HUNI and DSPM.DUNI were reported to have illegal values, but these errors were expected as originating during ENC conversion to NOAA chart values, so they also can be ignored.

C. VERTICAL CONTROL & HORIZONTAL CONTROL

Final vertical correction processing was completed by AHB for H11361 using final approved zoning and water level data provided by N/OPSI CO-OPS.

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83), UTM projection zone 18. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements. During CARIS HOM processing the horizontal geodetic datum was translated to Latitude and Longitude (LLDG) World Geodetic System-84 (WGS-84) prior to exporting the HOM file to the S-57 ENC format. The S-57 ENC format serves as the exchange file submitted to Marine Chart Division.

D. RESULTS AND RECOMMENDATIONS

D.1 COMPARISON WITH CHARTS

12374 13th Edition, Oct. 28/00 1:20,000 Scale
12372 33rd Edition, Aug. 01/04 1:40,000 Scale
Corrected through NM Aug. 21/04
Corrected through LNM Aug. 03/04
12358 19th Edition, Sep. 01/02 1:40,000 Scale
Corrected through NM Sep. 14/02
Corrected through LNM Sep. 03/02
12354 41st Edition, Apr. 24/04 1:80,000 Scale
Corrected through NM Apr. 24/04
Corrected through LNM Apr. 13/04
12300 45th Edition, Mar. 01/05 400,000 Scale
Corrected through NM Jul. 26/05
Corrected through LNM Jun. 22/05
13006 33rd Edition, Apr. 01/04 1:675,000 Scale
Corrected through NM Apr. 08/06
Corrected through LNM Mar. 28/06
13003 48th Edition, Oct. 01/04 1:1,200,000 Scale
Corrected through NM Oct. 09/04
Corrected through LNM Sep. 21/04

ENC Comparison US4NY1GM

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. of the Descriptive Report (DR). Current survey soundings are generally shoaler than the charted depths; the depth variance between charted depths and survey soundings can be attributed to modern positioning systems, echo sounder systems, and new processing philosophies, software, and programming algorithms.

D.2 COMPARISON WITH PRIOR SURVEYS

A comparison with prior surveys was not done during office processing in accordance with section 4. of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

ADEQUACY OF SURVEY

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

area. This is an adequate navigable area survey with full bottom multibeam coverage. No additional field work was recommended by the hydrographer nor noted during office processing.

MISCELLANEOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. The following NOS charts were used for compilation of the present survey:

12374 13th Edition, October 28, 2000 1:20,000 Scale

12372 33rd Edition, August 01, 2004 1:40,000 Scale
Corrected through NM Aug. 21/04
Corrected through LNM Aug. 03/04

12358 19th Edition, September 01, 2002 1:40,000 Scale
Corrected through NM Sep. 14/02
Corrected through LNM Sep. 03/02

ENC US4NY1GM

Edward Owens
I am the author of this document
2007.10.18 16:56:25 -04'00'

Edward A. Owens
Physical Scientist
Verification of Field Data
Evaluation and Analysis

APPROVAL SHEET
H11361

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

Edward Owens
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Date:_____

Edward Anthony Owens
Physical Scientist,
Atlantic Hydrographic Branch

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

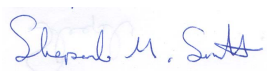
Marilyn Schluter
2007.11.26 15:42:48
-05'00'

Date:_____

Marilyn Schluter
Cartographer,
Atlantic Hydrographic Branch

I have reviewed the Base Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved:



Shepard Smith
I am approving this document
2007.11.26 16:19:40 -05'00'

Date:_____

LCDR Shepard M. Smith, NOAA
Chief, Atlantic Hydrographic Branch

Rachel Soraruf

Digitally signed by Rachel Soraruf
DN: cn=Rachel Soraruf, c=US, o=NOAA/NOS/OCS/HSD, ou=Operations Branch, email=Rachel.Sorasuf@noaa.gov
Reason: I have reviewed this document
Date: 2007.11.30 10:21:38 -05'00'