

**F00630**

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Ocean Survey

**DESCRIPTIVE REPORT**

Type of Survey: Basic Hydrographic Survey

Registry Number: F00630

**LOCALITY**

State(s): New Jersey  
New York

General Locality: New York Harbor

Sub-locality: Liberty and Ellis Islands

**2013**

CHIEF OF PARTY  
LTJG Steven T. Loy

LIBRARY & ARCHIVES

Date:

**HYDROGRAPHIC TITLE SHEET**

**F00630**

**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(s): **New Jersey New York**

General Locality: **New York Harbor**

Sub-Locality: **Liberty and Ellis Islands**

Scale: **5000**

Dates of Survey: **04/17/2013 to 04/29/2013**

Instructions Dated: **04/11/2013**

Project Number: **S-B906-NRT5-13**

Field Unit: **Navigation Response Team 5**

Chief of Party: **LTJG Steven T. Loy**

Soundings by: **Multibeam Echo Sounder**

Imagery by: **Side Scan Sonar**

Verification by: **Pacific Hydrographic Branch**

Soundings Acquired in: **meters at Mean Lower Low Water**

**Remarks:**

*Horizontal Coordinate System: UTM Zone 18N. The purpose of this survey is to provide contemporary survey to update National Ocean Service (NOS) charts. All separates are filed with the hydrographic data. Revisions and notes in red were generated during office processing. The processing branch concurs with all information and recommendations in the DR unless otherwise noted. Page numbering may be interrupted or non sequential. All pertinent records for this survey, including the Descriptive Report, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via <http://www.ngdc.noaa.gov/>.*

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## Descriptive Report to Accompany Survey F00630

Project: S-B906-NRT5-13  
Locality: New York Harbor  
Sublocality: Liberty and Ellis Islands  
Scale: 1:5000  
April 2013 - April 2013  
**Navigation Response Team 5**  
Chief of Party: LTJG Steven T. Loy

### A. Area Surveyed

The area surveyed includes Morris Canal Basin, Liberty Island vicinity, Ellis Island vicinity, Pier 7 vicinity, Liberty State Park vicinity, and northwestern portions of Anchorage Channel.

#### A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
40° 42" 49.12' N 74° 1" 40.97' W	40° 40" 58.25' N 74° 4" 7.77' W

*Table 1: Survey Limits*

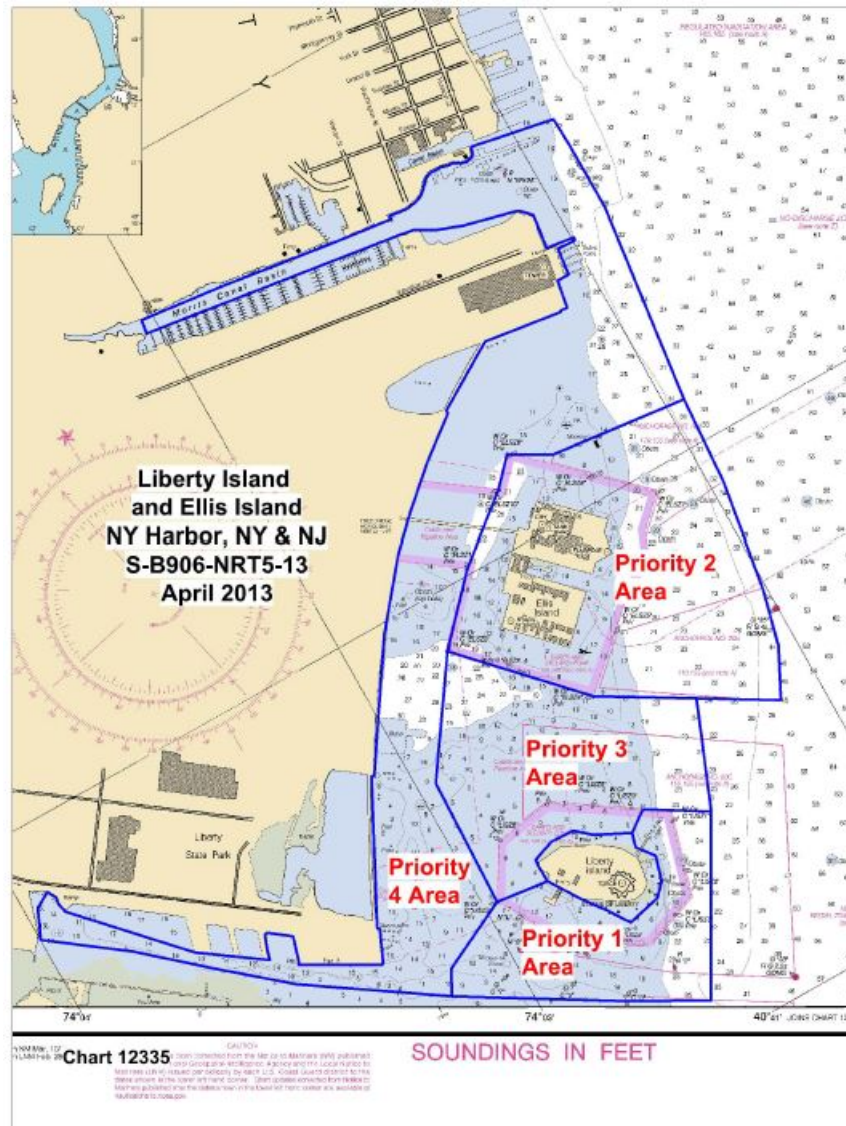


Figure 1: Survey Limits broken up by priority

Survey Limit requirements were in accordance with the requirements in the Project Instructions and the HSSD.

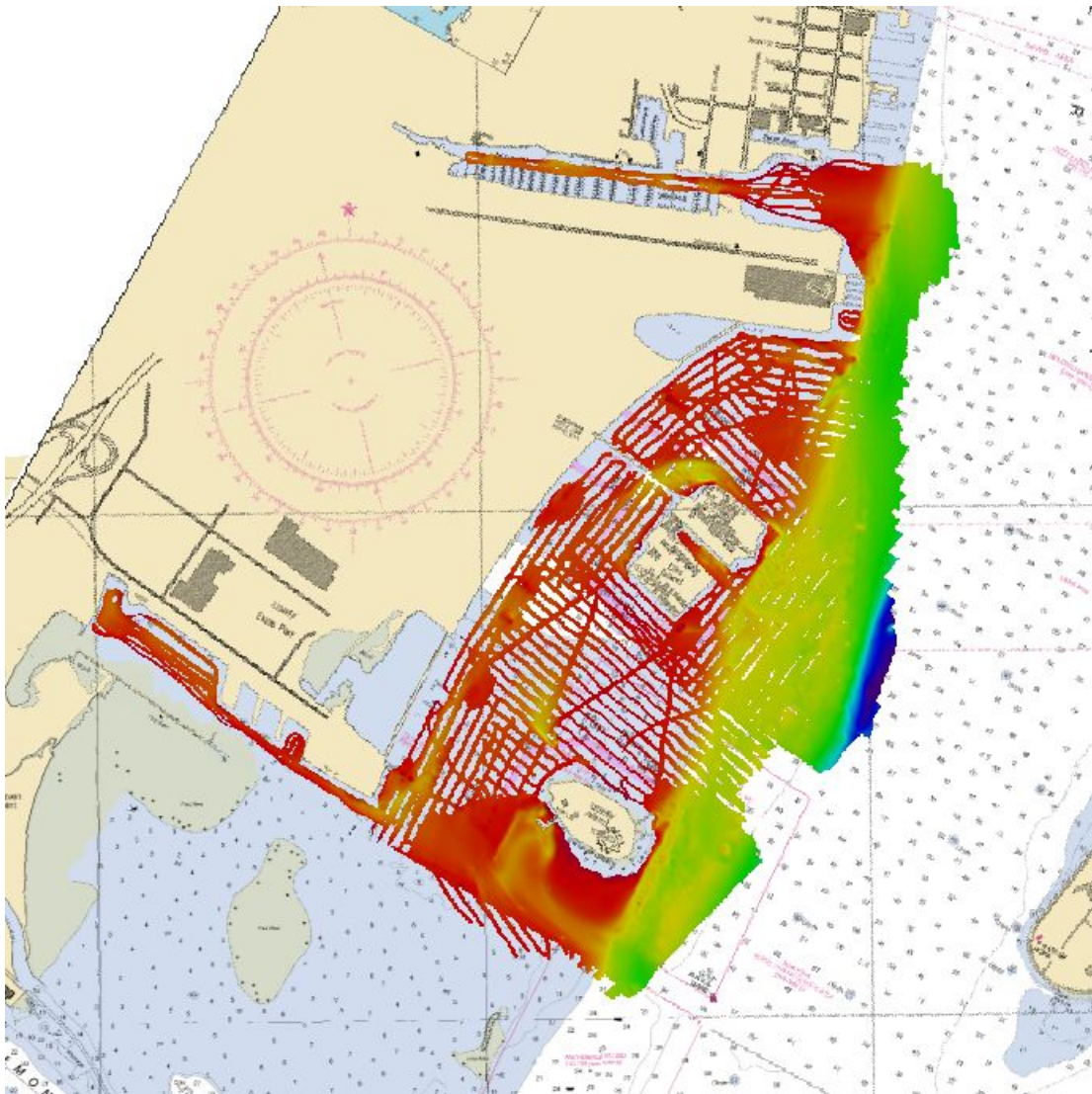
## A.2 Survey Purpose

The National Park Service has requested support from Navigation Response Team 5 for a hydrographic survey and to investigate for hazards to navigation in the waters in the vicinity of Ellis Island and Liberty Island. The survey will help assist the NPS with decisions on access to Liberty and Ellis Island.

### A.3 Survey Quality

The entire survey is adequate to supersede previous data.

### A.4 Survey Coverage



*Figure 2: Survey Coverage Area*

Minor holidays in 100% side scan coverage due to logging errors and limited time for acquisition occurred in a few areas, however those areas were ensounded by other coverage and reviewed for any possible contacts.

## A.5 Survey Statistics

The following table lists the mainscheme and crossline acquisition mileage for this survey:

	<b>HULL ID</b>	<b><i>Total</i></b>
<b>LNM</b>	<b>SBES Mainscheme</b>	0.00
	<b>MBES Mainscheme</b>	105.99
	<b>Lidar Mainscheme</b>	0.00
	<b>SSS Mainscheme</b>	53.86
	<b>SBES/MBES Combo Mainscheme</b>	0.00
	<b>SBES/SSS Combo Mainscheme</b>	0.00
	<b>MBES/SSS Combo Mainscheme</b>	0.00
	<b>SBES/MBES Combo Crosslines</b>	8.44
	<b>Lidar Crosslines</b>	0.00
	<b>Number of Bottom Samples</b>	0
<b>Number AWOIS Items Investigated</b>	21	
<b>Number Maritime Boundary Points Investigated</b>	0	
<b>Number of DPs</b>	0	
<b>Number of Items Items Investigated by Dive Ops</b>	0	
<b>Total Number of SNM</b>	0.87	

*Table 2: Hydrographic Survey Statistics*



The following table lists the specific dates of data acquisition for this survey:

<b>Survey Dates</b>	<b>Julian Day Number</b>
04/17/2013	107
04/18/2013	108
04/22/2013	112
04/23/2013	113
04/25/2013	115
04/29/2013	119

*Table 3: Dates of Hydrography*

## **B. Data Acquisition and Processing**

### **B.1 Equipment and Vessels**

Refer to the Data Acquisition and Processing Report (DAPR) for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR are discussed in the following sections.

#### **B.1.1 Vessels**

The following vessels were used for data acquisition during this survey:

<b>Hull ID</b>	<i>S3002</i>
<b>LOA</b>	33.5 feet
<b>Draft</b>	3.5 feet

*Table 4: Vessels Used*

S3002 is a 34 foot aluminum hulled SeaArk Commander, powered by twin 200 horsepower outboard engines.

## B.1.2 Equipment

The following major systems were used for data acquisition during this survey:

<b>Manufacturer</b>	<b>Model</b>	<b>Type</b>
Kongsberg	EM3002	MBES
Klein	3000	SSS
Applanix	POS/MV	Positioning and Attitude System
Trimble	DSM212L	Positioning System
Seabird	Seacat 19+	Sound Speed System
Odom	Digibar Pro	Sound Speed System

*Table 5: Major Systems Used*

Positioning, attitude, and heading, are measured by the Applanix POS/MV inertial navigation system. The Trimble DSM212L receives Coast Guard beacon RTCM messages, and transmits them to the POS/MV via RS232 connection. The Seabird Seacat 19+ is typically used to collect SVP casts, while the Odom Digibar Pro measures surface sound speed in real time, transmitting the values to the EM3002 for beam forming via RS232 connection. The Klein 3000 side scanning sonar is used to collect imagery, and is towed from vessel S3002.

## B.2 Quality Control

### B.2.1 Crosslines

Crosslines, acquired for this survey, totalled 5.3% of mainscheme acquisition.

8.4 LNM of crosslines were collected out of 105.99 LNM of mainscheme which is 5.3% of total mainscheme LNM. This value meets 4% requirements for complete MBES coverage, but fails the 8% requirement for partial MBES and complete SSS. Due to time constraints, shallow water, and safety concerns ability to collect further crosslines was limited, however the field unit believes the distribution and characterization provided remains accurate and useful.

Agreement between crosslines and mainscheme data was evaluated using two different methods. The first method consisted of visually inspecting crossline/mainscheme intersections in subset editor. The second method was a beam-by-beam statistical analysis performed with the Caris QC tool. A one meter resolution reference surface was created from mainscheme-only data. The crosslines were then selected and statistically compared to the mainscheme reference surface.

Results:

Visual Method:

Visually, the agreement between mainscheme and crossline data is very good. Several junctions across the survey area were inspected, and no significant deviations were observed.

Beam-by-beam statistical method:

The results of the statistical analysis were also very good. A plot of mean and standard deviation versus beam number is shown. The mean beam differences reveal a slight roll bias. The beam standard deviations reveal an unexpected spike near nadir. This is likely due to bottom penetration at nadir in shallow areas, or in soft sediment. The maximum standard deviation value was .205, which at the 95% confidence interval, is well within IHO order 1a requirements.

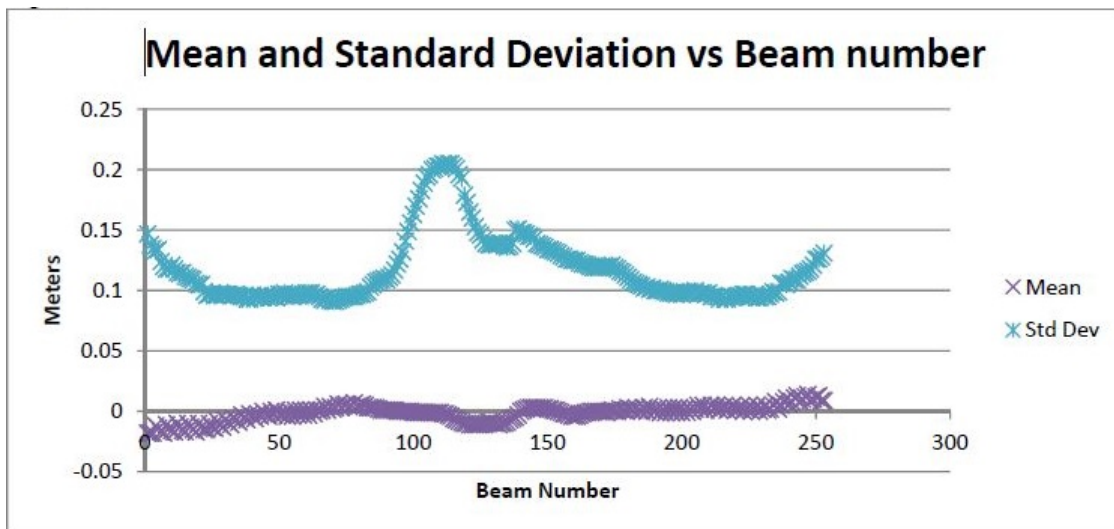


Figure 3: Crossline Comparison

**B.2.2 Uncertainty**

The following survey specific parameters were used for this survey:

Measured	Zoning
0.01 meters	0.10 meters

Table 6: Survey Specific Tide TPU Values

Hull ID	Measured - CTD	Measured - MVP	Surface
S3002	2 meters/second		.5 meters/second

*Table 7: Survey Specific Sound Speed TPU Values*

### B.2.3 Junctions

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
F00626	1:10000	2012	NOAA Ship THOMAS JEFFERSON	E
H11600	1:10000	2006	NOAA Ship THOMAS JEFFERSON	E
H11395	1:10000	2006	Navigation Response Team 5	E

*Table 8: Junctioning Surveys*

#### F00626

At the time of review, this survey was not available from NGDC for a junction comparison.

#### H11600

The MBES BAG surface from H11600 was downloaded from NGDC and compared to the current survey by creating a difference surface. The surfaces generally agree within 10cm.

#### H11395

The MBES BAG surface from H11395 was downloaded from NGDC and compared to the current survey by creating a difference surface. The surfaces generally agree within 10cm.

### B.2.4 Sonar QC Checks

Sonar system quality control checks were conducted as detailed in the quality control section of the DAPR.

### **B.2.5 Equipment Effectiveness**

Due to the shallow water in much of the survey area, the field unit decided to use a bow rigged arrangement for the side scan sonar for portions of this survey, specifically DN112 DN11. This process is described in the attached DAPR.

### **B.2.6 Factors Affecting Soundings**

There were no other factors that affected corrections to soundings.

### **B.2.7 Sound Speed Methods**

Sound Speed Cast Frequency: Sound Speed Cast Frequency: SVP casts were taken, at a minimum, every four hours, or when there was an indication that the sound velocity had changed, such as a change in the surface sound speed, or if smiling/frowning of the data was observed.

### **B.2.8 Coverage Equipment and Methods**

All equipment and survey methods were used as detailed in the DAPR.

## **B.3 Echo Sounding Corrections**

### **B.3.1 Corrections to Echo Soundings**

All data reduction procedures conform to those detailed in the DAPR.

### **B.3.2 Calibrations**

All sounding systems were calibrated as detailed in the DAPR.

## **B.4 Backscatter**

The Kongsberg Seabed Image Datagram was logged concurrently with bathymetry in the Kongsberg .ALL format, but was not processed by the field unit for backscatter purposes.

## **B.5 Data Processing**

### **B.5.1 Software Updates**

There were no software configuration changes after the DAPR was submitted.

The following Feature Object Catalog was used: NOAA Profile V\_5\_2

Also called Caris\_Support\_Files\_V5\_2

### B.5.2 Surfaces

The following surfaces and/or BAGs were submitted to the Processing Branch:

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
F00630_50cm	CUBE	0.5 meters	-	NOAA_0.5m	Object Detection
F00630_50cm_Final	CUBE	0.5 meters	-	NOAA_0.5m	Object Detection
F00630_1m	CUBE	1 meters	-	NOAA_1m	MBES TracklineSBES Set Line Spacing
F00630_1m_Final	CUBE	1 meters	-	NOAA_1m	Object Detection
F00630_Mosaic_100	SSS Mosaic	1 meters	-	N/A	100% SSS
F00630_Mosaic_200	SSS Mosaic	1 meters	-	N/A	200% SSS

*Table 9: Submitted Surfaces*

## C. Vertical and Horizontal Control

Additional information discussing the vertical or horizontal control for this survey can be found in the accompanying HVCR.

### C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

Standard Vertical Control Methods Used:

Discrete Zoning

The following National Water Level Observation Network (NWLON) stations served as datum control for this survey:

Station Name	Station ID
The Battery	8518750

*Table 10: NWLON Tide Stations*

File Name	Status
8518750.tid	Verified Observed

*Table 11: Water Level Files (.tid)*

File Name	Status
B906NRT52013CORP.zdf	Preliminary

*Table 12: Tide Correctors (.zdf or .tc)*

A request for final approved tides was sent to N/OPS1 on 08/01/2013. The final tide note was received on NaN/NaN/NaN.

This survey was submitted without final approved tides applied, and are expected to be applied at the processing branch.

***Final approved tides were received on August 16th, 2013 and applied at PHB. The tide note is attached.***

## C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD83).

The projection used for this project is UTM Zone 18N.

The following DGPS Stations were used for horizontal control:

DGPS Stations
Sandy Hook, NJ

*Table 13: USCG DGPS Stations*

## D. Results and Recommendations

### D.1 Chart Comparison

A comparison between digital surfaces (MBES and SSS) and existing raster and vector charts of the largest scale was performed.

#### D.1.1 Raster Charts

The following are the largest scale raster charts, which cover the survey area:

Chart	Scale	Edition	Edition Date	LNМ Date	NM Date
12334	1:10000	71	06/2011	07/27/2013	07/27/2013
12335	1:10000	45	03/2012	07/27/2013	07/27/2013

*Table 14: Largest Scale Raster Charts*

#### 12334

Significant shoaling was noted southwest of Ellis Island with depths differing by up to 20 ft. In the cable and pipeline area between Ellis and Liberty Island the survey depths were significantly deeper. In areas deeper than 20 ft. depths from the survey were in general agreement with the chart.

#### 12335



The inshore (blue tint) areas of this chart contain only a few soundings. The surveyed depths in this area are generally shoaler than the charted soundings. In areas deeper than the 18 ft. contour depths were in general agreement with the chart.

### D.1.2 Electronic Navigational Charts

The following are the largest scale ENC's, which cover the survey area:

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US5NY1CM	1:10000	34	01/08/2013	01/08/2013	NO
US5NY1DM	1:10000	24	11/29/2012	12/20/2012	NO

Table 15: Largest Scale ENC's

#### US5NY1CM

Raster chart comparison applies to this ENC.

#### US5NY1DM

Raster chart comparison applies to this ENC.

### D.1.3 AWOIS Items

All assigned AWOIS items were investigated by the field party. See the Final Feature File for additional information.

*Twenty-one AWOIS items were assigned for this survey. Two (#13471 and #15102) were not investigated.*

### D.1.4 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

### **D.1.5 Charted Features**

86 features were in the composite source file, but the Project Instructions specified 88 features to be investigated. See details in the Final Feature File.

*Recommendations made in the final feature file were used in the compilation of chart update product for survey F00630. The original final features file does not reflect verification and cartographic adjustments necessary for appropriate depiction of features at chart scale.*

### **D.1.6 Uncharted Features**

Uncharted features exist in this survey and are detailed within the Final Feature File.

### **D.1.7 Dangers to Navigation**

No Danger to Navigation Reports were submitted for this survey.

### **D.1.8 Shoal and Hazardous Features**

See discussion in chart comparison sections.

### **D.1.9 Channels**

Survey area contains maintained channels, security areas, and anchorage areas. For further information please see Final Feature File and chart comparison.

### **D.1.10 Bottom Samples**

No bottom samples were required for this survey, and none were collected.

## **D.2 Additional Results**

### **D.2.1 Shoreline**

All shoreline investigation results can be found in the Final Feature File.

### **D.2.2 Prior Surveys**

Prior survey comparisons exist for this survey, but were not investigated.

**D.2.3 Aids to Navigation**

All navigational aids in the survey area serve their intended purpose. See Final Feature File for more details.

**D.2.4 Overhead Features**

A fixed vehicle and foot bridge connects Ellis Island to Liberty State Park area in New Jersey. It is charted and characterized correctly.

**D.2.5 Submarine Features**

Submarine features exist for this survey, but were not investigated.

**D.2.6 Ferry Routes and Terminals**

Ferry routes and/or terminals exist for this survey, but were not investigated.

**D.2.7 Platforms**

No platforms exist for this survey.

**D.2.8 Significant Features**

No significant features exist for this survey.

**D.2.9 Construction and Dredging**

Present and/or planned construction or dredging exists within the survey limits, but was not investigated. Repairs and construction were observed on Liberty and Ellis Islands.


## E. Approval Sheet

As Chief of Party, Field operations for this hydrographic survey were conducted under my direct supervision, with frequent personal checks of progress and adequacy. I have reviewed the attached survey data and reports.

All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to the Processing Branch.

The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys and Specifications Deliverables Manual, Field Procedures Manual, Letter Instructions, and all HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Descriptive Report.

Report Name	Report Date Sent
Data Acquisition and Processing Report	2013-08-09
Tides and Water Levels Package	2013-08-09
Data Acquisition and Processing Report	2013-08-09

Approver Name	Approver Title	Approval Date	Signature
LTJG Steven Loy	Chief of Party	08/07/2013	 <small>Digitally signed by LOY STEVEN            TENHET.1383970799            DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,            ou=NDNA, cn=LOY STEVEN TENHET.1383970799            Date: 2013.08.09 14:04:45 -04'00'</small>

## F. Table of Acronyms

<b>Acronym</b>	<b>Definition</b>
<b>AHB</b>	Atlantic Hydrographic Branch
<b>AST</b>	Assistant Survey Technician
<b>ATON</b>	Aid to Navigation
<b>AWOIS</b>	Automated Wreck and Obstruction Information System
<b>BAG</b>	Bathymetric Attributed Grid
<b>BASE</b>	Bathymetry Associated with Statistical Error
<b>CO</b>	Commanding Officer
<b>CO-OPS</b>	Center for Operational Products and Services
<b>CORS</b>	Continually Operating Reference Station
<b>CTD</b>	Conductivity Temperature Depth
<b>CEF</b>	Chart Evaluation File
<b>CSF</b>	Composite Source File
<b>CST</b>	Chief Survey Technician
<b>CUBE</b>	Combined Uncertainty and Bathymetry Estimator
<b>DAPR</b>	Data Acquisition and Processing Report
<b>DGPS</b>	Differential Global Positioning System
<b>DP</b>	Detached Position
<b>DR</b>	Descriptive Report
<b>DTON</b>	Danger to Navigation
<b>ENC</b>	Electronic Navigational Chart
<b>ERS</b>	Ellipsoidal Referenced Survey
<b>ERZT</b>	Ellipsoidally Referenced Zoned Tides
<b>FFF</b>	Final Feature File
<b>FOO</b>	Field Operations Officer
<b>FPM</b>	Field Procedures Manual
<b>GAMS</b>	GPS Azimuth Measurement Subsystem
<b>GC</b>	Geographic Cell
<b>GPS</b>	Global Positioning System
<b>HIPS</b>	Hydrographic Information Processing System
<b>HSD</b>	Hydrographic Surveys Division
<b>HSSD</b>	Hydrographic Survey Specifications and Deliverables

<b>Acronym</b>	<b>Definition</b>
<b>HSTP</b>	Hydrographic Systems Technology Programs
<b>HSX</b>	Hypack Hysweep File Format
<b>HTD</b>	Hydrographic Surveys Technical Directive
<b>HVCR</b>	Horizontal and Vertical Control Report
<b>HVF</b>	HIPS Vessel File
<b>IHO</b>	International Hydrographic Organization
<b>IMU</b>	Inertial Motion Unit
<b>ITRF</b>	International Terrestrial Reference Frame
<b>LNM</b>	Local Notice to Mariners
<b>LNM</b>	Linear Nautical Miles
<b>MCD</b>	Marine Chart Division
<b>MHW</b>	Mean High Water
<b>MLLW</b>	Mean Lower Low Water
<b>NAD 83</b>	North American Datum of 1983
<b>NAIP</b>	National Agriculture and Imagery Program
<b>NALL</b>	Navigable Area Limit Line
<b>NM</b>	Notice to Mariners
<b>NMEA</b>	National Marine Electronics Association
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NOS</b>	National Ocean Service
<b>NRT</b>	Navigation Response Team
<b>NSD</b>	Navigation Services Division
<b>OCS</b>	Office of Coast Survey
<b>OMAO</b>	Office of Marine and Aviation Operations (NOAA)
<b>OPS</b>	Operations Branch
<b>MBES</b>	Multibeam Echosounder
<b>NWLON</b>	National Water Level Observation Network
<b>PDBS</b>	Phase Differencing Bathymetric Sonar
<b>PHB</b>	Pacific Hydrographic Branch
<b>POS/MV</b>	Position and Orientation System for Marine Vessels
<b>PPK</b>	Post Processed Kinematic
<b>PPP</b>	Precise Point Positioning
<b>PPS</b>	Pulse per second

<b>Acronym</b>	<b>Definition</b>
<b>PRF</b>	Project Reference File
<b>PS</b>	Physical Scientist
<b>PST</b>	Physical Science Technician
<b>RNC</b>	Raster Navigational Chart
<b>RTK</b>	Real Time Kinematic
<b>SBES</b>	Singlebeam Echosounder
<b>SBET</b>	Smooth Best Estimate and Trajectory
<b>SNM</b>	Square Nautical Miles
<b>SSS</b>	Side Scan Sonar
<b>ST</b>	Survey Technician
<b>SVP</b>	Sound Velocity Profiler
<b>TCARI</b>	Tidal Constituent And Residual Interpolation
<b>TPU</b>	Total Propagated Error
<b>TPU</b>	Topside Processing Unit
<b>USACE</b>	United States Army Corps of Engineers
<b>USCG</b>	United States Coast Guard
<b>UTM</b>	Universal Transverse Mercator
<b>XO</b>	Executive Officer
<b>ZDA</b>	Global Positioning System timing message
<b>ZDF</b>	Zone Definition File



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

**TIDE NOTE FOR HYDROGRAPHIC SURVEY**

**DATE :** August 06, 2013

**HYDROGRAPHIC BRANCH:** Pacific  
**HYDROGRAPHIC PROJECT:** S-B906-NRT5-2013  
**HYDROGRAPHIC SHEET:** F00630

**LOCALITY:** Liberty and Ellis Islands, NY Harbor, NY  
**TIME PERIOD:** April 17 - April 29, 2013

**TIDE STATION USED:** 851-8750 The Battery, NY  
Lat. 40° 42.0'N Long. 74° 00.9' W

**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 1.443 meters

**REMARKS: RECOMMENDED ZONING**

Preliminary zoning is accepted as the final zoning for project S-B906-NRT5-2013, F00630, during the time period between April 17 and April 29, 2013.

Please use the zoning file B906NRT52013CORP submitted with the project instructions for S-B906-NRT5-2013. Zones NY19 and NY21 are the applicable zones for F00630.

**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).

**HOVIS.GERALD**  
**D.THOMAS.1**  
**365860250**

Digitally signed by  
HOVIS.GERALD.THOMAS.136586025  
0  
DN: c=US, o=U.S. Government,  
ou=DoD, ou=PKI, ou=OTHER,  
cn=HOVIS.GERALD.THOMAS.136586  
0250  
Date: 2013.08.08 14:15:20 -04'00'

CHIEF, PRODUCTS AND SERVICES BRANCH







# F00630 AWOIS Items

**Registry Number:** F00630  
**State:** New Jersey, New York  
**Locality:** New York Harbor  
**Sub-locality:** Liberty and Ellis Islands  
**Project Number:** S-B906-NRT5-13  
**Survey Date:** 04/29/2013

## Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12334	71st	06/01/2011	1:10,000 (12334_1)	USCG LNM: 7/16/2013 (7/16/2013) CHS NTM: None (5/31/2013) NGA NTM: 6/17/2006 (7/27/2013)
12335	45th	03/01/2012	1:10,000 (12335_1)	USCG LNM: 7/16/2013 (7/16/2013) CHS NTM: None (5/31/2013) NGA NTM: 12/23/2006 (7/27/2013)
12337	23rd	10/01/2005	1:20,000 (12337_1)	[L]NTM: ?
12327	101st	04/01/2008	1:40,000 (12327_1)	[L]NTM: ?
12363	40th	06/01/2005	1:80,000 (12363_1)	[L]NTM: ?
12326	50th	05/01/2006	1:80,000 (12326_1)	[L]NTM: ?
12300	47th	05/01/2008	1:400,000 (12300_1)	[L]NTM: ?
13006	34th	05/01/2007	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

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

## Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	AWOIS	[no data]	[no data]	[no data]	---
1.2	AWOIS	[no data]	[no data]	[no data]	---
1.3	AWOIS	[no data]	[no data]	[no data]	---
1.4	AWOIS	[no data]	[no data]	[no data]	---

1.5	AWOIS	[no data]	[no data]	[no data]	---
1.6	AWOIS	[no data]	[no data]	[no data]	---
1.7	AWOIS	[no data]	[no data]	[no data]	---
1.8	Obstruction	3.49 m	40° 41' 28.6" N	074° 03' 14.3" W	13474
1.9	Obstruction	[None]	40° 42' 00.9" N	074° 02' 50.2" W	15102
1.10	Obstruction	1.63 m	40° 42' 01.8" N	074° 02' 46.8" W	15103
1.11	Obstruction	4.82 m	40° 41' 13.7" N	074° 02' 36.1" W	15096
1.12	Obstruction	5.61 m	40° 41' 16.2" N	074° 02' 34.8" W	15097
1.13	Rock	5.92 m	40° 41' 18.8" N	074° 02' 33.5" W	2694
1.14	Obstruction	7.21 m	40° 41' 19.9" N	074° 02' 30.7" W	15098
1.15	Wreck	0.97 m	40° 41' 46.3" N	074° 02' 29.1" W	13237
1.16	Obstruction	6.40 m	40° 41' 54.4" N	074° 02' 09.7" W	15099
1.17	Obstruction	5.87 m	40° 41' 59.5" N	074° 02' 08.0" W	15101
1.18	Obstruction	6.26 m	40° 42' 03.2" N	074° 02' 07.3" W	10667
1.19	Obstruction	7.07 m	40° 41' 54.4" N	074° 02' 03.5" W	15100
1.20	Obstruction	1.37 m	40° 42' 33.9" N	074° 02' 03.3" W	15105
1.21	Obstruction	4.69 m	40° 42' 33.5" N	074° 01' 56.3" W	10669

## **1 - AWOIS Features**

## 1.1) AWOIS #13471 - UNKNOWN

### No Primary Survey Feature for this AWOIS Item

**Search Position:** 40° 42' 02.9" N, 074° 02' 45.0" W  
**Historical Depth:** [None]  
**Search Radius:** 0  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

#### History Notes:

L-1266/74-- THERE IS A SUNKEN BARGE OR A COLLAPSED PIERHEAD SECTION AT THE EASTERN TIP OF THE SOUTH PIER OF THE LIBERTY YACHT CLUB, FOOT OF BURMA ROAD AND CAVEN PT. ROAD, JERSEY CITY, NJ. THIS OBSTRUCTION WAS MARKED BY A 2 INCH BY 4 INCH UPRIGHT SPAR AT THE OUTBOARD QUARTERS OF SAME. THE SPARS HAD A RED PENNANT ON THE TOP AND EXTENDED APPROXIMATELY SIX FEET ABOVE THE WATER SURFACE. UPDATED 2/23/2006 JCM.

### Survey Summary

**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Not investigated.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 13471	0.00	000.0	Primary

### Hydrographer Recommendations

Retain AWOIS Item.

### S-57 Data

[None]

## Office Notes

Concur.

## 1.2) AWOIS #13476 - UNKNOWN

### No Primary Survey Feature for this AWOIS Item

**Search Position:** 40° 41' 47.5" N, 074° 03' 57.3" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

#### History Notes:

L630/71-- SUNKEN WRECK WITH MAST SHOWING AT LOW WATER NOW CHARTED IN POSITION: 40 41 75.51 N, 40 41 75.51 W (NAD 83). UPDATED 2/23/2006 JCM.

### Survey Summary

**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Wreck not seen in MB or SSS.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 13476	0.00	000.0	Primary

### Hydrographer Recommendations

Delete wreck

### S-57 Data

[None]

### Office Notes

Concur

### 1.3) AWOIS #15104 - UNKNOWN

#### No Primary Survey Feature for this AWOIS Item

**Search Position:** 40° 42' 09.1" N, 074° 02' 14.2" W  
**Historical Depth:** [None]  
**Search Radius:** 75  
**Search Technique:** S2, MB  
**Technique Notes:** [None]

**History Notes:**

\*\*\*\*Unknown Source-- A submerged wreck is charted at 40/42/09.08-74/02/14.18.

#### Survey Summary

**Charts Affected:** 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

Wreck not seen in MB or SSS

#### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 15104	0.00	000.0	Primary

#### Hydrographer Recommendations

Delete wreck

#### S-57 Data

[None]

#### Office Notes

Concur



## 1.4) AWOIS #15106 - UNKNOWN

### No Primary Survey Feature for this AWOIS Item

**Search Position:** 40° 42' 38.3" N, 074° 02' 04.2" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

#### History Notes:

\*\*\*\*Unknown Source-- A subm wreck is charted.

### Survey Summary

**Charts Affected:** 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1,  
 13003\_1, 14500\_1

#### Remarks:

Wreck not seen in MB or SSS

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 15106	0.00	000.0	Primary

### Hydrographer Recommendations

Delete wreck

### S-57 Data

[None]

### Office Notes

Concur

## 1.5) AWOIS #15107 - OBSTRUCTION

### No Primary Survey Feature for this AWOIS Item

**Search Position:** 40° 42' 39.1" N, 074° 02' 05.8" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** S2, MB  
**Technique Notes:** [None]

#### History Notes:

\*\*\*\*Unknown Source-- A Obsn is charted with label "(3 1/2 ft rep)".

### Survey Summary

**Charts Affected:** 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1,  
 13003\_1, 14500\_1

#### Remarks:

Obstruction not seen in MB or SSS

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 15107	0.00	000.0	Primary

### Hydrographer Recommendations

Delete obstruction

### S-57 Data

[None]

### Office Notes

Concur

## 1.6) AWOIS #13475 - OBSTRUCTION

### No Primary Survey Feature for this AWOIS Item

**Search Position:** 40° 41' 19.3" N, 074° 03' 00.9" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

**History Notes:**

UNDETERMINED SOURCE (ANALYSIS OF HISTORICAL RECORDS INDICATES THAT IT WAS APPLIED TO THE CHARTS SOMETIME BETWEEN 1975 AND 1979)-- OBSTRUCTION PA NOW CHARTED IN POSITION: 40 41 19.29 N, 074 03 00.90 W (NAD 83) . UPDATED 2/23/2006 JCM.

### Survey Summary

**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

Obstruction not seen in MB or SSS

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 13475	0.00	000.0	Primary

### Hydrographer Recommendations

Delete obstruction PA

### S-57 Data

[None]

### Office Notes

Concur

## 1.7) AWOIS #13473 - UNKNOWN

### No Primary Survey Feature for this AWOIS Item

**Search Position:** 40° 41' 39.7" N, 074° 03' 00.8" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

#### History Notes:

H05607/34 -- SUBMERGED DANGEROUS WRECK AWASH AT HALF TIDE AND SURROUNDED BY PILES NOW CHARTED IN POSITION: 40 41 39.72 N, 074 03 00.80 W (NAD 83). UPDATED 2/23/2006 JCM.

### Survey Summary

**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

Wreck not seen in MB or SSS

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_EXPORT	AWOIS # 13473	0.00	000.0	Primary

### Hydrographer Recommendations

Delete wreck

### S-57 Data

[None]

### Office Notes

Concur

## 1.8) US 0000607154 00001

### Primary Feature for AWOIS Item #13474

**Search Position:** 40° 41' 28.7" N, 074° 03' 12.6" W  
**Historical Depth:** [None]  
**Search Radius:** 0  
**Search Technique:** MB, S2  
**Technique Notes:** 50 meters from the most seaward pile to the shoreline.

**History Notes:**

TP-00740/74-- GROUP OF SUBMERGED PILES. MOST SEAWARD PILE NOW CHARTED IN POSITION: 40 41 28.70 N, 40 41 28.70 W (NAD 83). UPDATED 2/23/2006 JCM.

### Survey Summary

**Survey Position:** 40° 41' 28.7" N, 074° 03' 12.6" W  
**Least Depth:** 1.50 m (= 4.93 ft = 0.821 fm = 0 fm 4.93 ft)  
**TPU (±1.96σ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** obstrn.000  
**FOID:** US 0000607154 00001(0226000943B20001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

ASOIS 13474

### Feature Correlation

Source	Feature	Range	Azimuth	Status
obstrn.000	US 0000607154 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 13474	0.93	240.5	Secondary (grouped)

## Hydrographer Recommendations

Chart new submerged pile.

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

5ft (12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1)

0 ¾m (12300\_1, 13006\_1, 13003\_1, 14500\_1)

1.5m (5161\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 1.502 m  
WATLEV - 3:always under water/submerged

### Office Notes

Concur. Chart new submerged pile.

Delete all piles associated with this AWOIS Item except the four listed in this report.

## 1.8) US 0000620777 00001

### Primary Feature for AWOIS Item #13474

**Search Position:** 40° 41' 28.7" N, 074° 03' 12.6" W  
**Historical Depth:** [None]  
**Search Radius:** 0  
**Search Technique:** MB, S2  
**Technique Notes:** 50 meters from the most seaward pile to the shoreline.

**History Notes:**

TP-00740/74-- GROUP OF SUBMERGED PILES. MOST SEAWARD PILE NOW CHARTED IN POSITION: 40 41 28.70 N, 40 41 28.70 W (NAD 83). UPDATED 2/23/2006 JCM.

### Survey Summary

**Survey Position:** 40° 41' 28.6" N, 074° 03' 14.3" W  
**Least Depth:** 3.49 m (= 11.44 ft = 1.907 fm = 1 fm 5.44 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620777 00001(0226000978E90001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS 13474

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620777 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 13474	40.61	264.3	Secondary (grouped)

### Hydrographer Recommendations

Chart new submerged pile.

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart submerged pile. AWOIS Item 13474.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 3.488 m  
WATLEV - 3:always under water/submerged

## Office Notes

Concur. Chart new submerged pile.

Delete all piles associated with this AWOIS Item except the four listed in this report.



## 1.8) US 0000620780 00001 - Other Primary

### Survey Summary

**Survey Position:** 40° 41' 28.7" N, 074° 03' 15.3" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620780 00001(0226000978EC0001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS item 13474

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620780 00001	0.00	000.0	Primary

### Hydrographer Recommendations

Retain pile

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
 NINFOM - Retain charted submerged pile with updated attribution. AWOIS Item 13474.  
 QUASOU - 2:depth unknown  
 SORDAT - 20130429  
 SORIND - US,US,graph,F00630  
 WATLEV - 3:always under water/submerged

## Office Notes

Concur. Retain charted pile.

Delete all piles associated with this AWOIS Item except the four listed in this report.

## 1.8) US 0000620785 00001 - Other Primary

### Survey Summary

**Survey Position:** 40° 41' 29.9" N, 074° 03' 15.2" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1996-321.00:00:00.000 (11/16/1996)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620785 00001(0226000978F10001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

#### Remarks:

AWOIS 13474

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620785 00001	0.00	000.0	Primary

### Hydrographer Recommendations

Retain charted pile

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
 NINFOM - Retain charted submerged pile. AWOIS Item 13474.  
 QUASOU - 2:depth unknown  
 SORDAT - 19961116  
 SORIND - US,US,graph,Chart 12335  
 WATLEV - 3:always under water/submerged

## Office Notes

Concur. Retain charted pile.

Delete all piles associated with this AWOIS Item except the four listed in this report.

## 1.9) US 0000620779 00001

### Primary Feature for AWOIS Item #15102

**Search Position:** 40° 42' 00.8" N, 074° 02' 50.1" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** S2, MB  
**Technique Notes:** 50 meter search radius, seaward. Search area close to sea wall as safety allows.

**History Notes:**

\*\*\*\*Unknown Source-- A obstruction labeled as "Foul" and charted as a dotted danger curve is chart at 40/42/00.82 - 74/02050.11.

### Survey Summary

**Survey Position:** 40° 42' 00.9" N, 074° 02' 50.2" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620779 00001(0226000978EB0001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 15102. Not investigated.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620779 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15102	4.76	320.7	Secondary (grouped)

### Hydrographer Recommendations

Retain foul

## S-57 Data

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

**Attributes:** CATOBS - 6:foul area

NINFOM - Retain charted obstruction with updated attribution. AWOIS Item 15102.

QUASOU - 2:depth unknown

SORDAT - 20130429

SORIND - US,US,graph,F00630

WATLEV - 3:always under water/submerged

## Office Notes

Concur

**1.10) US 000620781 00001**

**Primary Feature for AWOIS Item #15103**

**Search Position:** 40° 42' 01.2" N, 074° 02' 46.9" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** S2, MB  
**Technique Notes:** [None]

**History Notes:**

\*\*\*\*Unknown Source-- A charted obstruction is labeled with "(rep bare)".

**Survey Summary**

**Survey Position:** 40° 42' 01.8" N, 074° 02' 46.8" W  
**Least Depth:** 1.63 m (= 5.35 ft = 0.891 fm = 0 fm 5.35 ft)  
**TPU (±1.96σ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620781 00001(0226000978ED0001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 15103

**Feature Correlation**

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620781 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15103	20.00	007.5	Secondary (grouped)

**Hydrographer Recommendations**

Update position and depth of obstruction

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 15103.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 1.630 m  
WATLEV - 3:always under water/submerged

## Office Notes

Concur



**1.11) US 000620778 00001****Primary Feature for AWOIS Item #15096**

**Search Position:** 40° 41' 13.7" N, 074° 02' 36.1" W  
**Historical Depth:** 4.57 m  
**Search Radius:** 0  
**Search Technique:** S2, MB  
**Technique Notes:** [None]

**History Notes:**

H11600-- OPR-B301-TJ-06; Uncharted dangerous obstruction acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings

were corrected to MLLW with verified water levels and final tide zoning. Chart dangerous obstruction with least depth 4.67 meters (15.34 feet).

**Survey Summary**

**Survey Position:** 40° 41' 13.7" N, 074° 02' 36.1" W  
**Least Depth:** 4.82 m (= 15.80 ft = 2.633 fm = 2 fm 3.80 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620778 00001(0226000978EA0001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 15096

**Feature Correlation**

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620778 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15096	0.60	015.4	Secondary (grouped)

## Hydrographer Recommendations

Update position and depth of obstruction

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 15096.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 4.815 m  
WATLEV - 3:always under water/submerged

### Office Notes

Concur

## 1.12) US 000620787 00001

### Primary Feature for AWOIS Item #15097

**Search Position:** 40° 41' 16.2" N, 074° 02' 34.8" W  
**Historical Depth:** 5.79 m  
**Search Radius:** 0  
**Search Technique:** S2, MB  
**Technique Notes:** [None]

**History Notes:**

H11600-- OPR-B301-TJ-06; Uncharted non-dangerous obstruction acquired with Reson 8101 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and final tide zoning. Evaluated by the hydrographer as not a DTON due to being located inside the security area.

### Survey Summary

**Survey Position:** 40° 41' 16.2" N, 074° 02' 34.8" W  
**Least Depth:** 5.61 m (= 18.41 ft = 3.069 fm = 3 fm 0.41 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620787 00001(0226000978F30001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 15097

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620787 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15097	0.89	173.5	Secondary (grouped)

### Hydrographer Recommendations

Update position and depth of obstruction

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 15097.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 5.612 m  
WATLEV - 3:always under water/submerged

## Office Notes

Concur

## 1.13) US 0000620789 00001

### Primary Feature for AWOIS Item #2694

**Search Position:** 40° 41' 18.9" N, 074° 02' 32.3" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

**History Notes:**

FE232/80WD--OPR-B645-RU/HE-80; SHOAL HUNG AT 19, CLEARED TO 15 FT, DIVERS  
 VERIFY HANG AS A SHOAL WITH APPROX. RELIEF OF 8 FT.

### Survey Summary

**Survey Position:** 40° 41' 18.8" N, 074° 02' 33.5" W  
**Least Depth:** 5.92 m (= 19.41 ft = 3.234 fm = 3 fm 1.41 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620789 00001(0226000978F50001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 2694

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620789 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 2694	27.00	268.0	Secondary (grouped)

### Hydrographer Recommendations

Chart rock

## S-57 Data

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

**Attributes:** NINFOM - Chart rock. AWOIS Item 2694.

QUASOU - 6:least depth known

SORDAT - 20130429

SORIND - US,US,graph,F00630

VALSOU - 5.915 m

WATLEV - 3:always under water/submerged

## Office Notes

Concur

## 1.14) US 000620786 00001

### Primary Feature for AWOIS Item #15098

**Search Position:** 40° 41' 19.9" N, 074° 02' 30.7" W  
**Historical Depth:** 7.01 m  
**Search Radius:** 0  
**Search Technique:** S2, MB  
**Technique Notes:** [None]

**History Notes:**

H11600-- OPR-B301-TJ-06; Obstructions found with least depth of 23 ft.

### Survey Summary

**Survey Position:** 40° 41' 19.9" N, 074° 02' 30.7" W  
**Least Depth:** 7.21 m (= 23.64 ft = 3.940 fm = 3 fm 5.64 ft)  
**TPU (±1.96σ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620786 00001(0226000978F20001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS 15098

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620786 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15098	1.06	253.0	Secondary (grouped)

### Hydrographer Recommendations

Update position and depth of obstruction

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 15098.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 7.206 m  
WATLEV - 3:always under water/submerged

## Office Notes

Concur



## 1.15) US 000620790 00001

### Primary Feature for AWOIS Item #13237

**Search Position:** 40° 41' 45.9" N, 074° 02' 28.5" W  
**Historical Depth:** [None]  
**Search Radius:** 50  
**Search Technique:** VS, MB, S2  
**Technique Notes:** [None]

**History Notes:**

\*\*\*\*UNKOWN SOURCE-- A WRECK IN POSITION OF 40/41/46.7N - 74/02/29.5W, CHARTED AS "WK" NEXT TO A 3 FT SOUNDING.

F00463/00--OPR-C410; A VISIBLE WRECK WAS LOCATED AT 40/41/45.89N - 74/02/28.51W. (ENTERED 5/05 CEH)

### Survey Summary

**Survey Position:** 40° 41' 46.3" N, 074° 02' 29.1" W  
**Least Depth:** 0.97 m (= 3.17 ft = 0.529 fm = 0 fm 3.17 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 000620790 00001(0226000978F60001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS 13237

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 000620790 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 13237	19.25	309.5	Secondary (grouped)

## Hydrographer Recommendations

Update position and depth of wreck

### S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 5:wreck showing any portion of hull or superstructure  
NINFOM - Chart wreck. AWOIS Item 13237.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00640  
TECSOU - 3:found by multi-beam  
VALSOU - 0.967 m  
WATLEV - 3:Always under water/submerged

### Office Notes

Concur

## 1.16) US 000620775 00001

### Primary Feature for AWOIS Item #15099

**Search Position:** 40° 41' 53.9" N, 074° 02' 10.3" W  
**Historical Depth:** 6.10 m  
**Search Radius:** 0  
**Search Technique:** S2, MB  
**Technique Notes:** [None]

**History Notes:**

H11600--OPR-B301-TJ-06; Obstruction Least depth = 20 ft

### Survey Summary

**Survey Position:** 40° 41' 54.4" N, 074° 02' 09.7" W  
**Least Depth:** 6.40 m (= 21.00 ft = 3.500 fm = 3 fm 3.00 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620775 00001(0226000978E70001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 15099

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620775 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15099	20.26	046.3	Secondary (grouped)

### Hydrographer Recommendations

Update position and depth of obstruction

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 15099.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 6.400 m  
WATLEV - 3:always under water/submerged

## Office Notes

Concur

**1.17) US 000620782 00001****Primary Feature for AWOIS Item #15101**

**Search Position:** 40° 41' 59.5" N, 074° 02' 07.9" W  
**Historical Depth:** 5.79 m  
**Search Radius:** 0  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

**History Notes:**

H11600-- OPR-B301-TJ-06; Uncharted non-dangerous obstruction acquired with Reson 8101 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and final tide zoning. Evaluated by the hydrographer as not a DTON due to proximity to the security area and shoal area.

**Survey Summary**

**Survey Position:** 40° 41' 59.5" N, 074° 02' 08.0" W  
**Least Depth:** 5.87 m (= 19.25 ft = 3.209 fm = 3 fm 1.25 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620782 00001(0226000978EE0001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 15101

**Feature Correlation**

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620782 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15101	2.02	252.6	Secondary (grouped)

## Hydrographer Recommendations

Update position and depth of obstruction

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 15101.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 5.868 m  
WATLEV - 3:always under water/submerged

### Office Notes

Concur

## 1.18) US 0000620783 00001

### Primary Feature for AWOIS Item #10667

**Search Position:** 40° 42' 03.1" N, 074° 02' 07.1" W  
**Historical Depth:** 6.10 m  
**Search Radius:** 50  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

**History Notes:**

LNM47/74--10/30/75, 3RD CGD; TWO UNIDENTIFIED OBSTRUCTIONS HAVE BEEN REPORTED TO EXIST OFF ELLIS ISLAND, NY. ONE IS IN APPROX POSITION 40 42 04N, 074 02 09W NAD 27. SEE AWOIS 10668 FOR SECOND. ENTERED 6/00 MCR.

H11600-OPR-B301-TJ-06-- AWOIS item #10667 acquired with Reson 8125 MBES and 200% Klein 5000 side scan. Soundings were corrected to MLLW with verified water levels and final tide zoning. Move charted AWOIS item #10667 to current position with a least depth of 6.18 meters (20.29 feet).

### Survey Summary

**Survey Position:** 40° 42' 03.2" N, 074° 02' 07.3" W  
**Least Depth:** 6.26 m (= 20.54 ft = 3.424 fm = 3 fm 2.54 ft)  
**TPU (±1.96σ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620783 00001(0226000978EF0001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 10667

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620783 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 10667	4.50	299.0	Secondary (grouped)

## Hydrographer Recommendations

Update position and depth.

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 10667.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 6.262 m  
WATLEV - 3:always under water/submerged

### Office Notes

Concur



## 1.19) US 000620788 00001

### Primary Feature for AWOIS Item #15100

**Search Position:** 40° 41' 54.4" N, 074° 02' 03.5" W  
**Historical Depth:** 7.01 m  
**Search Radius:** 0  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

**History Notes:**

H11600-- OPR-B301-TJ-06; Obstruction, 23 ft.

### Survey Summary

**Survey Position:** 40° 41' 54.4" N, 074° 02' 03.5" W  
**Least Depth:** 7.07 m (= 23.20 ft = 3.866 fm = 3 fm 5.20 ft)  
**TPU ( $\pm 1.96\sigma$ ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620788 00001(0226000978F40001)  
**Charts Affected:** 12334\_1, 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 15100

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620788 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15100	1.30	042.4	Secondary (grouped)

### Hydrographer Recommendations

Update position and depth of obstruction

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 15100.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 7.071 m  
WATLEV - 3:always under water/submerged

## Office Notes

Concur

## 1.20) US 000620776 00001

### Primary Feature for AWOIS Item #15105

**Search Position:** 40° 42' 34.9" N, 074° 02' 03.4" W  
**Historical Depth:** [None]  
**Search Radius:** 75  
**Search Technique:** MB, S2  
**Technique Notes:** [None]

**History Notes:**

\*\*\*\*Unknown Source-- Obstruction chart with label, "Obstn rep".

### Survey Summary

**Survey Position:** 40° 42' 33.9" N, 074° 02' 03.3" W  
**Least Depth:** 1.37 m (= 4.48 ft = 0.747 fm = 0 fm 4.48 ft)  
**TPU (±1.96σ):** **THU (TPEh)** [None] ; **TVU (TPEv)** [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 000620776 00001(0226000978E80001)  
**Charts Affected:** 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS Item 15105

### Feature Correlation

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 000620776 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 15105	29.90	177.6	Secondary (grouped)

### Hydrographer Recommendations

Update position and depth of obstruction

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
NINFOM - Chart obstruction. AWOIS Item 15105  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 1.367 m  
WATLEV - 3:always under water/submerged

## Office Notes

Concur

**1.21) US 0000620784 00001****Primary Feature for AWOIS Item #10669**

**Search Position:** 40° 42' 33.8" N, 074° 01' 55.1" W  
**Historical Depth:** [None]  
**Search Radius:** 200  
**Search Technique:** S2, MB  
**Technique Notes:** [None]

**History Notes:**

HISTORY

CL12/1980--3RD CGD, VESSEL CASUALTY REPORT, 12-15-79; THE 150 FT TANKER M/V JET TRADER WITH A 12 FT DRAFT GROUNDED APPROX 200 FT OFF THE ENTRANCE TO MORRIS CANAL. CG INVESTIGATION FOUND 12 TO 13 FEET OF WATER AT THE SITE. CHARTED DEPTHS ARE 26 FT. ENTERED MCR 6/00

**Survey Summary**

**Survey Position:** 40° 42' 33.5" N, 074° 01' 56.3" W  
**Least Depth:** 4.69 m (= 15.39 ft = 2.565 fm = 2 fm 3.39 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2013-119.00:00:00.000 (04/29/2013)  
**Dataset:** AWOIS\_Items\_only.000  
**FOID:** US 0000620784 00001(0226000978F00001)  
**Charts Affected:** 12335\_1, 12337\_1, 12327\_1, 12326\_1, 12363\_1, 12300\_1, 13006\_1, 5161\_1, 13003\_1, 14500\_1

**Remarks:**

AWOIS 10669

**Feature Correlation**

Source	Feature	Range	Azimuth	Status
AWOIS_Items_only.000	US 0000620784 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 10669	28.85	249.0	Secondary (grouped)

## Hydrographer Recommendations

Update position and depth.

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** NINFOM - Chart obstruction. AWOIS Item 10669.  
QUASOU - 6:least depth known  
SORDAT - 20130429  
SORIND - US,US,graph,F00630  
VALSOU - 4.690 m  
WATLEV - 3:always under water/submerged

### Office Notes

Concur

APPROVAL PAGE

F00630

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NGDC for archive

- F00630\_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- F00630\_GeoImage.pdf

The survey evaluation and verification has been conducted according current OCS Specifications.

Approved: \_\_\_\_\_

**Peter Holmberg**

Cartographic Team Lead, Pacific Hydrographic Branch

The survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: \_\_\_\_\_

**Katie Reser**

Physical Scientist, Pacific Hydrographic Branch