

**H11360**

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:* **H11360**

**LOCALITY**

*State:* New York and Connecticut

*General Locality:* Long Island Sound

*Sub-locality:* Jacob's Point to Albany Rock

**2004**

CHIEF OF PARTY  
**CDR Emily B. Christman, NOAA**

LIBRARY & ARCHIVES

DATE

**HYDROGRAPHIC TITLE SHEET**

**H11360**

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 and Connecticut**

General Locality: **~~Eastern~~ Long Island Sound**

Sub-Locality: **Jacob's Point to Albany Rock**

Scale: **1:10,000** Date of Survey: **9/14/04-11/11/04**

Instructions Dated: **08/06/04** Project Number: **B-370-TJ-04**

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

Chief of Party: **CDR Emily B. Christman, NOAA**

Surveyed by: **THOMAS JEFFERSON Personnel**

Soundings by: **Odom Echotrac DF3200 MK II vertical beam echosounder (VBES)  
Reson SeaBat 8125 multibeam echosounder (MBES)  
Kongsberg Simrad EM1002 multibeam echosounder (MBES)**

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: **~~Feet at MLLW~~ *Meters at MLLW***

Remarks: ***Bold, red, italic notes in the Descriptive Report were made during office processing  
Charted depths in feet at MLLW.***

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

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\* ***DATA FILED WITH THE ORIGINAL FIELD RECORDS***



## **DESCRIPTIVE REPORT**

to accompany  
HYDROGRAPHIC SURVEY H11360

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-B-370-TJ-04, Eastern Long Island Sound, New York and Connecticut. The instructions are dated August 6, 2004.

This Descriptive Report pertains to sheet "T" of project OPR-B-370-TJ-04, Jacob's Point to Albany Rock. The assigned registry number for this sheet is H11360, as prescribed in the Letter Instructions.

The purpose of the 2004 survey operations in ~~Eastern~~ *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 ~~Southern~~ *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.

*\*Filed with original field records at Atlantic Hydrographic Branch (AHB).*

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

### **EQUIPMENT**

Data were acquired by NOAA Ship THOMAS JEFFERSON, NOAA Launch 1005, and NOAA Launch 1014. NOAA Ship THOMAS JEFFERSON is a 63.4-meter hydrographic survey vessel with an average transducer draft of 4.6 meters. NOAA Launch 1005 and NOAA Launch 1014 are standard NOAA 8.5-meter aluminum Jensen vessels with a 0.6-meter average transducer draft.

NOAA Ship THOMAS JEFFERSON acquired multibeam echosounder (MBES) data with a SIMRAD EM1002 and side scan sonar (SSS) data with a towed KLEIN 5000 system. Vertical beam echosounder (VBES) data were acquired with an Odom Echotrac DF3200 MK II echosounder; however, these data were not processed.

Launch 1005 acquired VBES data with an Odom MK II echosounder and SSS data with a hull-mounted KLEIN 5000 system. Launch 1005 also acquired MBES data with a RESON 8101.

Launch 1014 acquired MBES data with a RESON 8125. Vertical beam data were acquired with an Odom MK II echosounder; however, these data were not processed. *Pertains to only one sounding line of data during survey operations.*

Positioning and attitude data for all three platforms were acquired using TSS POS/MV 320 Version 3 GPS-aided inertial navigation systems and corrected with US Coast Guard differential correctors. Refer to the 2004 Fall Data Acquisition and Processing Report \* (DAPR) for details related to each individual vessel.

Sound velocity data were acquired by all platforms. THOMAS JEFFERSON used a Sea-Bird SBE19 Deep SEACAT conductivity, temperature, and depth profiler. Launches 1014 and 1005 each used a Sea-Bird SBE19+ SEACAT conductivity, temperature, and depth profiler.

No unusual vessel configurations or problems with the ship or the launches were encountered during this survey that affected data quality or integrity. Refer to the 2004 Fall DAPR\* for detailed discussion of the vessel configurations and survey equipment.

*\*DAPR filed at AHB.*

## QUALITY CONTROL

### Side Scan Sonar (SSS) 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.

### Multibeam Echosounder Quality Control

There were no faults with the MBES system that affected data integrity. Refer to this project's DAPR\* for detailed discussion of MBES system calibrations, data acquisition, and data processing.

Daily confidence checks examining the internal consistency of the MBES were made by comparing overlapping lines, and accuracy was checked by performing lead line comparisons. Refer to this project's DAPR\* for detailed discussion of MBES system calibrations, data acquisition, and data processing.

Tidal artifacts of as much as 0.6 meters exist in the MBES data. The tide gages used for primary water level data for this survey are located on the northern and northeastern sides of Long Island Sound. Winds out of the northeast during portions of the survey resulted in the gages recording values that were lower than those actually experienced in the survey area. These tidal artifacts create areas of higher uncertainty in the BASE surfaces. Final zoning which incorporates data from the gages at Mattituck Inlet should eliminate any residual tidal artifacts, resulting in lower uncertainty in the combined BASE surface. *After final zoning and approved tides were applied, no artifacts were seen.*

Heave artifacts of as much as 0.1 meters exist in the combined BASE surface. The heave artifacts were caused by surveying in the same direction as the swell. When winds were blowing out of the northeast, and launch 1014 was surveying in a westerly direction, the launch would "surf" the swell. This would induce a heave that measured as much as 1.3 meters and the duration of the heave would exceed the sampling window for the heave filter. This would result in a re-zeroing of the heave filter while the actual heave was still as much as 1.3 meters. Once a swell overtook the launch, a negative heave was perceived until the next swell caught up to the launch. When viewing the BASE surface, rippled lines adjacent to smooth lines can be found. The smooth lines were acquired while surveying into the prevailing swell, where the constant pitching up and down provided sufficient input for the heave filter to apply accurate heave measurements to the MBES data. The rippled lines were acquired while surveying with the prevailing swell, where the smooth ride did not provide enough input for the heave filter to apply accurate heave measurements to the MBES data. The heave artifacts that remain in the combined BASE surface are insignificant in height and fall within the error budget. They are discussed here only because they are easily noticed in the DTM. Soundings from areas with remaining heave artifacts are adequate to supercede soundings from previous surveys. *Concur.*

*\*DAPR filed at AHB*

## Crosslines

Approximately 42 nm of crosslines (about 6% of the 615 nm of main scheme MBES and VBES data) were acquired. No traditional Checkline QC 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. Crosslines were compared to main scheme lines in subset editor to check for differences that could be caused by sound velocity differences or tidal artifacts. The crossline depths were found to be in close agreement with the mainscheme depths, resulting in a satisfactory crossline comparison.

## BASE Surface and Total Propagated Error

CARIS HIPS BASE (Bathymetry Associated with Statistical Error) surfaces for this survey were created according to depth interval. Initially, three base surfaces with 1m resolution were created to cover the entire survey area. Next, two 0.5m surfaces were created for areas where the depth was less than 15m. In addition, one investigation surface was created at a 0.8m resolution. BASE surfaces were examined as follows:

1. Density: Full multibeam coverage was not required for this survey. This survey was designed to meet NOS Hydrographic Surveys Specifications and Deliverables.
2. Uncertainty: An examination of the uncertainty grid was performed and the high uncertainty areas were examined in CARIS subset editor.
3. Standard Deviation: Areas of high standard deviation were investigated and resolved. In general, standard deviation of mean bathymetry was low (std dev <1). High standard deviation areas were investigated in CARIS subset editor. True fliers were examined and rejected. High standard deviation areas caused by natural bathymetric features or submerged objects were also noted.

Shoal, Median, and Deep surface layers were also created for data verification.

Five coverage BASE Surfaces, one combined BASE Surface, and one feature investigation BASE Surface were generated as part of this project.

NAME	PURPOSE	RESOLUTION
<i>H11360_A_1m</i>	<i>Coverage</i>	<i>1m</i>
<i>H11360_B_1m</i>	<i>Coverage</i>	<i>1m</i>
<i>H11360_C_1m</i>	<i>Coverage</i>	<i>1m</i>
<i>H11360_central_0p5m</i>	<i>Coverage</i>	<i>0.5m</i>
<i>H11360_SE_Shallow</i>	<i>Coverage</i>	<i>0.5m</i>
<i>H11360_Combined_BASE_1m</i>	<i>Combined</i>	<i>1m</i>
<i>Wreck_0p8m</i>	<i>Feature Investigation</i>	<i>0.8m</i>

**Junctions** *See also the Evaluation Report*

One navigable area survey was run concurrently with this survey. Survey H11255 adjoins this survey on the northern boundary. There was excellent agreement between the two surveys. *Concur.* Data for this project were acquired in accordance with survey limits provided by HSD.

**CORRECTIONS TO ECHO SOUNDING**

All methods or instruments used were as described in the project DAPR.\* The positions of all the sound velocity casts are loaded into the survey PSS as individual “generic position” features (GP’s), with the depth versus sound velocity information contained in the remarks. A master file of sound velocity profiles (SVP’s) was created from the SVP’s utilizing velocity data from the THOMAS JEFFERSON, launch 1005, and launch 1014. This master file of SVP’s was then applied to all data in Caris HIPS 5.4 using the “Nearest in distance within time” option. A value of four hours was selected for the time range.

\* *DAPR filed at AHB*

## 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) station at New London, CT (846-1490), 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 stations.

The operating water level stations at New London, CT (846-1490), New Haven, CT (846-5705), Silver Eel Pond (851-0719), and Mattituck Inlet (851-2668) will also provide water level reducers for this project.

**Table 2: Final Tide Zones & Correctors**

ZONE NAME	CORRECTOR (min)	RATIO	REFERENCE
LIS 48B	0	X0.96	846-5705
LIS 51B	0	X0.93	846-5705
LIS 54A	0	X0.89	846-5705
LIS 56B	0	X0.86	846-5705

A Request for Approved Tides letter was sent to N/OPS1 on December 3, 2004 (Appendix IV). \* Verified tides with the zoning from the N/OPS1 CO-OPS website were downloaded on November 11, 2004, and were applied to all sounding data. Refer to the Fall-2004 DAPR\*\* for a summary of the methods used to determine, evaluate, and apply tide corrections to sounding data. *Approved tides and zoning were applied in CARIS during office processing. See also the Evaluation Report.*

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

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

Horizontal position was determined using the Global Positioning System (GPS) with differential correctors from the US Coast Guard Differential Corrector Beacons in Moriches, NY (293.0 KHz), Sandy Hook, NJ (286.0 KHz), and Acushnet, MA (306.0 KHz). The differential correctors from Sandy Hook or Acushnet were used during much of the survey. Local weather affected reception of the differential beacons, and therefore the beacon that was used varied throughout the survey based on which beacon provided the strongest signal. While the survey area's proximity to the Moriches beacon precluded its use during much of the survey, there were occasions

\* *Data filed with the original field records*

\*\* *DAPR filed at AHB*

when it provided the best signal. Refer to the Fall-2004 DAPR\* for more detail.

Horizontal dilution of precision (HDOP) was monitored daily on the ship and both launches. While there were occasional spikes in HDOP values, survey operations continued as long as HDOP did not exceed 2.0 for longer than 1 second.

\* *DAPR filed at AHB*

## D. RESULTS AND RECOMMENDATIONS

### *CHART COMPARISON See also the Evaluation Report*

There are two NOS charts affected by this survey:

**Table 1: Affected Charts**

Number	Version	Edition Date	Scale
12354	41 <sup>st</sup> Ed.	24 April 2004	1:80,000
12358	19 <sup>th</sup> Ed.	<del>04</del> September <del>2004</del> <i>2002</i>	1:40,000

### **General Agreement with Charted Soundings, Features, and Notes**

Soundings acquired as part of survey H11360 are largely in agreement with charted soundings. MBES and VBES data acquired for this survey are adequate to supercede the charted soundings. *Concur.*

### **AWOIS Items and Significant Contacts**

There were 11 AWOIS items assigned to this survey. See Feature Reports in ~~Appendix I.~~ *data attached to this report.*

A total of 222 side scan sonar contacts and 36 bathymetry contacts were selected during the survey. Of these contacts, 40 features are considered significant to surface navigation and will be discussed in ~~Appendix I.~~ *data attached to this report.*

## Dangers to Navigation

There were a total of 6 Dangers to Navigation selected within the survey area. All selected dangers to navigation were rocks located within a rocky area. None of these rocks would pose a hazard to large ship traffic, but could potentially be hazardous to smaller vessels transiting close to shore. See Feature Reports in **Appendix I, data attached to this report.**

## Charted Features

The charted features in the survey area were found to be in close agreement with the digital data acquired during the survey, with the following exceptions: the privately maintained black can buoys “3” and “5” are no longer present in the survey area; the western mooring buoy located south of the charted platform is no longer present in the survey area; and the eastern mooring buoy located south of the charted platform is off station. The hydrographer recommends additional investigation by N/CS26 (MCD). **Concur.** See also Feature Reports in **Appendix I, data attached to this report.**

## ADDITIONAL RESULTS

### Prior Surveys *See also Evaluation Report*

Prior survey comparison was not required. The soundings acquired during this survey are adequate to supercede soundings from prior surveys. **Concur.**

### Aids to Navigation and Other Detached Positions

There is one floating aid to navigation in the survey area. The green “5” can buoy marks the northern most extent of the Roanoke Point shoal. The buoy is well positioned by the hull mounted KLEIN 5000 SSS on Launch 1005. At the time of the survey, the “5” buoy was on station as charted. **Concur with clarification. Defer charting disposition to Marine Chart Division, Nautical Data Branch, Source Information Unit.**

Positioning of the Tosco Corporation Riverhead Terminal and its shoreside pier was accomplished using HYPACK detached positions from Launch 1014. Due to project time constraints, a target’s range and bearing to the actual feature was not measured. Launch 1014 was maneuvered as close to the feature as sea conditions would allow. The ranges from the targets to the features were in most cases approximately 3 – 7 meters, with the greatest range estimated at no more than 10 meters from the reference point of the vessel. The digital data, namely SSS imagery, may provide more precise positioning of the terminal to meet charting needs. **Do not concur. See pages 43, 44, and 48 of the Features Reports in data attached to this report.**



The position of the Tosco Corporation Riverhead Terminal was found to be in close agreement with its charted position. *Concur.*

### **Bridges and Overhead Cables**

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

### **Ferry Routes**

There are no ferry routes, either actual or proposed, in the survey area. *Concur.*

### **Submarine Cables and Pipelines**

There is one submarine pipeline within the survey limits. This pipeline extends from the TOSCO Corporation Riverhead Terminal's shore based facilities to the offshore platform for deep draft tankers. On either side of the pipeline are concrete pipe anchors that are visible on shore where the pipeline enters the water. These pipe anchors are visible in both SSS imagery and MBES bathymetry. The charted position of the pipeline is in close agreement with the positioning from digital data acquired during the survey.

*Concur with clarification. Defer final charting disposition of pipeline to Marine Chart Division, Nautical Data Branch, Source Information Unit.*

# H11360 Features Reports

**Registry Number:** H11360  
**State:** New York and Connecticut  
**Locality:** ~~Eastern~~ Long Island Sound  
**Sub-locality:** Jacob's Point to Albany Rock  
**Project Number:** OPR-B370-TJ-04  
**Survey Dates:** 14 September 2004 - 11 November 2004

## Charts Affected

Number	Version	Date	Scale
12358	19th Ed.	09/01/2002	1:40000
12354	41st Ed.	04/01/2004	1:80000
12300	44th Ed.	07/01/2004	1:400000
13006	31st Ed.	06/01/2003	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	47th Ed.	06/01/2003	1:1200000

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	rock	Rock	2.52 m	040° 59' 04.059" N	72° 39' 24.203" W	---
1.2	rock	Rock	2.06 m	040° 58' 59.849" N	72° 40' 40.542" W	---
1.3	rock	Rock	6.34 m	040° 59' 16.372" N	72° 40' 03.779" W	---
1.4	rock	Rock	6.49 m	040° 59' 28.988" N	72° 40' 00.734" W	---
1.5	rock	Rock	7.98 m	040° 59' 31.294" N	72° 39' 40.945" W	---
1.6	rock	Rock	5.18 m	040° 59' 03.484" N	72° 40' 19.220" W	---
2.1	AWOIS #11391	SSS	[None]	040° 59' 03.991" N	72° 38' 40.706" W	11391
2.2	AWOIS #2639	Obstruction	16.93 m	040° 59' 06.678" N	72° 45' 01.393" W	2639
2.3	AWOIS #11389	Dolphin	[None]	040° 59' 59.942" N	72° 38' 53.153" W	11389
2.4	AWOIS #11390	Dolphin	[None]	041° 00' 02.407" N	72° 38' 43.012" W	11390
2.5	AWOIS #2638	Wreck	[None]	040° 58' 40.082" N	72° 43' 29.950" W	2638
2.6	AWOIS #11392	Obstruction	[None]	040° 59' 44.449" N	72° 38' 46.569" W	11392

2.7	AWOIS # 12524	Shoal	[None]	040° 59' 12.920" N	72° 38' 33.350" W	12524
2.8	AWOIS #10600	Obstruction	8.38 m	040° 59' 53.267" N	72° 38' 49.251" W	10600
2.9	AWOIS #10599	Obstruction	9.31 m	040° 59' 53.337" N	72° 38' 54.739" W	10599
2.10	AWOIS #10598	Obstruction	9.62 m	040° 59' 57.300" N	72° 38' 37.051" W	10598
2.11	AWOIS # 12522	Obstruction	9.15 m	040° 59' 55.220" N	72° 38' 41.865" W	12522
3.1	Eastern Corner of Pier	Stationary structure, floating or fixed	[None]	040° 58' 59.581" N	72° 38' 41.850" W	---
3.2	Western Edge of Pier	Stationary structure, floating or fixed	[None]	040° 58' 59.462" N	72° 38' 45.544" W	---
3.3	Mooring buoy	Mooring buoy	[None]	040° 59' 57.767" N	72° 38' 39.287" W	---
3.4	Mooring buoy not present	Mooring buoy	[None]	040° 59' 57.377" N	72° 38' 53.158" W	---
3.5	Platform - SE Corner	Platform (oil or gas), lighted	[None]	041° 00' 01.781" N	72° 38' 46.411" W	---
3.6	"5" green can buoy	Green buoy	[None]	041° 00' 12.215" N	72° 42' 15.795" W	---
3.7	Priv "3" Can	Marker (privately maintained)	6.36 m	040° 59' 46.877" N	72° 38' 47.596" W	---
3.8	Priv Can "5"	Marker (privately maintained)	4.18 m	040° 59' 12.703" N	72° 38' 44.028" W	---
4.1	rock	Rock	4.16 m	040° 58' 58.167" N	72° 40' 28.953" W	---
4.2	rock	Rock	3.76 m	040° 59' 00.018" N	72° 40' 30.764" W	---
4.3	rock	Rock	2.75 m	040° 58' 54.293" N	72° 40' 38.674" W	---
4.4	rock	Rock	2.95 m	040° 58' 54.848" N	72° 40' 22.796" W	---
4.5	rock	Rock	2.29 m	040° 59' 01.192" N	72° 39' 10.831" W	---
4.6	rock	Rock	3.75 m	040° 59' 01.895" N	72° 38' 58.266" W	---
4.7	rock	Rock	3.90 m	040° 59' 02.833" N	72° 39' 01.164" W	---
4.8	rock	Rock	6.71 m	040° 59' 09.800" N	72° 40' 14.494" W	---
4.9	rock	Rock	6.85 m	040° 59' 18.769" N	72° 40' 06.682" W	---
4.10	rock	Rock	6.34 m	040° 59' 23.232" N	72° 40' 02.615" W	---
4.11	rock	Rock	5.07 m	040° 59' 42.206" N	72° 38' 52.482" W	---
4.12	OBSTN	Obstruction	5.60 m	040° 59' 45.839" N	72° 38' 44.926" W	---
4.13	OBSTN	Obstruction	5.06 m	040° 59' 48.496" N	72° 42' 40.234" W	---
4.14	OBSTN	Obstruction	4.88 m	040° 59' 47.651" N	72° 42' 41.297" W	---
4.15	WRECK	Wreck	23.52 m	041° 00' 26.176" N	72° 45' 34.145" W	---
4.16	OBSTN	Obstruction	9.40 m	040° 59' 52.703" N	72° 38' 51.429" W	---

*See appropriate feature report for Depth, Latitude and Longitude changes.*

**1.1) rock****DANGER TO NAVIGATION****Survey Summary****Survey Position:** ~~-040° 59' 04.059" N, 72° 39' 24.203" W~~ **40° 59' 04.060" N, 72° 39' 24.146" W****Least Depth:** ~~-2.52 m~~ **2.54m****Timestamp:** 2004-269.16:34:36.551 (09/25/2004)**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 153\_1634**Profile/Beam:** 186/172**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1**Remarks:**

200% sidescan was aquired over this position. A MBES investigation resulted in a least depth sounding on a rock. The feature poses a danger to navigation. Dton submitted 27 March 2005.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/153_1634	186/172	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-269/626_1307	0001	3.55	081.1	Secondary
b370_tj_04_h11360t/1005_100/2004-258/249_1443	0001	3.56	278.2	Secondary
b370_tj_04_h11360t/1005_100/2004-258/247_1549	0001	6.66	077.8	Secondary

**Hydrographer Recommendations**

Chart as per digital data. **Concur. Chart 8 Rk and danger curve as shown in the present survey location.**

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

8ft (12358\_1, 12354\_1)

1 ¼fm (12300\_1, 13006\_1, 13003\_1)

2.5m (5161\_1)

**S-57 Data****Geo object 1:** Sounding (SOUNDG)

**Attributes:** INFORM - 200% sidescan was aquired over this position. A MBES investigation resulted in a least depth sounding on a rock. The feature poses a danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - 200% sidescan was aquired over this position. A MBES investigation resulted in a least depth sounding on a rock. The feature poses a danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~2.52m~~ **2.54m**

WATLEV - 3:always under water/submerged

**1.2) rock****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** ~~040° 58' 59.849" N, 72° 40' 40.542" W~~ **40° 58' 59.847" N, 72° 40' 40.604" W**  
**Least Depth:** ~~2.06 m~~ **2.12 m**  
**Timestamp:** 2004-269.14:43:25.883 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 132\_1442  
**Profile/Beam:** 153/7  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

200% sidescan was acquired over this position. A MBES investigation resulted in a least depth sounding on a rock. The feature poses a danger to navigation. Dton submitted 27 March 2005.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/132_1442	153/7	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-269/627_1322	0002	3.38	298.2	Secondary
b370_tj_04_h11360t/1005_100/2004-258/247_1550	0003	6.14	086.3	Secondary
b370_tj_04_h11360t/1005_200/2004-269/602_1334	0005	7.39	095.6	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-269/602_1334	0007	11.23	019.8	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-258/247_1550	0002	12.59	019.1	Secondary (grouped)

**Hydrographer Recommendations**

Chart as per digital data. **Concur. Chart 7 Rk and danger curve as shown in the present survey location.**

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

7ft (12358\_1, 12354\_1)

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

~~2.0m~~ (5161\_1) **2.1m**

## S-57 Data

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

**Attributes:** INFORM - 200% sidescan was acquired over this position. A MBES investigation resulted in a least depth sounding on a rock. The feature poses a danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - 200% sidescan was acquired over this position. A MBES investigation resulted in a least depth sounding on a rock. The feature poses a danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~2:06m~~ **2.12m**

WATLEV - 3:always under water/submerged

**1.3) rock**

**DANGER TO NAVIGATION**

**Survey Summary**

**Survey Position:** ~~-040°-59'-16.372"-N, 72°-40'-03.779"-W~~ **40° 59' 16.329"N, 72° 40' 03.827"W**  
**Least Depth:** ~~-6.34m~~ **6.32m**  
**Timestamp:** 2004-269.17:24:26.815 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 113\_1722  
**Profile/Beam:** 673/183  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON MBES. A least depth sounding was acquired. The feature is significant and may pose a danger to navigation. Dton submitted 27 March 2005.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/113_1722	673/183	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-268/630_1237	0002	3.44	297.1	Secondary
b370_tj_04_h11360t/1005_100/2004-259/218_1449	0001	4.94	076.2	Secondary
b370_tj_04_h11360t/1005_100/2004-259/234_1627	0001	6.95	063.6	Secondary

**Hydrographer Recommendations**

Chart as per digital data. **Concur. Chart 20 Rk and danger curve as shown in the present survey location.**

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

- ~~21ft~~ **20 ft** (12358\_1, 12354\_1)
- 3 ½fm (12300\_1, 13006\_1, 13003\_1)
- 6.3m (5161\_1)

**S-57 Data**

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



**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON MBES. A least depth sounding was acquired. The feature is significant and may pose a danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

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

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON MBES. A least depth sounding was acquired. The feature is significant and may pose a danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~6:34m~~ **6.32m**

WATLEV - 3:always under water/submerged

**1.4) rock****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** ~~-040°-59'-28.988"-N, -72°-40'-00.734"-W~~ **40° 59' 28.950"N, 72° 40' 00.762"W**  
**Least Depth:** ~~6.49m~~ **6.44m**  
**Timestamp:** 2004-269.18:44:45.611 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 102\_1842  
**Profile/Beam:** 787/98  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a possible danger to navigation. Dton submitted 27 March 2005.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/102_1842	787/98	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-259/220_1742	0001	2.42	083.7	Secondary
b370_tj_04_h11360t/1005_100/2004-259/236_1927	0001	4.74	090.9	Secondary
b370_tj_04_h11360t/1005_200/2004-268/634_1434	0001	4.96	302.0	Secondary
b370_tj_04_h11360t/1005_200/2004-268/635_1459	0001	6.50	052.5	Secondary

**Hydrographer Recommendations**

Chart as per digital data. **Concur. Chart 21 Rk and danger curve as shown in the present survey location.**

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

21ft (12358\_1, 12354\_1)

3 ½fm (12300\_1, 13006\_1, 13003\_1)

~~6.5m~~ (5161\_1) **6.4m**

## S-57 Data

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

**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a possible danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a possible danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~6.49 m~~ **6.44m**

WATLEV - 3:always under water/submerged

**1.5) rock****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** ~~040° 59' 31.294" N, 72° 39' 40.945" W~~ **40° 59' 31.327" N, 72° 39' 40.916" W**  
**Least Depth:** ~~7.98 m~~ **7.96m**  
**Timestamp:** 2004-269.16:51:48.228 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 118\_1651  
**Profile/Beam:** 179/90  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a potential danger to navigation. Dton submitted 27 March 2005.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/118_1651	179/90	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-259/221_1845	0001	2.81	272.7	Secondary
b370_tj_04_h11360t/1005_100/2004-259/236_1926	0003	3.49	077.1	Secondary
b370_tj_04_h11360t/1005_200/2004-268/636_1532	0001	4.92	318.4	Secondary
b370_tj_04_h11360t/1005_200/2004-268/635_1458	0003	6.97	082.5	Secondary

**Hydrographer Recommendations**

Chart as per digital data. **Concur. Chart 26 Rk and danger curve as shown in the present survey location.**

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

26ft (12358\_1, 12354\_1)

4 ¼fm (12300\_1, 13006\_1, 13003\_1)

8.0m (5161\_1)

## S-57 Data

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

**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a potential danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a potential danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~7.98m~~ **7.96m**

WATLEV - 3:always under water/submerged

**1.6) rock****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** ~~040°-59'-03.484"-N, 72°-40'-19.220"-W~~ **40° 59' 03.495"N, 72° 40' 19.159"W**  
**Least Depth:** ~~5.18m~~ **5.26m**  
**Timestamp:** 2004-269.15:28:42.854 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 123\_1527  
**Profile/Beam:** 263/182  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a potential danger to navigation. Dton submitted 27 March 2005.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/123_1527	263/182	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-259/223_1400	0001	5.26	258.1	Secondary
b370_tj_04_h11360t/1005_200/2004-269/627_1322	0001	6.21	260.8	Secondary
b370_tj_04_h11360t/1005_200/2004-269/626_1308	0001	6.98	067.6	Secondary

**Hydrographer Recommendations**

Chart as per digital data. **Concur. Chart 17 Rk and danger curve as shown in the present survey location.**

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

17ft (12358\_1, 12354\_1)

2 ¾fm (12300\_1, 13006\_1, 13003\_1)

~~5.2m~~(5161\_1) **5.3m**

**S-57 Data**

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

**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a potential danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature poses a potential danger to navigation. Dton submitted 27 March 2005.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~5.18m~~ **5.26m**

WATLEV - 3:always under water/submerged

## 2.1) AWOIS #11391

### Primary Feature for AWOIS Item #11391

**Search Position:** 040° 59' 58.240" N, 72° 38' 49.200" W  
**Historical Depth:** [None]  
**Search Radius:** 0  
**Search Technique:** ES,S2,MB,DI,SD  
**Technique Notes:** Where feasible, search the area per the AWOIS graphic (i.e., along a line between the coordinates defined below with a 100m buffer)

#### History Notes:

CL902/56 -- 10/31/56, USC DRAWING PLANS OF SUBMARINE PIPELINES EXTENDING FROM OIL TANKER LOADING AND UNLOADING PLATFORM SHOREWARD TO TANKER. NOTE: PIPELINES HAVE CONCRETE PIPE ANCHORS TO OVERCOME BOUYANCY. PIPELINES SCALED FROM 12358; LAT 40-59-58.24N, LONG 072-38-49.20W (NAD 83) STRAIGHT TO LAT 40-58-55.27N, LONG 072-38-39.05W (NAD 83). (ENT 02/02, PSH)

### Survey Summary

**Survey Position:** 040° 59' 03.991" N, 72° 38' 40.706" W  
**Least Depth:** [None]  
**Timestamp:** 2004-270.12:37:37 (09/26/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1005\_200 / 2004-269 / 626\_1307  
**Contact/Point:** 0003/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The group of features are SSS contacts of the concrete pipe anchors used to anchor the charted pipeline servicing the TOSCO Riverhead platform. The pipeline was imaged with KLEIN 5000 SSS and extensive RESON MBES was acquired over the pipeline as well (exceeding the suggested 100m buffer around the AWOIS item). The concrete pipe anchors are clearly evident in the bathymetry as well as in the SSS. The positioning of the pipeline on Chart 12354 closely agrees with the digital data acquired in the field. *The survey position is the southern end of the eastern one of two pipelines.*

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1005_200/2004-269/626_1307	0003	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-269/626_1307	0002	6.29	090.1	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/232_1345	0003	6.45	359.8	Secondary (grouped)



b370_tj_04_h11360t/1005_200/2004-269/625_1241	0001	11.24	214.5	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/217_1311	0002	11.75	170.5	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/217_1311	0003	12.62	289.0	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-269/625_1241	0002	15.97	354.6	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/232_1345	0002	16.31	104.3	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/217_1311	0001	29.86	177.6	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/628_1831	0001	32.55	166.8	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/628_1831	0002	35.08	154.6	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/233_1426	0001	77.54	176.2	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/233_1426	0002	77.64	168.8	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/630_1238	0001	287.02	172.6	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/631_1302	0001	288.00	170.6	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/234_1626	0001	291.73	170.9	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/630_1238	0002	292.56	174.5	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/234_1626	0002	295.68	172.6	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/631_1302	0002	297.19	172.3	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/219_1543	0001	330.17	174.3	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/219_1543	0002	331.75	171.8	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/632_1333	0001	356.19	174.0	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/632_1333	0002	358.85	172.0	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/235_1719	0002	466.40	172.2	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/633_1358	0001	471.56	171.2	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/633_1358	0002	474.57	173.1	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/235_1719	0001	474.91	174.2	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/220_1741	0002	509.10	173.1	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/220_1741	0001	510.68	171.5	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/634_1435	0001	549.39	174.1	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/634_1435	0002	552.63	172.4	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/236_1926	0002	591.57	173.2	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/236_1926	0001	623.68	171.9	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/635_1458	0002	636.51	173.1	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/635_1458	0001	637.74	171.9	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/221_1845	0002	678.78	173.8	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-259/221_1845	0003	679.78	172.8	Secondary (grouped)
b370_tj_04_h11360t/1005_200/2004-268/636_1533	0001	719.89	173.8	Secondary (grouped)

b370_tj_04_h11360t/1005_200/2004-268/636_1533	0002	720.77	172.9	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/237_1730	0001	760.40	172.4	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/237_1730	0002	760.44	173.1	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/222_1636	0001	850.66	172.6	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/222_1636	0002	864.17	173.2	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/238_1705	0001	924.67	173.7	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/238_1705	0002	926.73	173.2	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/224_1762	0002	1008.67	173.3	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/224_1762	0001	1008.69	173.7	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-266/239_1318	0002	1084.70	173.7	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-266/239_1318	0001	1085.96	173.4	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/224_1762	0003	1145.84	173.6	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-266/225_1345	0003	1171.97	173.4	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-266/225_1345	0004	1173.74	173.1	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-266/240_1431	0001	1258.44	173.7	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-266/240_1431	0002	1259.32	173.3	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/226_1243	0001	1362.28	173.9	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/226_1243	0003	1413.94	172.6	Secondary (grouped)
opr-b370-tj-04_awois	AWOIS # 11391	1570.05	173.1	Secondary (grouped)

## Hydrographer Recommendations

Chart as per digital data. ***Do not concur. The difference between the surveyed and charted positions of the pipelines is invisible at chart scale. Retain pipelines as charted.***

### S-57 Data

**Geo object 1:** Pipeline, submarine/on land (PIPSOL)

**Attributes:** CATPIP - 6:supply pipe

INFORM - The group of features are SSS contacts of the concrete pipe anchors used to anchor the charted pipeline servicing the TOSCO Riverhead platform. The pipeline was imaged with KLEIN 5000 SSS and extensive RESON MBES was acquired over the pipeline as well (exceeding the suggested 100m buffer around the AWOIS item). The concrete pipe anchors are clearly evident in the bathymetry as well as in the SSS. The positioning of the pipeline on Chart 12354 closely agrees with the digital data acquired in the field.

PRODCAT - 1:oil

STATUS - 1:permanent; 8:private

## 2.2) AWOIS #2639

### Primary Feature for AWOIS Item #2639

**Search Position:** 040° 59' 06.540" N, 72° 45' 01.910" W

**Historical Depth:** 17.30 m

**Search Radius:** 100

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

**Technique Notes:** [None]

#### History Notes:

FE340SS/89--OPR-B660-HE; SIDE SCAN SONAR / DIVER INVEST. DISCOVERED AN ALUMINUM HULL AIRPLANE IN POS. LAT.41-59-06.54, LONG.72-45-01.91W (NAD 83) WITH A LEAST DEPTH OF 56.8 FT (17.3M). LORAN RATES: CHAIN 9960, W-15016.1, X-26452.6, Y-43903.8, Z-?. (UPDATED 8/92 MCR) DESCRIPTION 195 LORAN C RATES: 9960-X 26450.1; 9960-Y 43903.7; 9960-Z 60052.6; FOR FURTHER INFORMATION, CONTACT MR. RICHARD TARACKA GREENWICH, CT. POLICE DEPARTMENT, TEL NO.(203)622-8007.

### Survey Summary

**Survey Position:** ~~040° 59' 06.678" N, 72° 45' 01.393" W~~ **40° 59' 06.743" N, 72° 45' 01.408" W**

**Least Depth:** ~~16.93 m~~ **17.03m**

**Timestamp:** 2004-267.13:23:07.333 (09/23/2004)

**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-267 / 792\_1322

**Profile/Beam:** 306/240

**Charts Affected:** 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

This feature was imaged with 200% sidescan and investigated with MBES. A least depth sounding over the charted obstruction was acquired.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-267/792_1322	306/240	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-258/216_1950	0002	4.24	094.8	Secondary
opr-b370-tj-04_awois	AWOIS # 2639	12.81	070.6	Secondary

## Hydrographer Recommendations

Chart as per digital data. *Concur. Revise 56 Obstrn and danger curve to the present survey location.*

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

~~55ft~~ (12354\_1) *56ft*

9 ¼fm (12300\_1, 13006\_1, 13003\_1)

~~16.9m~~ (5161\_1) *17.0m*

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** CATOBS - 7:foul ground

INFORM - This feature was imaged with 200% sidescan and investigated with MBES. A least depth sounding over the charted obstruction was acquired.

NATCON - 4:hard surfaced

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~16.93 m~~ *17.03m*

WATLEV - 3:always under water/submerged

**Geo object 2:** Sounding (SOUNDG)

**Attributes:** INFORM - This feature was imaged with 200% sidescan and investigated with MBES. A least depth sounding over the charted obstruction was acquired.

QUASOU - 6:least depth known

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

## 2.3) AWOIS #11389

### Primary Feature for AWOIS Item #11389

**Search Position:** 041° 00' 00.140" N, 72° 38' 53.410" W

**Historical Depth:** [None]

**Search Radius:** 50

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

**Technique Notes:** Verify position.

#### History Notes:

S-B600-RU -- THE DOLPHIN WAS LOCATED USING SSS IN POSITION: 41/00/01.00 N, 072/38/47.41 W, NAD 83 [ENT 7/21/04, JCM]. CL1568/72--ACOE; WORK HAS COMMENCED ON THE CONSTRUCTION OF AN OIL TANKER LOADING AND UNLOADING PLATFORM AND FOUR BREASTING DOLPHINS IN WAY OF THE OFFSHORE TANKER BERTH AT THE SEAWARD EXTREMITY OF THE SUBMARINE PIPELINES (4100'00" N., 7238'52" W.) CL956/73--ACOE; WORK DESCRIBED IN CL 1568/72 HAS BEEN COMPLETED AS OF 9 JULY 1973. THE FOUR BREASTING DOLPHINS, TWO IN THE NORTH BERTH AND TWO IN THE SOUTH BERTH, WILL BE MARKED WITH WHITE REFLECTOR TAPE ON THE EXPOSED PILINGS ABOVE THE HIGH WATER MARK. EACH BAND OF RETRO-REFLECTIVE TAPE WILL BE 6" WIDE AND TAPED ENTIRELY AROUND THE PILING. H10930/99--OPR-B352-RU; THE SOUTHWEST DOLPHIN'S CALCULATED POSITION OF 4100'00.14"N, 07238'53.41"W IS LOCATED 50 METERS SOUTHWEST OF THE CHARTED (CHART NO. 12354) POSITION AT 4100'00.30"N, 07238'51.71"W. THE DETACHED POSITION WAS TAKEN AT A RANGE OF 2 METERS AND A BEARING OF 233.5T. IN THE VICINITY OF THE FOUR CHARTED (CHART NO. 12358) DOLPHINS IN: LAT 4100'02.15"N, LONG 7238'49.50"W LAT 4100'02.05"N, LONG 7238'45.20"W LAT 4100'00.80"N, LONG 7238'46.20"W LAT 4100'00.80"N, LONG 7238'48.85"W THE PRESENT SURVEY COVERED THE AREA WITH 200% SIDE SCAN SONAR AND MULTIBEAM SOUNDING OPERATIONS. THIS DATA WAS REVIEWED DURING OFFICE PROCESSING AND NO INDICATION OF VISIBLE OR SUBMERGED DOPHINS WAS DETECTED. ALSO, IT WAS ASCERTAINED FROM THE HYDROGRAPHER THAT THE CHARTED DOLPHINS ARE ACTUALLY SUPPORTS FOR A NEAR BY PLATFORM. (ENT 02/02, PSH)

### Survey Summary

**Survey Position:** ~~040° 59' 59.942" N, 72° 38' 53.153" W~~

**Least Depth:** [None]

**Timestamp:** 2004-268.15:42:06.000 (09/24/2004)

**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004

**Profile/Beam:** 11/1

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

**Remarks:**

The feature is a dolphin located on the western side of the TOSCO Corporation Riverhead Terminal. The feature is assigned AWOIS #11389. DP's were taken approximately 3 - 5 meters from the corner pilings of the dolphin. Imagery of the dolphin was acquired by KLEIN 5000 SSS. See Chartlet at the end of Appendix I.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	11/1	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-267/242_1537	0001	5.96	271.9	Secondary
b370_tj_04_h11360t/1005_100/2004-267/227_1511	0003	8.11	027.1	Secondary
opr-b370-tj-04_awois	AWOIS # 11389	8.58	135.6	Secondary
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	10/1	15.91	170.7	Secondary (grouped)
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	8/1	26.44	261.8	Secondary (grouped)
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	9/1	29.91	214.5	Secondary (grouped)

### Hydrographer Recommendations

Chart as per digital data. *Do not concur. Delete dolphin and notation "Dols". See item 4.18 of the Features Reports for additional information.*

#### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)

**Attributes:** CATMOR - 1:dolphin

COLOUR - 7:grey

CONRAD - 1:radar conspicuous

INFORM - The feature is a dolphin located on the western side of the TOSCO Corporation Riverhead Terminal. The feature is assigned AWOIS #11389. DP's were taken approximately 3 - 5 meters from the corner pilings of the dolphin. Imagery of the dolphin was acquired by KLEIN 5000 SSS. See Chartlet at the end of Appendix I.

STATUS - 1:permanent; 8:private

WATLEV - ~~1:partly submerged at high water~~ **2: always dry**

**Geo object 2:** Obstruction (OBSTRN)

**Attributes:** INFORM - The feature is a dolphin located on the western side of the TOSCO Corporation Riverhead Terminal. The feature is assigned AWOIS #11389. DP's were taken approximately 3 - 5 meters from the corner pilings of the dolphin. Imagery of the dolphin was acquired by KLEIN 5000 SSS. See Chartlet at the end of Appendix I.

NATCON - 4:hard surfaced; 6:wooden; 7:metal

QUASOU - ~~1:depth known; 6:least depth known~~ **2: depth unknown; baring feature**

STATUS - 1:permanent; 8:private

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

VALSOU - m

WATLEV - ~~1: partly submerged at high water~~ **2: always dry**





## 2.4) AWOIS #11390

### Primary Feature for AWOIS Item #11390

**Search Position:** 041° 00' 02.120" N, 72° 38' 42.530" W

**Historical Depth:** [None]

**Search Radius:** 50

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

**Technique Notes:** Verify position.

#### History Notes:

THIS ITEM WAS INVESTIGATED BY NOAA SHIP RUDE WHILE PERFORMING HOMELAND SECURITY SURVEY S-B600. THE DOLPHIN WAS LOCATED USING SSS IN POSITION: 41/00/02.71 N, 072/38/43.70 W, NAD 83 [ENT 7/21/04, JCM]. CL1568/72--ACOE; WORK HAS COMMENCED ON THE CONSTRUCTION OF AN OIL TANKER LOADING AND UNLOADING PLATFORM AND FOUR BREASTING DOLPHINS IN WAY OF THE OFFSHORE TANKER BERTH AT THE SEAWARD EXTREMITY OF THE SUBMARINE PIPELINES (4100'00" N., 7238'52" W.) CL956/73--ACOE; WORK DESCRIBED IN CL 1568/72 HAS BEEN COMPLETED AS OF 9 JULY 1973. THE FOUR BREASTING DOLPHINS, TWO IN THE NORTH BERTH AND TWO IN THE SOUTH BERTH, WILL BE MARKED WITH WHITE REFLECTOR TAPE ON THE EXPOSED PILINGS ABOVE THE HIGH WATER MARK. EACH BAND OF RETRO-REFLECTIVE TAPE WILL BE 6" WIDE AND TAPED ENTIRELY AROUND THE PILING. H10930/99--OPR-B352-RU; THE NORTHEAST DOLPHIN'S CALCULATED POSITION AT 4100'00.21"N, 07238'42.53"W IS LOCATED 50 METERS NORTHEAST OF THE CHARTED (CHART NO. 12354) POSITION OF 4100'00.59"N, 07238'43.00"W. THE DETACHED POSITION WAS TAKEN AT A RANGE OF 15 METERS AND A BEARING OF 289T. IN THE VICINITY OF THE FOUR CHARTED (CHART NO. 12358) DOLPHINS IN: LAT 4100'02.15"N, LONG 7238'49.50"W LAT 4100'02.05"N, LONG 7238'45.20"W LAT 4100'00.80"N, LONG 7238'46.20"W LAT 4100'00.80"N, LONG 7238'48.85"W THE PRESENT SURVEY COVERED THE AREA WITH 200% SIDE SCAN SONAR AND MULTIBEAM SOUNDING OPERATIONS. THIS DATA WAS REVIEWED DURING OFFICE PROCESSING AND NO INDICATION OF VISIBLE OR SUBMERGED DOPHINS WAS DETECTED. ALSO, IT WAS ASCERTAINED FROM THE HYDROGRAPHER THAT THE CHARTED DOLPHINS ARE ACTUALLY SUPPORTS FOR A NEAR BY PLATFORM. (ENT 02/02, PSH)

### Survey Summary

**Survey Position:** ~~041° 00' 02.120" N, 72° 38' 42.530" W~~

**Least Depth:** [None]

**Timestamp:** 2004-268.15:58:34.000 (09/24/2004)

**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004

**Profile/Beam:** 16/1

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

**Remarks:**



The feature is a dolphin located on the eastern side of the TOSCO Corporation Riverhead Terminal. The feature is assigned AWOIS #11390. DP's were taken approximately 3 - 5 meters from the corner pilings of the dolphin. Imagery of the dolphin was acquired by KLEIN 5000 SSS. See Chartlet at the end of Appendix I.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	16/1	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-267/242_1537	0006	2.04	350.4	Secondary
opr-b370-tj-04_awois	AWOIS # 11390	14.32	308.2	Secondary
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	17/1	14.47	156.3	Secondary (grouped)
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	19/1	22.55	070.1	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/231_1624	0001	23.46	076.2	Secondary
b370_tj_04_h11360t/1005_100/2004-265/228_1941	0001	25.51	105.4	Secondary
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	18/1	26.26	101.5	Secondary (grouped)

### Hydrographer Recommendations

Chart as per digital data. ***Do not concur. Delete dolphin. See item 4.17 of the Features Reports for additional information.***

### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)

**Attributes:** CATMOR - 1:dolphin

COLOUR - 7:grey; 8:brown

CONRAD - 1:radar conspicuous

INFORM - The feature is a dolphin located on the eastern side of the TOSCO Corporation Riverhead Terminal. The feature is assigned AWOIS #11390. DP's were taken approximately 3 - 5 meters from the corner pilings of the dolphin. Imagery of the dolphin was acquired by KLEIN 5000 SSS. See Chartlet at the end of Appendix I.

STATUS - 1:permanent

WATLEV - ~~1:partly submerged at high water~~ ***2: always dry***

**Geo object 2:** Obstruction (OBSTRN)

**Attributes:** INFORM - The feature is a dolphin located on the eastern side of the TOSCO Corporation Riverhead Terminal. The feature is assigned AWOIS #11390. DP's were taken approximately 3 - 5 meters from the corner pilings of the dolphin. Imagery of the dolphin was acquired by KLEIN 5000 SSS. See Chartlet at the end of Appendix I.

NATCON - 4:hard surfaced; 6:wooden; 7:metal

QUASOU - ~~1:depth known; 6:least depth known~~ ***2: depth unknown; baring feature***

STATUS - 1:permanent; 8:private

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

VALSOU - m

WATLEV - ~~1:partly submerged at high water~~ **2: *always dry***



## 2.5) AWOIS #2638

### Primary Feature for AWOIS Item #2638

**Search Position:** 040° 58' 30.350" N, 72° 43' 22.350" W

**Historical Depth:** [None]

**Search Radius:** 50

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

**Technique Notes:** [None]

#### History Notes:

T-12399 (1965) -- VISIBLE WRECK NOW CHARTED IN POSITION 4058'30.70" N 07243'21.29" W NAD83 [ENT 7/21/04 JCM].

### Survey Summary

**Survey Position:** 040° 58' 40.082" N, 72° 43' 29.950" W

**Least Depth:** [None]

**Timestamp:** 2004-268.17:27:26.000 (09/24/2004)

**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004

**Profile/Beam:** 23/1

**Charts Affected:** 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

This DP was taken to position AWOIS Item # 2638. The wreck is visible on or near the shore. The launch was maneuvered as close to the shore as safety would allow and was perpendicular to the shore when the DP was taken.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	23/1	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 2638	349.31	329.5	Secondary (grouped)

### Hydrographer Recommendations

Further investigation and shoreline verification is recommended to verify the precise position of the wreck. Until such a time, the hydrographer recommends retaining the AWOIS item as charted. *Concur.*

## S-57 Data

**Geo object 1:** Wreck (WRECKS)

**Attributes:** CATWRK - 5:wreck showing any portion of hull or superstructure

INFORM - This DP was taken to position AWOIS Item # 2638. The wreck is visible on or near the shore. The launch was maneuvered as close to the shore as safety would allow and was perpendicular to the shore when the DP was taken.

VALSOU - m

WATLEV - 1:partly submerged at high water



## 2.6) AWOIS #11392

### Primary Feature for AWOIS Item #11392

**Search Position:** 040° 59' 44.230" N, 72° 38' 45.460" W  
**Historical Depth:** [None]  
**Search Radius:** 200  
**Search Technique:** ES,S2,MB,DI,SD  
**Technique Notes:** [None]

**History Notes:**

CL75/61--01/30/61, NORTHVILLE DOCK CORPORATION; APPROXIMATELY 740 YARDS INSHORE FROM THE SPAR BUOY MARKING THE TERMINUS OF THE 24" SUBMERGED PIPELINES FIVE LARGE ROCKS HAVING ONLY 11 FEET OF WATER OVER THEM AT MLW WERE DISCOVERED. ROCKS ARE AT PRESENT MARKED WITH A BLACK CAN BUOY LOCATED 8,100 YARDS AND 246 DEGREES TRUE FROM MATTITUCK B W LIGHT. (ENT 02/02, PSH)

### Survey Summary

**Survey Position:** 040° 59' 44.449" N, 72° 38' 46.569" W  
**Least Depth:** [None]  
**Timestamp:** 2005-075.20:04:02 (03/16/2005)  
**GP Dataset:** ChartGPs - Digitized  
**GP No.:** 1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

100% MBES from a RESON 8125 and 200% SSS from a KLEIN 5000 were acquired over the entire AWOIS radius. No significant rocks were found within the AWOIS radius. The charted black can buoy was not present in the survey area.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	1	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 11392	26.76	284.7	Secondary (grouped)

## Hydrographer Recommendations

Chart as per digital data. Remove black can buoy from the chart.

*Concur with clarification. Delete buoy and notations "Rks rep", "Priv" and "C "3"". See also Item 3.7 of the Features Reports for additional information. Chart present survey soundings.*

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** INFORM - 100% MBES from a RESON 8125 and 200% SSS from a KLEIN 5000 were acquired over the entire AWOIS radius. No significant rocks were found within the AWOIS radius. The charted black can buoy was not present in the survey area.

NATCON - 3:loose boulders; 4:hard surfaced

QUASOU - 1:depth known; 6:least depth known

STATUS - 1:permanent

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

VALSOU - m

WATLEV - 3:always under water/submerged

**Geo object 2:** Sounding (SOUNDG)

**Attributes:** INFORM - 100% MBES from a RESON 8125 and 200% SSS from a KLEIN 5000 were acquired over the entire AWOIS radius. No significant rocks were found within the AWOIS radius. The charted black can buoy was not present in the survey area.

QUASOU - 1:depth known; 6:least depth known

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



## 2.7) AWOIS # 12524

### Primary Feature for AWOIS Item #12524

**Search Position:** 040° 59' 12.920" N, 72° 38' 33.350" W  
**Historical Depth:** [None]  
**Search Radius:** 200  
**Search Technique:** ES, S2, MB, SD  
**Technique Notes:** INVESTIGATE SHOALING TRENDS IN THIS AREA

#### History Notes:

UNKNOWN SOURCE -- SHOALING REPORTED. NOW CHARTED IN POSITION 4059'12.92" N 07238'33.35" W [NAD 83] [ENTERED 7/21/04 JCM].

### Survey Summary

**Survey Position:** 040° 59' 12.920" N, 72° 38' 33.350" W  
**Least Depth:** [None]  
**Timestamp:** 2005-079.01:18:22 (03/20/2005)  
**GP Dataset:** ChartGPs - Digitized  
**GP No.:** 2  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Entire AWOIS radius not investigated. Feature will be fully investigated on Sheet R.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	2	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 12524	0.00	000.0	Secondary (grouped)

### Hydrographer Recommendations

Retain as charted until a complete investigation can be made. *Concur.*



**S-57 Data**

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

**Attributes:** INFORM - Entire AWOIS radius not investigated. Feature will be fully investigated on Sheet R.

QUASOU - 8:value reported (not surveyed); 9:value reported (not confirmed)

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

## 2.8) AWOIS #10600

### Primary Feature for AWOIS Item #10600

**Search Position:** 040° 59' 53.240" N, 72° 38' 49.190" W

**Historical Depth:** 8.84 m

**Search Radius:** 0

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

**Technique Notes:** [None]

#### History Notes:

S-B600-RU -- THIS 29-FOOT MOORING BUOY BLOCK WAS LOCATED WITH SSS IN POSITION: 4159'53.24" N 07238'49.14" W [NAD 83]. HYDROGRAPHER RECOMMENDATION: RETAIN AS CHARTED [ENT 7/23/04, JCM] H10930/99-- OPR-B352-RU; OBSTRUCTION LOCATED DURING SWMB OPERATIONS. LD OF 29 FEET LOCATED IN LAT. 40-59-53.24N, LONG. 72-38-49.19W (BUOY BLOCK). EVALUATOR RECOMMENDS CHARTING A 29 OBSTN AS SURVEYED. (ENT 4/28/00, SJV)

### Survey Summary

**Survey Position:** ~~-040°-59'-53.267"-N,-72°-38'-49.251"-W~~ **40° 59' 53.274"N, 72° 38' 49.195"W**

**Least Depth:** ~~8.38 m~~ **8.57m**

**Timestamp:** 2004-265.18:58:16.917 (09/21/2004)

**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-265 / 322\_1857

**Profile/Beam:** 303/41

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

#### Remarks:

The AWOIS item #10600 was imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. A least depth was acquired over the AWOIS item.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-265/322_1857	303/41	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 10600	1.66	300.7	Secondary

## Hydrographer Recommendations

Chart as per digital data. *Concur. Chart 28 Obstrn and danger curve as shown in the present survey location.*

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

~~27ft~~ (12358\_1, 12354\_1) *28ft*

4 ½fm (12300\_1, 13006\_1, 13003\_1)

~~8.4m~~ (5161\_1) *8.6m*

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** INFORM - The AWOIS item #10600 was imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. A least depth was acquired over the AWOIS item.

NATCON - 1:masonry; 4:hard surfaced

QUASOU - 1:depth known; 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~8.38m~~ *8.57m*

WATLEV - 3:always under water/submerged

**Geo object 2:** Sounding (SOUNDG)

**Attributes:** INFORM - The AWOIS item #10600 was imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. A least depth was acquired over the AWOIS item.

QUASOU - 1:depth known; 6:least depth known

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

## 2.9) AWOIS #10599

### Primary Feature for AWOIS Item #10599

**Search Position:** 040° 59' 53.440" N, 72° 38' 54.770" W  
**Historical Depth:** 9.45 m  
**Search Radius:** 0  
**Search Technique:** ES,S2,MB,DI,SD  
**Technique Notes:** [None]

**History Notes:**

S-B600-RU -- THIS MOORING BUOY BLOCK WAS LOCATED WITH SSS IN POSITION: 4059'33.44" N 07238'54.77" W [NAD 83]. HYDROGRAPHER RECOMMENDATION: RETAIN AS CHARTED [ENT 7/21/04, JCM] H10930/99-- OPR-B352-RU; UNCHARTED OBSTRUCTION LOCATED DURING SWMB OPERATIONS . LD OF 31 FEET IN LAT. 40-59-53.44N, LONG. 72-38-54.77W. LABELED "BUOY BLOCK" ON SMOOTH SHEET. EVALUATOR RECOMMENDS CHARTING A 31 OBSTN AS SURVEYED. (ENT 4/28/00, SJV)

### Survey Summary

**Survey Position:** ~~040° 59' 53.337" N, 72° 38' 54.739" W~~ **40°59'53.336"N, 72°38'54.686"W**  
**Least Depth:** ~~9.31m~~ **9.50m**  
**Timestamp:** 2004-265.18:58:44.963 (09/21/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-265 / 322\_1857  
**Profile/Beam:** 444/27  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is an obstruction imaged with a KLEIN 5000 SSS with RESON 8125 MBES bathymetry. The feature is AWOIS item # 10599. A least depth sounding over the obstruction was acquired.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-265/322_1857	444/27	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 10599	3.27	167.3	Secondary
b370_tj_04_h11360t/1005_100/2004-267/226_1243	0005	5.68	271.5	Secondary

## Hydrographer Recommendations

Chart as per digital data. *Concur. Chart 31 Obstrn and danger curve as shown in the present survey location.*

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

~~30~~ft (12358\_1, 12354\_1) *31ft*

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

~~9.5~~m (5161\_1) *9.5m*

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** INFORM - The feature is an obstruction imaged with a KLEIN 5000 SSS with RESON 8125 MBES bathymetry. The feature is AWOIS item # 10599. A least depth sounding over the obstruction was acquired.

NATCON - 1:masonry

OBJNAM - AWOIS #10599

QUASOU - 6:least depth known

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

VALSOU - ~~9.51~~m *9.50m*

WATLEV - 3:always under water/submerged

**Geo object 2:** Sounding (SOUNDG)

**Attributes:** INFORM - The feature is an obstruction imaged with a KLEIN 5000 SSS with RESON 8125 MBES bathymetry. The feature is AWOIS item # 10599. A least depth sounding over the obstruction was acquired.

QUASOU - 6:least depth known

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

**2.10) AWOIS #10598****Primary Feature for AWOIS Item #10598****Search Position:** 040° 59' 57.350" N, 72° 38' 37.000" W**Historical Depth:** 9.75 m**Search Radius:** 0**Search Technique:** ES,S2,MB,DI,SD**Technique Notes:** [None]**History Notes:**

S-B600-RU -- THIS MOORING BUOY BLOCK WAS LOCATED WITH SSS IN POSITION: 4049'57.35" N 07238'37.00" W [NAD 83]. HYDROGRAPHER RECOMMENDATION: REVISE "33 OBSTN" TO "32 OBSTN". [ENT 7/23/04, JCM] H10930/99-- OPR-B352-RU; UNCHARTED OBSTRUCTION LOCATED DURING OFFICE PROCESSING IN LAT. 40-59-57.35N, LONG. 72-38-37.00W WITH A LD OF 33 FEET (10.0 METERS). EVALUATOR RECOMMENDS CHARTING A 33 OBSTN AS SURVEYED. (ENT 4/28/00, SJV)

**Survey Summary****Survey Position:** ~~040° 59' 57.350" N, 72° 38' 37.000" W~~ **40° 59' 57.299"N, 72° 38' 37.018"W****Least Depth:** ~~9.62m~~ **9.81m****Timestamp:** 2004-287.13:20:46.139 (10/13/2004)**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-287 / 686\_1320**Profile/Beam:** 60/87**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1**Remarks:**

The feature is a mooring block imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. The feature is assigned AWOIS #10598. A least depth sounding was acquired.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-287/686_1320	60/87	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 10598	1.95	217.2	Secondary
b370_tj_04_h11360t/1005_100/2004-267/241_1312	0001	3.32	107.5	Secondary
b370_tj_04_h11360t/1005_100/2004-267/227_1511	0006	4.60	091.2	Secondary
b370_tj_04_h11360t/1005_100/2004-267/241_1445	0001	5.69	279.5	Secondary

## Hydrographer Recommendations

Chart as per digital data. *Concur. Chart 32 Obstrn and danger curve as shown in the present survey location.*

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

~~31ft~~ (12358\_1, 12354\_1) *32ft*

5 ¼fm (12300\_1, 13006\_1, 13003\_1)

~~9.6m~~ (5161\_1) *9.8m*

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** INFORM - The feature is a mooring block imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. The feature is assigned AWOIS #10598. A least depth sounding was acquired.

NATCON - 1:masonry; 4:hard surfaced

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~9.62m~~ *9.81m*

WATLEV - 3:always under water/submerged

**Geo object 2:** Sounding (SOUNDG)

**Attributes:** INFORM - The feature is a mooring block imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. The feature is assigned AWOIS #10598. A least depth sounding was acquired.

QUASOU - 6:least depth known

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

**2.11) AWOIS # 12522**

**Primary Feature for AWOIS Item #12522**

**Search Position:** 040° 59' 55.200" N, 72° 38' 41.860" W  
**Historical Depth:** 9.14 m  
**Search Radius:** 50  
**Search Technique:** ES, S2, MB, SD  
**Technique Notes:** [None]

**History Notes:**

S-B600-RU -- A PREVIOUSLY UNCHARTED 30-FOOT MOORING BUOY BLOCK LOCATED WAS LOCATED WITH SIDE SCAN SONAR BY NOAA SHIP RUDE WHILE PERFORMING A HOMELAND SECURITY SURVEY IN THE LONG ISLAND SOUND. THE BLOCK IS IN POSITION: 4149'55.20" N 07238'41.86" W [NAD 83] [ENTERED 7/29/2004 JCM]

**Survey Summary**

**Survey Position:** ~~040° 59' 55.220" N, 72° 38' 41.865" W~~ **40° 59' 55.215" N, 72° 38' 41.904" W**  
**Least Depth:** ~~9.15m~~ **9.08m**  
**Timestamp:** 2004-267.18:04:14.047 (09/23/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-267 / 804\_1804  
**Profile/Beam:** 64/19  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is a mooring block imaged by KLEIN 5000 SSS with RESON 8125 MBES. The feature is assigned AWOIS # 12522. A least depth sounding was acquired.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-267/804_1804	64/19	0.00	000.0	Primary
opr-b370-tj-04_awois	AWOIS # 12522	0.63	349.1	Secondary
b370_tj_04_h11360t/1005_100/2004-267/241_1445	0003	2.92	261.5	Secondary
b370_tj_04_h11360t/1005_100/2004-267/241_1312	0003	4.10	113.2	Secondary
b370_tj_04_h11360t/1005_100/2004-267/226_1243	0002	5.88	286.5	Secondary



## Hydrographer Recommendations

Chart as per digital data. *Concur. Chart 30 Obstrn and danger curve as shown in the present survey location.*

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

30ft (12358\_1, 12354\_1)

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

9.1m (5161\_1)

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** INFORM - The feature is a mooring block imaged by KLEIN 5000 SSS with RESON 8125 MBES. The feature is assigned AWOIS # 12522. A least depth sounding was acquired.

NATCON - 1:masonry; 4:hard surfaced

QUASOU - 1:depth known; 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~9.15m~~ *9.08m*

WATLEV - 3:always under water/submerged

**Geo object 2:** Sounding (SOUNDG)

**Attributes:** INFORM - The feature is a mooring block imaged by KLEIN 5000 SSS with RESON 8125 MBES. The feature is assigned AWOIS # 12522. A least depth sounding was acquired.

QUASOU - 1:depth known; 6:least depth known

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

### 3.1) Eastern Corner of Pier

#### Survey Summary

**Survey Position:** 040° 58' 59.581" N, 72° 38' 41.850" W  
**Least Depth:** [None]  
**Timestamp:** 2004-268.14:43:58.000 (09/24/2004)  
**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004  
**Profile/Beam:** 2/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

A DP was taken approximately 20 meters east of the eastern corner of the TOSCO Corporation Riverhead Terminal pier.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	2/1	0.00	000.0	Primary
ChartGPs - Digitized	4	4.37	014.0	Secondary (grouped)

#### Hydrographer Recommendations

Chart as per digital data. *Do not concur. Pier was not adequately verified. Retain pier as charted. Not in survey area.*

#### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)  
**Attributes:** CATMOR - 3:bollard  
 COLOUR - 8:brown  
 CONRAD - 1:radar conspicuous  
 INFORM - A DP was taken approximately 20 meters east of the eastern corner of the TOSCO Corporation Riverhead Terminal pier.  
 STATUS - 1:permanent; 8:private







## 3.2) Western Edge of Pier

### Survey Summary

**Survey Position:** 040° 58' 59.462" N, 72° 38' 45.544" W  
**Least Depth:** [None]  
**Timestamp:** 2004-268.14:51:24.000 (09/24/2004)  
**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004  
**Profile/Beam:** 3/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

A DP was taken approximately 20 meters west of the western corner of the TOSCO Corporation Riverhead Terminal pier.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	3/1	0.00	000.0	Primary
ChartGPs - Digitized	5	3.84	124.0	Secondary (grouped)

### Hydrographer Recommendations

Chart as per digital data. *Do not concur. Pier was not adequately verified. Retain pier as charted. Not in survey area.*

### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)  
**Attributes:** CATMOR - 3:bollard  
 COLOUR - 8:brown  
 CONRAD - 1:radar conspicuous  
 INFORM - A DP was taken approximately 20 meters west of the western corner of the TOSCO Corporation Riverhead Terminal pier.  
 STATUS - 1:permanent; 8:private

### 3.3) Mooring buoy

#### Survey Summary

**Survey Position:** 040° 59' 57.767" N, 72° 38' 39.287" W  
**Least Depth:** [None]  
**Timestamp:** 2004-268.15:25:44.000 (09/24/2004)  
**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004  
**Profile/Beam:** 5/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

A DP was taken alongside the mooring buoy present in the survey area. The current position of the mooring buoy does not agree with the charted position. *Concur.*

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	5/1	0.00	000.0	Primary
ChartGPs - Digitized	8	9.71	019.3	Secondary (grouped)
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	6/1	10.72	026.1	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/227_1511	0007	13.37	000.7	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/241_1312	0002	16.61	350.8	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/241_1445	0004	21.64	332.8	Secondary (grouped)
b370_tj_04_h11360t/1014_mb/2004-287/686_1320	128/76	23.10	320.0	Secondary (grouped)

#### Hydrographer Recommendations

Delete charted mooring buoy and chart a mooring buoy in the surveyed position. *Concur.*

#### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)  
**Attributes:** BOYSHP - 6:barrel (tun)  
 CATMOR - 7:mooring buoy  
 COLOUR - 1:white  
 CONRAD - 1:radar conspicuous

INFORM - A DP was taken alongside the mooring buoy present in the survey area. The current position of the mooring buoy does not agree with the charted position.

STATUS - 8:private



### 3.4) Mooring buoy not present

#### Survey Summary

**Survey Position:** 040° 59' 57.377" N, 72° 38' 53.158" W  
**Least Depth:** [None]  
**Timestamp:** 2004-268.15:32:28.000 (09/24/2004)  
**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004  
**Profile/Beam:** 7/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The mooring buoy charted in this position is no longer present in the survey area.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	7/1	0.00	000.0	Primary
ChartGPs - Digitized	3	57.91	348.1	Secondary (grouped)
ChartGPs - Digitized	10	65.38	347.8	Secondary (grouped)

#### Hydrographer Recommendations

Delete charted mooring buoy. *Concur.*

#### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)  
**Attributes:** INFORM - The mooring buoy charted in this position is no longer present in the survey area.  
 STATUS - 18:existence doubtful

### 3.5) Platform - SE Corner

#### Survey Summary

**Survey Position:** 041° 00' 01.781" N, 72° 38' 46.411" W  
**Least Depth:** [None]  
**Timestamp:** 2004-268.15:56:04.000 (09/24/2004)  
**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004  
**Profile/Beam:** 15/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is the TOSCO Corporation Riverhead Terminal platform. Four DP's were used to approximate the position of the platform. See Chartlet at the end of Appendix I.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	15/1	0.00	000.0	Primary
ChartGPs - Digitized	6	2.40	153.7	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/242_1537	0004	8.46	062.4	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/231_1624	0003	9.95	066.9	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/227_1511	0005	17.69	047.9	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/228_1941	0002	24.37	168.2	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/242_1537	0005	26.22	058.9	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/228_1941	0004	28.50	129.3	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/227_1511	0001	34.99	079.6	Secondary (grouped)
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	14/1	37.35	188.9	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/227_1511	0002	37.56	038.1	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/231_1624	0002	39.76	188.5	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/231_1624	0004	41.62	114.4	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-265/228_1941	0003	50.01	099.8	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/242_1537	0003	55.74	070.4	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/227_1511	0004	65.04	065.2	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-267/242_1537	0002	79.76	088.6	Secondary (grouped)
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	12/1	87.80	070.2	Secondary (grouped)



B370_TJ_04_H11360T/1014_vb/2004-268/09242004	13/1	101.41	089.0	Secondary (grouped)
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## Hydrographer Recommendations

Chart platform as per digital data. *Do not concur. Retain platform as charted, with final charting disposition deferred to Marine Chart Division, Nautical Data Branch, Source Information Unit.*

### S-57 Data

**Geo object 1:** Offshore platform (OFSPLF)

**Attributes:** CATOFP - 9:acomodation platform

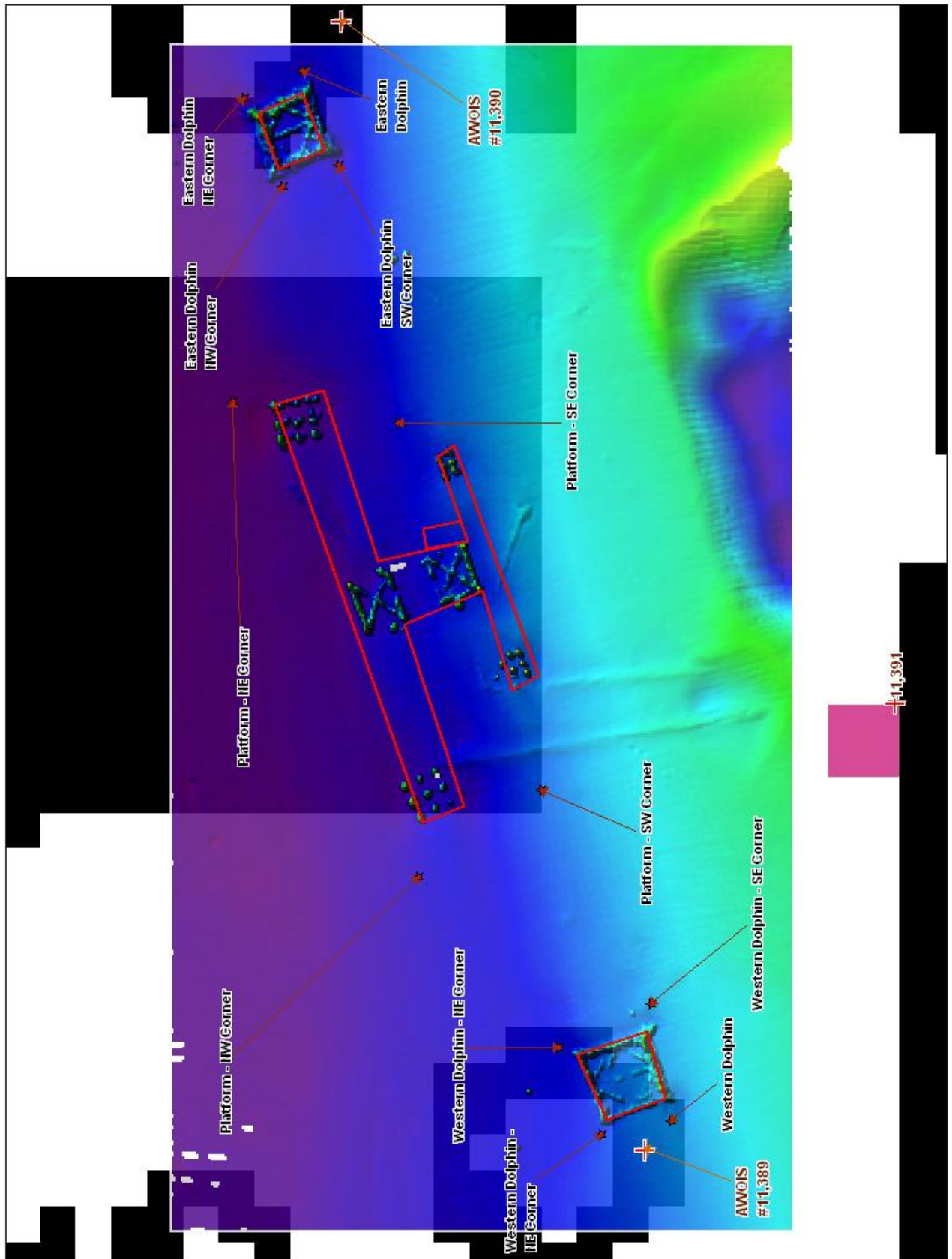
CONVIS - 1:visual conspicuous

INFORM - The feature is the TOSCO Corporation Riverhead Terminal platform. Four DP's were used to approximate the position of the platform. See Chartlet at the end of Appendix I.

OBJNAM - TASCOCORPORATION RIVERHEAD TERMINAL

PICREP - H:\ProjectData\OPR-B370-TJ-04\H11360\_T\PSS\Sheet T DP photos\Platform\_looking\_west1

STATUS - 1:permanent; 8:private



Chartlet Tosco Corporation Riverhead Platform

### 3.6) "5" green can buoy

#### Survey Summary

**Survey Position:** 041° 00' 12.215" N, 72° 42' 15.795" W  
**Least Depth:** [None]  
**Timestamp:** 2004-268.16:58:28.000 (09/24/2004)  
**DP Dataset:** B370\_TJ\_04\_H11360T / 1014\_vb / 2004-268 / 09242004  
**Profile/Beam:** 21/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

DP marking the position of the "5" green can buoy. The buoy was found as charted.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
B370_TJ_04_H11360T/1014_vb/2004-268/09242004	21/1	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-265/229_1913	0008	5.44	322.0	Secondary
ChartGPs - Digitized	7	6.50	189.4	Secondary (grouped)
b370_tj_04_h11360t/1005_100/2004-266/244_1632	0006	9.82	232.9	Secondary
b370_tj_04_h11360t/1005_200/2004-267/650_1735	0001	10.61	132.2	Secondary

#### Hydrographer Recommendations

Retain as charted. *Concur.*

#### S-57 Data

**Geo object 1:** Buoy, lateral (BOYLAT)  
**Attributes:** BOYSHP - 2:can (cylindrical)  
 COLOUR - 4:green  
 INFORM - DP marking the position of the "5" green can buoy. The buoy was found as charted.  
 OBJNAM - "5" green can buoy  
 STATUS - 1:permanent

### 3.7) Priv "3" Can

#### Survey Summary

**Survey Position:** 040° 59' 46.877" N, 72° 38' 47.596" W  
**Least Depth:** 6.36 m  
**Timestamp:** 2004-268.13:34:48.228 (09/24/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-268 / 822\_1333  
**Profile/Beam:** 375/6  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The private can "3" buoy is not present in the survey area.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-268/822_1333	375/6	0.00	000.0	Primary
ChartGPs - Digitized	11	1.91	046.3	Secondary (grouped)

#### Hydrographer Recommendations

Delete charted private can "3" buoy. *Concur with clarification. This is the same buoy discussed in Item 2.6 of the Features Reports. See Item 2.6 for additional information.*

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

21ft (12358\_1, 12354\_1)

3 ½fm (12300\_1, 13006\_1, 13003\_1)

6.3m (5161\_1)

#### S-57 Data

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

**Attributes:** CATSPM - 39:pipline mark

INFORM - The private can "3" buoy is not present in the survey area.

STATUS - 18:existence doubtful

### 3.8) Priv Can "5"

#### Survey Summary

**Survey Position:** 040° 59' 12.703" N, 72° 38' 44.028" W  
**Least Depth:** 4.18 m  
**Timestamp:** 2004-259.14:46:40.576 (09/15/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1005\_vb / 2004-259 / 233\_1423  
**Profile/Beam:** 12952/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The private "5" can buoy is not present in the survey area.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1005_vb/2004-259/233_1423	12952/1	0.00	000.0	Primary
ChartGPs - Digitized	13	4.90	170.5	Secondary (grouped)

#### Hydrographer Recommendations

Delete Priv "5" can buoy. *Concur. Also delete notations "Priv" and "C "5"."*

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

13ft (12358\_1, 12354\_1)

2 ¼fm (12300\_1, 13006\_1, 13003\_1)

4.2m (5161\_1)

#### S-57 Data

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

**Attributes:** CATSPM - 39:pipline mark

INFORM - The private "5" can buoy is not present in the survey area.

STATUS - 18:existence doubtful

## 4.1) rock

### Survey Summary

**Survey Position:** ~~040°58'58.167"N, 72°40'28.953"W~~ **40°58'58.166"N, 72°40'29.016"W**  
**Least Depth:** ~~4.16m~~ **4.26m**  
**Timestamp:** 2004-269.14:22:07.281 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 136\_1420  
**Profile/Beam:** 505/115  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

200% sidescan revealed a rock in this position. A MBES investigation resulted in a least depth sounding. The feature has a significant height.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/136_1420	505/115	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-269/602_1334	0002	5.38	074.6	Secondary
b370_tj_04_h11360t/1005_100/2004-258/247_1550	0004	5.64	108.4	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 14 Rk and danger curve in the present survey location if scale permits.**

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

~~13ft~~ (12358\_1, 12354\_1) **14ft**

2 ¼fm (12300\_1, 13006\_1, 13003\_1)

~~4.1m~~ (5161\_1) **4.3m**

### S-57 Data

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

**Attributes:** INFORM - 200% sidescan revealed a rock in this position. A MBES investigation resulted in a least depth sounding. The feature has a significant height.

QUASOU - 6:least depth known

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

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - 200% sidescan revealed a rock in this position. A MBES investigation resulted in a least depth sounding. The feature has a significant height.

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - ~~4.16m~~ **4.26m**

WATLEV - 3:always under water/submerged

## 4.2) rock

### Survey Summary

**Survey Position:** ~~040°59'00.018"N, 72°40'30.764"W~~ **40°59'00.024"N, 72°40'30.698"W**  
**Least Depth:** ~~3.76m~~ **3.87m**  
**Timestamp:** 2004-269.14:51:10.023 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 131\_1448  
**Profile/Beam:** 910/219  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

200% sidescan revealed a rock in this position. A MBES investigation resulted in a least depth sounding on a rock.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/131_1448	910/219	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-269/627_1322	0004	6.17	250.8	Secondary
b370_tj_04_h11360t/1005_200/2004-269/602_1334	0004	6.53	049.6	Secondary
b370_tj_04_h11360t/1005_200/2004-269/602_1334	0003	7.38	125.0	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 12 Rk and danger curve as shown in the present survey location.**

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

12ft (12358\_1, 12354\_1)

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

~~3.7m~~ (5161\_1) **3.87m**

### S-57 Data

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

**Attributes:** INFORM - 200% sidescan revealed a rock in this position. A MBES investigation resulted in a least depth sounding on a rock.

QUASOU - 6:least depth known



TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - 200% sidescan revealed a rock in this position. A MBES investigation resulted in a least depth sounding on a rock.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~3:76m~~ **3.87m**

WATLEV - 3:always under water/submerged

### 4.3) rock

#### Survey Summary

**Survey Position:** ~~040° 58' 54.293" N, 72° 40' 38.674" W~~ **40°58'54.333"N, 72°40'38.703"W**  
**Least Depth:** ~~2.75 m~~ **2.89m**  
**Timestamp:** 2004-287.15:16:46.671 (10/13/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-287 / 162\_1516  
**Profile/Beam:** 107/139  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-287/162_1516	107/139	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-258/249_1442	0001	2.77	219.4	Secondary

#### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 9 Rk and danger curve as shown in the present survey location.**

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

9ft (12358\_1, 12354\_1)

1 ½fm (12300\_1, 13006\_1, 13003\_1)

~~2.7m~~(5161\_1) **2.9m**

#### S-57 Data

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

**Attributes:** INFORM - Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~2.75 m~~ **2.89m**

WATLEV - 3:always under water/submerged

**4.4) rock**

**Survey Summary**

**Survey Position:** ~~-040°58'54.848"N, 72°40'22.796"W~~ **40°58'54.853"N, 72°40'22.738"W**  
**Least Depth:** ~~2.95m~~ **3.10m**  
**Timestamp:** 2004-287.15:24:26.239 (10/13/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-287 / 163\_1523  
**Profile/Beam:** 240/165  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

200% sidescan revealed a rock this positon. A MBES investigation resulted in a least depth sounding.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-287/163_1523	240/165	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-258/249_1442	0002	2.12	273.0	Secondary

**Hydrographer Recommendations**

Chart as per digital data. **Concur. Chart 10 Rk and danger curve as shown in the present survey location.**

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

~~9ft~~(12358\_1, 12354\_1) **10ft**  
 1 ½fm (12300\_1, 13006\_1, 13003\_1)  
~~2.9m~~ (5161\_1) **3.1m**

**S-57 Data**

**Geo object 1:** Sounding (SOUNDG)  
**Attributes:** INFORM - 200% sidescan revealed a rock this positon. A MBES investigation resulted in a least depth sounding.  
 QUASOU - 6:least depth known  
 TECSOU - 3:found by multi-beam  
**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:**      INFORM - 200% sidescan revealed a rock this position. A MBES investigation resulted in a least depth sounding.

                          QUASOU - 6:least depth known

                          STATUS - 1:permanent

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

                          VALSOU - ~~2.95m~~ **3.10m**

                          WATLEV - 3:always under water/submerged

## 4.5) rock

### Survey Summary

**Survey Position:** ~~040°59'01.192"N, 72°39'10.831"W~~ **40°59'01.194"N, 72°39'10.809"W**  
**Least Depth:** ~~2.29m~~ **2.41m**  
**Timestamp:** 2004-287.16:24:27.462 (10/13/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-287 / 164\_1623  
**Profile/Beam:** 151/136  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-287/164_1623	151/136	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-258/249_1443	0002	3.21	275.9	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 8 Rk and danger curve as shown in the present survey location.**

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

~~7ft~~ (12358\_1, 12354\_1) **8ft**

1 ¼fm (12300\_1, 13006\_1, 13003\_1)

~~2.3m~~ (5161\_1) **2.4m**

### S-57 Data

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

**Attributes:** INFORM - Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:**      INFORM - Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

                          QUASOU - 6:least depth known

                          STATUS - 1:permanent

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

                          VALSOU - ~~2.29m~~ **2.41m**

                          WATLEV - 3:always under water/submerged

## 4.6) rock

### Survey Summary

**Survey Position:** ~~040°59'01.895"N, 72°38'58.266"W~~ **40°59'01.888"N, 72°38'58.349"W**  
**Least Depth:** ~~3.75m~~ **3.87m**  
**Timestamp:** 2004-287.16:26:49.983 (10/13/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-287 / 165\_1625  
**Profile/Beam:** 378/177  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-287/165_1625	378/177	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-258/249_1444	0001	2.16	203.7	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 12 Rk and danger curve as shown in the present survey location.**

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

12ft (12358\_1, 12354\_1)

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

~~3.7m~~(5161\_1) **3.87m**

### S-57 Data

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

**Attributes:** INFORM - Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)



**Attributes:**      INFORM - Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

                         QUASOU - 6:least depth known

                         STATUS - 1:permanent

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

                         VALSOU - ~~3.75m~~ **3.87m**

                         WATLEV - 3:always under water/submerged

## 4.7) rock

### Survey Summary

**Survey Position:** ~~040°59'02.833"N, 72°39'01.164"W~~ **40°59'02.856"N, 72°39'01.233"W**  
**Least Depth:** ~~3.90m~~ **3.97m**  
**Timestamp:** 2004-287.16:33:00.053 (10/13/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-287 / 169\_1632  
**Profile/Beam:** 33/190  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-287/169_1632	33/190	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-258/249_1444	0002	2.47	264.6	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 13 Rk and danger curve in the present survey location if scale permits.**

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

13ft (12358\_1, 12354\_1)

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

~~3.9m~~ (5161\_1) **4.0m**

### S-57 Data

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

**Attributes:** INFORM - Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

QUASOU - 6:least depth known

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

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:**      INFORM - Feature is a rock on the water bottom imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry.

                          QUASOU - 6:least depth known

                          STATUS - 1:permanent

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

                          VALSOU - ~~3.90m~~ **3.97m**

                          WATLEV - 3:always under water/submerged

## 4.8) rock

### Survey Summary

**Survey Position:** ~~040°59'09.800"N; 72°40'14.494"W~~ **40°59'09.824"N, 72°40'14.474"W**  
**Least Depth:** ~~6.71m~~ **6.63m**  
**Timestamp:** 2004-269.17:57:15.858 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 110\_1752  
**Profile/Beam:** 1470/1  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Feature is a rock imaged with 200% SSS and investigated with MBES. A least depth sounding was acquired.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/110_1752	1470/1	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-259/217_1310	0001	4.44	252.4	Secondary
b370_tj_04_h11360t/1005_200/2004-268/628_1831	0004	5.43	084.8	Secondary
b370_tj_04_h11360t/1005_200/2004-269/625_1240	0001	6.33	286.7	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 22 Rk and danger curve as shown in the present survey location.**

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

~~-22ft~~ (12358\_1, 12354\_1) **22ft**

3 ½fm (12300\_1, 13006\_1, 13003\_1)

~~6.71m~~(5161\_1) **6.6m**

### S-57 Data

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

**Attributes:** INFORM - Feature is a rock imaged with 200% SSS and investigated with MBES. A least depth sounding was acquired.

QUASOU - 6:least depth known

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

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - Feature is a rock imaged with 200% SSS and investigated with MBES. A least depth sounding was acquired.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~6.71m~~ **6.63m**

WATLEV - 3:always under water/submerged

## 4.9) rock

### Survey Summary

**Survey Position:** ~~040°59'18.769"N, 72°40'06.682"W~~ **40°59'18.800"N, 72°40'06.656"W**  
**Least Depth:** ~~6.85m~~ **6.82m**  
**Timestamp:** 2004-269.18:08:37.767 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 108\_1805  
**Profile/Beam:** 934/58  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is a rock imaged by KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature is significant.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/108_1805	934/58	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-268/630_1237	0001	4.69	288.2	Secondary
b370_tj_04_h11360t/1005_100/2004-259/234_1627	0002	4.78	091.4	Secondary
b370_tj_04_h11360t/1005_200/2004-268/631_1303	0001	4.96	090.5	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 22 Rk and danger curve in the present survey location if scale permits.**

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

22ft (12358\_1, 12354\_1)

3 ¾fm (12300\_1, 13006\_1, 13003\_1)

6.8m (5161\_1)

### S-57 Data

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

**Attributes:** INFORM - The feature is a rock imaged by KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature is significant.

QUASOU - 6:least depth known

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

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:** INFORM - The feature is a rock imaged by KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired. The feature is significant.

QUASOU - 6:least depth known

STATUS - 1:permanent

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

VALSOU - ~~6.85m~~ **6.82m**

WATLEV - 3:always under water/submerged

## 4.10) rock

### Survey Summary

**Survey Position:** ~~040°59'23.232"N, 72°40'02.615"W~~ **40°59'23.193"N, 72°40'02.658"W**  
**Least Depth:** ~~6.34m~~ **6.32m**  
**Timestamp:** 2004-269.18:16:08.804 (09/25/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-269 / 107\_1812  
**Profile/Beam:** 1154/193  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-269/107_1812	1154/193	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-259/235_1718	0001	2.85	284.0	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 20 Rk and danger curve as shown in the present survey location.**

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

~~2 1/4~~ (12358\_1, 12354\_1) **20ft**

3 1/2fm (12300\_1, 13006\_1, 13003\_1)

6.3m (5161\_1)

### S-57 Data

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

**Attributes:** INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired.

QUASOU - 6:least depth known

TECSOU - 3:found by multi-beam

**Geo object 2:** Underwater rock / awash rock (UWTROC)



**Attributes:**      INFORM - Feature is a rock imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. A least depth sounding was acquired.

                          QUASOU - 6:least depth known

                          STATUS - 1:permanent

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

                          VALSOU - ~~6.34m~~ **6.32m**

                          WATLEV - 3:always under water/submerged

## 4.11) rock

### Survey Summary

**Survey Position:** ~~040°59'42.206"N, 72°38'52.482"W~~ **40°59'42.209"N, 72°38'52.423"W**  
**Least Depth:** ~~5.07m~~ **5.20m**  
**Timestamp:** 2004-287.13:25:13.619 (10/13/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-287 / 601\_1325  
**Profile/Beam:** 26/145  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:**

The feature is a rock imaged with KLEIN 5000 SSS with RESON 8125 MBES. A least depth sounding was acquired.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-287/601_1325	26/145	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-265/224_1762	0004	3.88	270.1	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 17 Rk and danger curve as shown in the present survey location.**

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

~~16ft~~(12358\_1, 12354\_1) **17ft**

2 ¾fm (12300\_1, 13006\_1, 13003\_1)

~~5.0m~~(5161\_1) **5.2m**

### S-57 Data

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

**Attributes:** INFORM - The feature is a rock imaged with KLEIN 5000 SSS with RESON 8125 MBES. A least depth sounding was acquired.

QUASOU - 6:least depth known

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

**Geo object 2:** Underwater rock / awash rock (UWTROC)

**Attributes:**      INFORM - The feature is a rock imaged with KLEIN 5000 SSS with RESON 8125 MBES. A least depth sounding was acquired.

                          QUASOU - 6:least depth known

                          STATUS - 1:permanent

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

                          VALSOU - ~~5.07m~~ **5.20m**

                          WATLEV - 3:always under water/submerged

## 4.12) OBSTN

### Survey Summary

**Survey Position:** ~~040°59'45.839"N, 72°38'44.926"W~~ **40°59'45.903"N, 72°38'44.927"W**  
**Least Depth:** ~~5.60m~~ **5.74m**  
**Timestamp:** 2004-268.13:47:13.751 (09/24/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-268 / 827\_1346  
**Profile/Beam:** 227/224  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Feature is an unidentified obstruction imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. The height of the obstruction is insignificant, but the nature of the material warrants a significant flag. The type of material is difficult to determine. It is logical that the obstruction is either a piece of the pipeline, the concrete pipeline anchors on either side of the pipeline, or one of the girders that was used to construct the platform.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-268/827_1346	227/224	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-266/225_1345	0002	3.18	129.3	Secondary
b370_tj_04_h11360t/1005_100/2004-266/239_1318	0003	13.17	173.9	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 19 Obstn and danger curve in the present survey location if scale permits.**

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

~~18ft~~ (12358\_1, 12354\_1) **19ft**

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

~~5.6m~~ (5161\_1) **5.74m**

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:**      INFORM - Feature is an unidentified obstruction imaged with KLEIN 5000 SSS and investigated with RESON 8125 MBES. The height of the obstruction is insignificant, but the nature of the material warrants a significant flag. The type of material is difficult to determine. It is logical that the obstruction is either a piece of the pipeline, the concrete pipeline anchors on either side of the pipeline, or one of the girders that was used to construct the platform.

NATCON - 4:hard surfaced

QUASOU - 6:least depth known

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

VALSOU - ~~5.60m~~ **5.74m**

WATLEV - 3:always under water/submerged

## 4.13) OBSTN

### Survey Summary

**Survey Position:** 040° 59' 48.496" N, 72° 42' 40.234" W  
**Least Depth:** ~~5.06m~~ **5.18m**  
**Timestamp:** 2004-287.13:23:42.148 (10/13/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1005\_mb / 2004-287 / 730\_1323  
**Profile/Beam:** 182/35  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

Feature is an obstruction imaged by a KLEIN 5000 with RESON 8101 MBES investigation. A least depth sounding was acquired.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1005_mb/2004-287/730_1323	182/35	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-267/642_1924	0001	8.20	223.1	Secondary
b370_tj_04_h11360t/1005_100/2004-266/225_1349	0001	10.50	250.7	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 17 Obstn and danger curve in the present survey location if scale permits.**

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

~~16ft~~(12358\_1, 12354\_1) **17ft**  
 2 ¾fm (12300\_1, 13006\_1, 13003\_1)  
~~5.0m~~ (5161\_1) **5.2m**

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** INFORM - Feature is an obstruction imaged by a KLEIN 5000 with RESON 8101 MBES investigation. A least depth sounding was acquired.  
 QUASOU - 6:least depth known  
 TECSOU - 2:found by side scan sonar; 3:found by multi-beam

VALSOU - ~~5.06m~~ **5.18m**

WATLEV - 3:always under water/submerged

## 4.14) OBSTN

### Survey Summary

**Survey Position:** 040° 59' 47.651" N, 72° 42' 41.297" W  
**Least Depth:** ~~4.88m~~ **5.01m**  
**Timestamp:** 2004-287.13:29:15.390 (10/13/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1005\_mb / 2004-287 / 162\_1328  
**Profile/Beam:** 295/70  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is an obstruction that was imaged with RESON 8101 backscatter while investigating another nearby obstruction. When the KLEIN 5000 SSS imagery over the area was reviewed, a contact at nadir that was originally missed was discovered. A least depth sounding was acquired from the RESON 8101 MBES data.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1005_mb/2004-287/162_1328	295/70	0.00	000.0	Primary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 16 Obstn and danger curve as shown in the present survey location.**

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

16ft (12358\_1, 12354\_1)  
 2 ½fm (12300\_1, 13006\_1, 13003\_1)  
~~4.9m~~ (5161\_1) **5.0m**

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** INFORM - The feature is an obstruction that was imaged with RESON 8101 backscatter while investigating another nearby obstruction. When the KLEIN 5000 SSS imagery over the area was reviewed, a contact at nadir that was originally missed was discovered. A least depth sounding was acquired from the RESON 8101 MBES data.

QUASOU - 6:least depth known

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



VALSOU - ~~4.88m~~ **5.01m**

WATLEV - 3:always under water/submerged

**Geo object 2:** Sounding (SOUNDG)

**Attributes:** INFORM - The feature is an obstruction that was imaged with RESON 8101 backscatter while investigating another nearby obstruction. When the KLEIN 5000 SSS imagery over the area was reviewed, a contact at nadir that was originally missed was discovered. A least depth sounding was acquired from the RESON 8101 MBES data.

QUASOU - 6:least depth known

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

## 4.15) WRECK

### Survey Summary

**Survey Position:** ~~041°00'26.176"N, 72°45'34.145"W~~ **41°00'26.175"N, 72°45'34.110"W**  
**Least Depth:** ~~23.52m~~ **23.61m**  
**Timestamp:** 2004-266.05:41:29.512 (09/22/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / s222\_mb / 2004-266 / 0120\_20040922\_053004\_raw  
**Profile/Beam:** 2948/96  
**Charts Affected:** 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is an uncharted wreck imaged with KLEIN 5000 SSS with KONGSBERG/SIMRAD EM1002 MBES bathymetry. A least depth sounding over the feature was acquired.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/s222_mb/2004-266/0120_20040922_053004_raw	2948/96	0.00	000.0	Primary
b370_tj_04_h11360t/1005_200/2004-269/054_1728	0001	4.61	285.1	Secondary
b370_tj_04_h11360t/1005_200/2004-269/055_1732	0001	7.63	213.6	Secondary
b370_tj_04_h11360t/1005_200/2004-269/055_1730	0001	13.74	203.1	Secondary
b370_tj_04_h11360t/1005_200/2004-269/054_1723	0001	24.71	193.3	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 77 Wk as shown in the present survey location.**

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

77ft (12354\_1)

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

23m (5161\_1)

### S-57 Data

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

**Attributes:** INFORM - The feature is an uncharted wreck imaged with KLEIN 5000 SSS with KONGSBERG/SIMRAD EM1002 MBES bathymetry. A least depth sounding over the feature was acquired.

QUASOU - 6:least depth known

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

**Geo object 2:** Wreck (WRECKS)

**Attributes:** CATWRK - 1:non-dangerous wreck

HEIGHT - 3 m

INFORM - The feature is an uncharted wreck imaged with KLEIN 5000 SSS with KONGSBERG/SIMRAD EM1002 MBES bathymetry. A least depth sounding over the feature was acquired.

STATUS - 1:permanent

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

VALSOU - ~~23.52m~~ **23.61m**

WATLEV - 3:always under water/submerged

## 4.16) OBSTN

### Survey Summary

**Survey Position:** ~~040°59'52.703"N, 72°38'51.429"W~~ **40°59'52.712"N, 72°38'51.494"W**  
**Least Depth:** ~~9.40m~~ **9.59m**  
**Timestamp:** 2004-265.18:55:06.693 (09/21/2004)  
**Survey Line:** b370\_tj\_04\_h11360t / 1014\_mb / 2004-265 / 323\_1845  
**Profile/Beam:** 2771/151  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

#### Remarks:

The feature is an obstruction imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. A least depth sounding was acquired. The feature has a significant height, but is less than the controlling depth of the area.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
b370_tj_04_h11360t/1014_mb/2004-265/323_1845	2771/151	0.00	000.0	Primary
b370_tj_04_h11360t/1005_100/2004-267/226_1243	0004	3.63	292.4	Secondary
b370_tj_04_h11360t/1005_100/2004-266/240_1431	0003	4.49	262.5	Secondary

### Hydrographer Recommendations

Chart as per digital data. **Concur. Chart 31 Obstrn and danger curve in the present survey location if scale permits.**

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

31ft (12358\_1, 12354\_1)

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

~~9.4m~~ (5161\_1) **9.6m**

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** INFORM - The feature is an obstruction imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. A least depth sounding was acquired. The feature has a significant height, but is less than the controlling depth of the area.

NATCON - 1:masonry

QUASOU - 6:least depth known

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

VALSOU - ~~9.40m~~ **9.59m**

WATLEV - 3:always under water/submerged

**Geo object 2:** Sounding (SOUNDG)

**Attributes:** INFORM - The feature is an obstruction imaged with KLEIN 5000 SSS with RESON 8125 MBES bathymetry. A least depth sounding was acquired. The feature has a significant height, but is less than the controlling depth of the area.

QUASOU - 6:least depth known

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

# H11360

**Registry Number:** H11360  
**State:** New York and Connecticut  
**Locality:** Long Island Sound  
**Sub-locality:** Jacob's Point to Albany Rock  
**Project Number:** OPR-B370-TJ-04  
**Survey Date:** 09/22/2004

## Charts Affected

Number	Version	Date	Scale
12358	19th Ed.	09/01/2002	1:40000
12354	41st Ed.	04/01/2004	1:80000
12300	44th Ed.	07/01/2004	1:400000
13006	31st Ed.	06/01/2003	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	47th Ed.	06/01/2003	1:1200000

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
4.17	Platform	Platform (oil or gas)	<del>19.61 m</del>	041° 00' 02.551" N	72° 38' 43.508" W	---

## 4.17) Profile/Beam - 225/8 from h11360 / 1014\_mb / 2004-266 / 314\_1554

### Survey Summary

**Survey Position:** 041° 00' 02.551" N, 72° 38' 43.508" W  
**Least Depth:** ~~19.61m~~ *N/A Baring feature (height unknown)*  
**Timestamp:** 2004-266.15:55:27.032 (09/22/2004)  
**Survey Line:** h11360 / 1014\_mb / 2004-266 / 314\_1554  
**Profile/Beam:** 225/8  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:** *A multibeam data point was used for the location of this feature.*

[None]

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11360/1014_mb/2004-266/314_1554	225/8	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

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

64ft (12358\_1, 12354\_1)

10 <sup>3</sup>/<sub>4</sub>fm (12300\_1, 13006\_1, 13003\_1)

19.6m (5161\_1)

### S-57 Data

**Geo object 1:** Offshore platform (OFSPLF)  
**Attributes:** CATOFP - 6:mooring tower  
 NATCON - 7:metal  
 STATUS - 1:permanent

## Office Notes

Chart mooring platform in the present location. This platform replaces the eastern of two dolphins that were deleted from the chart. See also AWOIS# 11390, item 2.4 of the Features Report, for additional information.



Eastern Mooring Platform Looking SE



# H11360

**Registry Number:** H11360  
**State:** New York and Connecticut  
**Locality:** Long Island Sound  
**Sub-locality:** Jacob's Point to Albany Rock  
**Project Number:** OPR-B370-TJ-04  
**Survey Date:** 09/22/2004

## Charts Affected

Number	Version	Date	Scale
12358	19th Ed.	09/01/2002	1:40000
12354	41st Ed.	04/01/2004	1:80000
12300	44th Ed.	07/01/2004	1:400000
13006	31st Ed.	06/01/2003	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	47th Ed.	06/01/2003	1:1200000

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
4.18	Platform	Platform (Mooring)	<del>17.67-m</del>	041° 00' 00.237" N	72° 38' 52.551" W	--

## 4.18) Profile/Beam - 656/211 from h11360 / 1014\_mb / 2004-266 / 316\_1524

### Survey Summary

**Survey Position:** 041° 00' 00.237" N, 72° 38' 52.551" W  
**Least Depth:** ~~17.67m~~ *N/A Baring feature (height unknown)*  
**Timestamp:** 2004-266.15:26:32.224 (09/22/2004)  
**Survey Line:** h11360 / 1014\_mb / 2004-266 / 316\_1524  
**Profile/Beam:** 656/211  
**Charts Affected:** 12358\_1, 12354\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1

**Remarks:** *A multibeam data point was used for the location of this feature.*

[None]

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11360/1014_mb/2004-266/316_1524	656/211	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

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

58ft (12358\_1, 12354\_1)

9 ½fm (12300\_1, 13006\_1, 13003\_1)

17.6m (5161\_1)

### S-57 Data

**Geo object 1:** Offshore platform (OFSPLF)  
**Attributes:** CATOFP - 6:mooring tower  
 NATCON - 7:metal  
 STATUS - 1:permanent

## Office Notes

Chart mooring platform in the present location. This platform replaces the western of two dolphins that were deleted from the chart. See also AWOIS# 11389, item 2.3 of the Features Report, for additional information.



**E. APPROVAL SHEET****OPR-B370-TJ-04  
Eastern Long Island Sound, Connecticut and New York****Jacob's Point to Albany Rock  
Survey Registry No. H11360**

Field operations for this navigable area 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, including:

- SEPARATES TO ACCOMPANY PROJECT OPR-B370-TJ-04, SHEET T, H11360
- DATA ACQUISITION AND PROCESSING REPORT (dated 12/15/2004; submitted 12/16/2004)
- HORIZONTAL AND VERTICAL CONTROL REPORT (dated 12/6/2004; submitted 12/9/2004)

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

Respectfully Submitted:

  
ENS/NOAA  
ENS Michael C. Davidson, NOAA  
Hydrographer

Approved and Forwarded:

  
LT Marc Moser, NOAA  
Field Operations Officer

  
CDR Emily B. Christman, NOAA  
Commanding Officer



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: H11360

LOCALITY: Jacobs Point to Albany Rock, Long Island  
Sound, NY/CT

TIME PERIOD: September 14 - October 13, 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: LIS48B, LIS51B, LIS54A & LIS56B

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).

  
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CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION



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

**TIDE NOTE FOR HYDROGRAPHIC SURVEY**

**DATE :** April 7, 2006

**HYDROGRAPHIC BRANCH:** Atlantic  
**HYDROGRAPHIC PROJECT:** OPR-B370-TJ-2004  
**HYDROGRAPHIC SHEET:** H11360rev

**LOCALITY:** Roanoke Pt Shoal, NY and CT  
**TIME PERIOD:** November 11, 2004

**TIDE STATION USED:** 851-2668 Matituck Inlet, NY  
Lat. 41 00.9'N Long. 072 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: LIS54A & LIS56B

**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).

*Fa [Signature]*

CHIEF, PRODUCTS AND SERVICES DIVISION



**ATLANTIC HYDROGRAPHIC BRANCH  
EVALUATION REPORT FOR H11360 (2004)**

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

**B. DATA ACQUISITION AND PROCESSING**

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

MapInfo, version 8.0  
CARIS HIPS/SIPS version 6.0  
PYDRO, version 5.9.4  
CARIS BASE Editor, version 1.0  
CARIS Field Sheet Editor, version 6.0  
CARIS HOM ENC, version 3.3  
CARIS GIS, version 4.4a  
dKart Inspector, version 5.0

Office processing entailed the use of CARIS HIPS/SIPS to generate a Bathymetry Associated with Statistical Error (BASE) navigation surface model. The BASE surface model serves as the source for all cartographic components incorporated within the submitted Base Cell ENC exchange file.

CARIS Field Sheet Editor and Base Editor were used for creating the H11360 H-cell. This included the generation of the combined surface model, creation of contours, and the extraction of sounding selections for survey scale and chart scale.

The field unit submitted a series of surface models generated at 0.5 meter and 1.0 meter resolutions. After data verification and sounding designation AHB personnel re-computed the BASE surface models. The five individual surface models were combined to generate one surface model with a resolution of 1.0 meter. The combined 1.0 meter resolution surface model served as the product of the survey at a scale of 1:10,000. The product surface generated for H-Cell processing used a survey scale of 1:10,000, with the default generalization radius of 100 meters, cell resolution of 10 meters, and no horizontal defocusing. The chart scale product was generated using a scale of 1:40,000, with the default generalization radius of 400 meters, cell resolution of 20 meters, and a defocusing radius of 20 meters. Defocusing was applied for the sake of generalizing the depth curves. The

chart scale product surface was used only for the source of the depth curves and not for sounding selection.

Sounding selection was sourced from the 1:10,000 survey scale product surface. Soundings were extracted using the default value of 1mm @ 1:10,000 with a radius value of 5. The chart scale sounding selection was suppressed using the CARIS HOM sounding suppression routine. The suppression parameters used were a scale of 1mm @ 1:40,000 and a radius value of 5. The chart scale BASE Cell file (\*.000) contains only the background soundings, while the survey scale product contains the background and suppressed sounding selections.

H11360 bathymetric data was a combination of Shallow Water Multi Beam (SWMB) and Vertical Beam Echo Sounder (VBES) data. Due to the limited coverage of the VBES data within the navigation surface models, VBES contours were generated only within the confines of the bathy swath. This was not adequate for delineations of the depth curves between the limited swath coverage areas. Bearing this in mind, all chart scale depth curves were drawn by hand while referencing survey scale and chart scale sounding selections. Coverage requirements were met utilizing side scan sonar.

The final processing routines were performed using CARIS HOM and standard CARIS processing routines for S-57 ENC production. In addition, dKart Inspector tests were used to check the (\*.000) files for errors. Many of the errors that occur indicate that the files are not totally S-57 compliant. Those errors were allowed in order for the files to be compatible with Marine Chart Division (MCD) specifications. Other errors or warnings were ignored because they were immaterial. An example is the warning (LG0059) that indicates most of the soundings are deeper than the depth area they are in. This is the result of rounding and converting to feet. Warning (LG0058) indicates that all the rest of the soundings are shoaler than their depth area. This is also the result of rounding and converting to feet. Other errors and warnings include:

Error LG0022 Prohibited attribute 'recdat' in coverage, quality of data, rocks, obstructions, etc. This was handled by eliminating all 'recdats' from the survey.

Warning GG2101 Vertex lies on a straight line. Eliminating excess vertices caused all the contours in the HOM file to be unsmoothed.



Warning LG 0159 Unnecessary spaces in 'inform'. However, no spaces exist.

### Contour and Depth Area Feature Objects

Charted curve values present in chart 12354, listed below, were specified in a metric depth contour list of feet curve-equivalents found in OCS H-Cell Specifications 1.1. The use of these values ensures that contours are generalized offshore, as shown below:

<b>Meters</b>	<b>Feet</b>
0.229	0.75
2.057	6.75
3.886	12.75
5.715	18.75
9.373	30.75
18.517	60.75
27.661	90.75
36.805	120.75
55.093	180.75

Upon completion of H-Cell compilation, and prior to conversion to chart units, false values replace the generalized metric values, such that, upon conversion, whole feet equivalents will result, as indicated below:

<b>Meters</b>	<b>Feet</b>
0.000	0
1.829	6
3.658	12
5.486	18
9.144	30
18.288	60
27.432	90
36.576	120
54.864	180

### CROSS LINES

The field unit collected the required amount of crossline data, but ran multibeam crosslines over the VBES mainscheme lines. Crosslines should be run with the same type of echosounder as the mainscheme lines, as per section 2.8.2.4 of

the NOAA Hydrographic Surveys Division Field Procedures Manual (November 2004). Also, crosslines should be run before mainscheme lines are run. See the *Hydrographic Manual, Fourth Edition*, July 4, 1976, sections 1.4.2, 4.3.6 and 4.6.1.

### JUNCTIONS

#### H11255 (2004) to the north

A standard junction was effected between H11255 (2004) and the present survey. Present survey depths are in harmony with the charted hydrography to the east, west and south.

### C. VERTICAL CONTROL

Approved tides and zoning were applied in CARIS during office processing, necessitated by a change of gage (approved gage was different from preliminary). Also, approved tides and zoning were not requested for day 316 (November 11, 2004) of the survey until December 12, 2005, resulting in there being two Tide Notes. Day 316 was processed in CARIS using verified tides provided by N/OPSI CO-OPS and the approved zoning used to compute tides for all other days of the survey.

### HORIZONTAL CONTROL

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 H-Cell 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 Base Cell File. The S-57 ENC format Base Cell File serves as the exchange file submitted to MCD.

#### D.1 CHART COMPARISON 12354 (41<sup>st</sup> Edition, Apr/04)

Corrected through NM Apr 24/04

Corrected through LNM Apr 13/04

#### 12358 (19<sup>th</sup> Edition, Sep/02)

Corrected through NM Sep 14/02

Corrected through LNM Sep 3/02

### 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.

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

#### COMPARISON WITH PRIOR SURVEYS

A comparison with prior surveys and the remaining survey data was not done during office processing in accordance with section 4. of the memorandum titled "*Changes to Hydrographic Survey Processing*" dated May 24, 1995. The present survey is considered adequate to supersede the prior surveys in the common area.

#### ADEQUACY OF SURVEY

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

#### MISCELLANEOUS

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

12354 (41<sup>st</sup> Edition, Apr/04)  
Corrected through NM Apr 24/04  
Corrected through LNM Apr 13/04

---

**Marilyn L. Schlüter**

Cartographer

Verification of Field Data

Evaluation and Analysis

**APPROVAL SHEET**  
**H11360**

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disapproval 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.

\_\_\_\_\_ Date: \_\_\_\_\_  
Marilyn L. Schlüter  
Cartographer,  
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.

\_\_\_\_\_ Date: \_\_\_\_\_  
Bryan Chauveau  
Physical Scientist,  
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: \_\_\_\_\_ Date: \_\_\_\_\_  
Commander P. Tod Schattgen, NOAA  
Chief, Atlantic Hydrographic Branch