

H11442

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: **H11442**

LOCALITY

State: Connecticut & New York

General Locality: Eastern Long Island Sound

Sub-locality: Approaches to Niantic River

2005

CHIEF OF PARTY
CAPT Emily B. Christman, NOAA

LIBRARY & ARCHIVES

DATE:

HYDROGRAPHIC TITLE SHEET

H11442

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: **Connecticut & New York**

General Locality: **Eastern Long Island Sound**

Sub-Locality: **Approaches to Niantic River**

Scale: **1:10,000** Date of Survey: **04/18/05 to 05/06/05**

Instructions Dated: **04/12/05** Project Number: **OPR-B370-TJ-05**

Change No.1 Dated: **04/12/05**

Change No.2 Dated: **04/29/05**

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

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

Surveyed by: **NOAA Ship THOMAS JEFFERSON Personnel**

Soundings by: **Reson SeaBat 8101 multibeam echosounder**
Reson SeaBat 8125 multibeam echosounder

Graphic record scaled by: **N/A**

Graphic record checked by: **N/A**

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

Verification by: ***Atlantic Hydrographic Branch Personnel***

Soundings in: **Meters at MLLW**

Remarks:
Bold, Italic, Red notes in the Descriptive Report were made during office processing.
1) All Times are UTC.
2) This is a Navigable Area Hydrographic Survey.
3) Projection is UTM Zone 18.

TABLE OF CONTENTS

A. AREA SURVEYED	1
B. DATA ACQUISITION AND PROCESSING	3
EQUIPMENT	3
QUALITY CONTROL	3
Side Scan Sonar Quality Control	3
Shallow Water Multibeam Quality Control	3
Crosslines	6
Junctions	7
CORRECTIONS TO ECHO SOUNDING	7
LIDAR and RESON 8125/8101 Feature Comparison	7
LIDAR Features Requiring Field Work	7
LIDAR Test Area Features	7
C. VERTICAL AND HORIZONTAL CONTROL	8
VERTICAL CONTROL	8
HORIZONTAL CONTROL	9
D. RESULTS AND RECOMMENDATIONS	9
CHART COMPARISON	9
General Agreement with Charted Soundings	10
Dangers to Navigation (Dton's)	10
AWOIS Items	10
Significant Uncharted Features	10
Non-AWOIS Charted Features & Notes	10
LIDAR Features & Notes	10
ADDITIONAL RESULTS	11
Prior Surveys	11
Aids to Navigation and Other Detached Positions	11
Bridges and Overhead Cables	11
Ferry Routes	11
Submarine Cables and Pipelines	11
Shoreline	11
E. APPROVAL SHEET	12
APPENDIX I: ITEM INVESTIGATION REPORTS	I
APPENDIX II: LIST OF GEOGRAPHIC NAMES	II
APPENDIX III: PROGRESS SKETCH	III
APPENDIX IV: TIDES AND WATER LEVELS	IV
1) Field Tide Note (Section 5 of Project Instructions)	IV

2) Smooth Tide Request.....	IV
3) Times of Hydrography.....	IV
4) Final Tide Note	IV
APPENDIX V: SUPPLEMENTAL RECORDS & CORRESPONDENCES	V
V.1. COAST PILOT REPORT, NOAA FORM 77-6.....	V
V.2. BOTTOM SAMPLE, NOAA FORM 75-44.....	V
V.3. NONFLOATING AIDS OR LANDMARKS FOR CHARTS, NOAA FORM 76-40	V
V.4. DIVE INVESTIGATION REPORTS.....	V
V.5. SHORELINE VERIFICATION DETACHED POSITION FORMS	V
V.6. COMPREHENSIVE ANALYSIS OF LIDAR DATA COMPARED TO RESON 8125 AND 8101 BY LCDR SHEPHARD M. SMITH, NOAA.....	V

LIST OF FIGURES

Figure 1: Complete Survey Limits & Data Coverage.....	2
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LIST OF TABLES

Table 1: Preliminary Tide Zones & Correctors	8
Table 2: Affected Charts.....	9

APPENDICES

APPENDIX I – ITEM INVESTIGATION REPORTS

APPENDIX II – LIST OF GEOGRAPHIC NAMES

APPENDIX III – PROGRESS SKETCH

APPENDIX IV – TIDE AND WATER LEVELS

APPENDIX V – SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDENCES

DESCRIPTIVE REPORT

to accompany
HYDROGRAPHIC SURVEY H11442

Scale of Survey: 1:10,000

Year of Survey: 2005

NOAA Ship THOMAS JEFFERSON
CAPT Emily B. Christman, Commanding

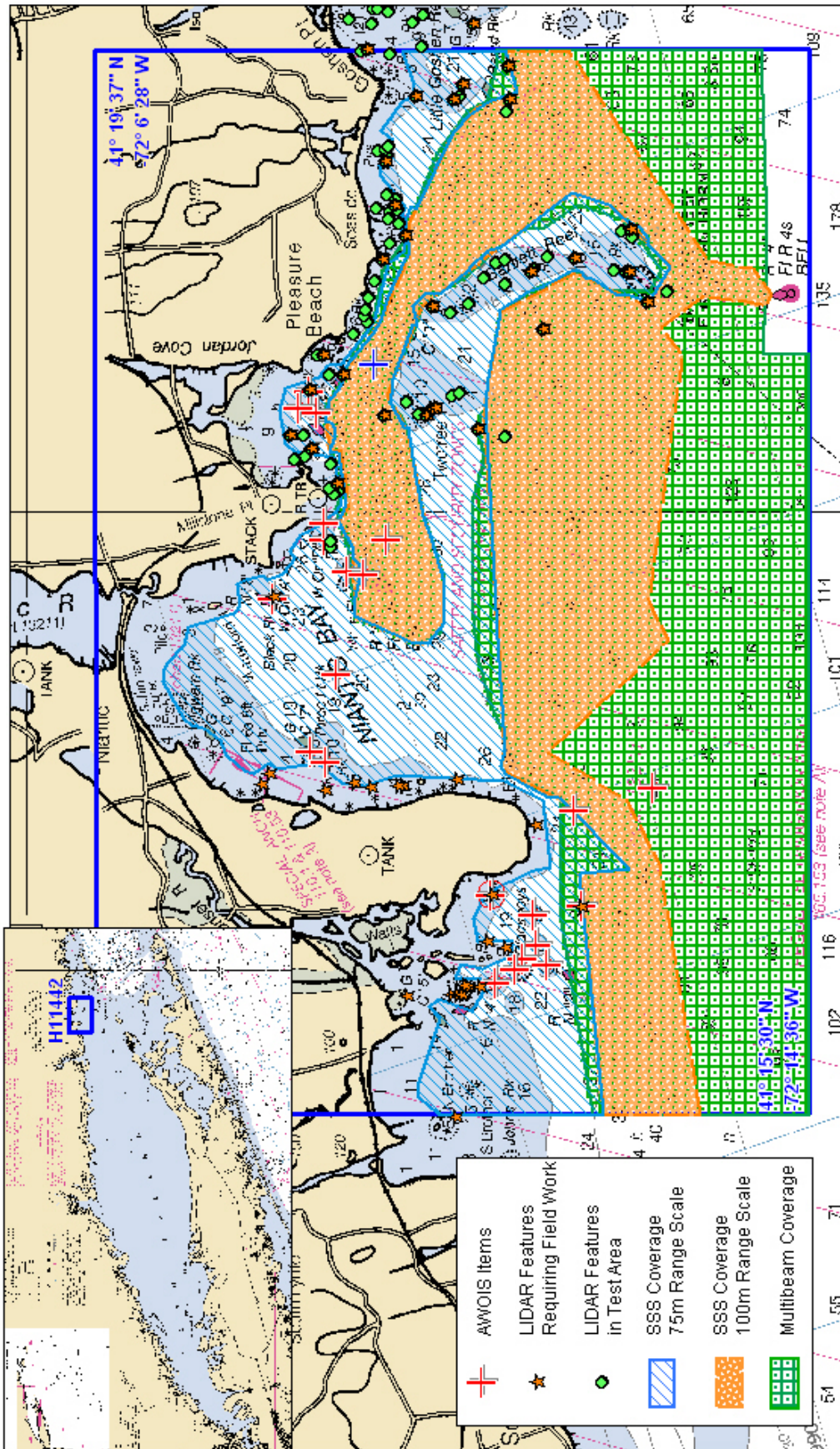
A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project OPR-B370-TJ-05, Eastern Long Island Sound, Connecticut and New York. The original instructions are dated March 25, 2005. Changes to the letter instructions were received dated April 12, 2005 with changes in the scope of the project and a leveling request. A second change was received dated April 29, 2005 with changes in the sheet limits.

This Descriptive Report pertains to sheet "B" of project OPR-B370-TJ-05, which includes approaches to Niantic River. The assigned registry number for this sheet is H11442, as prescribed in the Letter Instruction.

The purpose of CY 2005 survey operations in the Eastern Long Island Sound is four-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, (2) to address a specific request from the Northeast Marine Pilots for updated surveys in the vicinity of New London and New Haven, Connecticut; particularly in the vicinity of Fort Trumbull in New London Harbor where cruise ships are expected to begin docking, (3) to evaluate the efficacy of the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm for post-processing bathymetric data, and finally (4) to conduct a comprehensive comparison and evaluation of recent vintage LIDAR data to ascertain the reliability and effectiveness of LIDAR for near shore survey work in an east coast survey paradigm.

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



This chartlet has been corrected through
 Notice to Mariners dated
 NOT FOR NAVIGATION.

Chart 13211, 14th Ed. September 2004
 Scale 1:20,000,
 North of Long Island Sound, Niantic Bay Vicinity

OPR-B370-TJ-05, H11442
Survey Limits & Data Coverage

NATIONAL OCEANIC AND
 ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE



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

EQUIPMENT

Data were acquired by NOAA Launch 1005, and NOAA Launch 1014. NOAA Launches 1005 and 1014 are 8.5-meter aluminum Jensen vessels with a typical 0.5-meter transducer draft.

Launch 1014 acquired MBES data with a RESON 8125. Launch 1005 acquired MBES data with a RESON 8101 and SSS data with a KLEIN 5000.

Launch 1005 and Launch 1014 positioning and attitude data were determined with TSS POS/MV 320 Version 3 GPS-aided inertial navigation systems.

Refer to the Data Acquisition and Processing Report (DAPR)* for detailed equipment and vessel configuration information.

QUALITY CONTROL

Side Scan Sonar Quality Control

As per letter instructions, areas with 4-10 meters water depth were imaged with 200% SSS bottom coverage, areas with 10-20 meters water depth were imaged with 100% SSS.

Side scan sonar data were acquired simultaneously with Reson 8101 MBES data on launch 1005. The data were reviewed in CARIS 6.0. No significant reductions in data quality were observed.

Rock features found in the side scan sonar imagery were compared to charted rock features and found to be in agreement. The data were determined to have adequate quality.

Shallow Water Multibeam Quality Control

As per letter instructions, areas with water depths greater than 10 meters were imaged with 100% MBES coverage. The working grounds were partitioned into regions. A launch was assigned to each region to collect multibeam data. Generally, launch 1014 collected data in regions with depths of 10-20 meters. Launch 1005 collected multibeam data in areas deeper than 20 meters.

** Data filed at the Atlantic Hydrographic Branch (AHB).*

'Postage stamp' areas were designated in areas with target features of various sizes. Data was collected on each entire area by each launch. This provides data for LIDAR, RESON 8101 and RESON 8125 system comparison of least depths and gridding methods on the same targets. For results, see Appendix V.6, Comprehensive Analysis of LIDAR data compared to RESON 8101 and 8125.

Reson 8101 MBES data were acquired simultaneously with Klein SSS on Launch 1005 on days 110-112 and 131. Part of the Reson 8101 swath was physically blocked by the Klein mounting sled. These data were filtered and cleaned and used for general bathymetry. Least depths on features and Reson 8101 MBES data on the remaining days were acquired when the Klein mounting sled was not mounted.

The multibeam data acquired with Launch 1014 on days 110 and 111 were deleted because of heave errors. The heave values for these two days were found to be out of range for approximately 90% of the data and the data was unsalvageable. The heave bandwidth value was subsequently changed on Launch 1014 which resolved the issue.

28 lines of multibeam data from launch 1014 were deleted from day 121 due to acquisition problems. ISIS was not receiving UDP attitude/position data.

The following multibeam data acquired on Launch 1005 from days 110, 114 and 115 were deleted because they did not contain precise timing raw navigation datagram:

2005-110	2005-114	2005-115
154_1526	460_1808	586_1948
364_1531	468_1819	
365_1537	469_1823	
367_1543		

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

CUBE Surfaces

CARIS HIPS CUBE (*Combined Uncertainty and Bathymetric Estimator*) surfaces, which incorporate each sounding's total propagated error (TPE), were created according to depth intervals. Each finalized CUBE surface contains nine layers: depth, uncertainty, density, mean, hypothesis strength, hypothesis count, standard deviation, shoal, and deep. User specified hypothesis selection was not used to modify the surface.

Data from Launch 1014 are contained in a series of 30 finalized 0.4 meter resolutions CUBE surfaces for object detection:

* ***Data filed at (AHB).***

Field Sheet	Surface Name
H11442_OD1a	H11442_1014_OD1a_40cm_cube
H11442_OD1b	H11442_1014_OD1b_40cm_cube
H11442_OD2a	H11442_1014_OD2a_40cm_cube
H11442_OD2b	H11442_1014_OD2b_40cm_cube
H11442_OD3	H11442_1014_OD3_40cm_cube
H11442_OD4	H11442_1014_OD4_40cm_cube
H11442_OD5	H11442_1014_OD5_40cm_cube
H11442_OD6a	H11442_1014_OD6a_40cm_cube
H11442_OD6b	H11442_1014_OD6b_40cm_cube
H11442_OD7	H11442_1014_OD7_40cm_cube
H11442_OD8a	H11442_1014_OD8a_40cm_cube
H11442_OD8b	H11442_1014_OD8b_40cm_cube
H11442_OD9a	H11442_1014_OD9a_40cm_cube
H11442_OD9b	H11442_1014_OD9b_40cm_cube
H11442_OD10b	H11442_1014_OD10b_40cm_cube
H11442_OD10c	H11442_1014_OD10c_40cm_cube
H11442_OD10d	H11442_1014_OD10d_40cm_cube
H11442_OD11	H11442_1014_OD11_40cm_cube
H11442_OD12b	H11442_1014_OD12b_40cm_cube
H11442_OD12c	H11442_1014_OD12c_40cm_cube
H11442_OD12d	H11442_1014_OD12d_40cm_cube
H11442_OD13a	H11442_1014_OD13a_40cm_cube
H11442_OD13b	H11442_1014_OD13b_40cm_cube
H11442_OD14a	H11442_1014_OD14a_40cm_cube
H11442_OD14c	H11442_1014_OD14c_40cm_cube
H11442_OD14d	H11442_1014_OD14d_40cm_cube
H11442_OD15a	H11442_1014_OD15a_40cm_cube
H11442_OD15b	H11442_1014_OD15b_40cm_cube
H11442_OD16	H11442_1014_OD16_40cm_cube
H11442_OD17	H11442_1014_OD17_40cm_cube

Data from Launch 1005 are contained in a series of 14 finalized 0.8 meter resolutions CUBE surfaces for coverage:

Field Sheet	Surface Name
H11442_C1	H11442_1005_C1_80cm_cube
H11442_C2	H11442_1005_C2_80cm_cube
H11442_C3	H11442_1005_C3_80cm_cube
H11442_C4	H11442_1005_C4_80cm_cube

H11442_C5	H11442_1005_C5_80cm_cube
H11442_C6	H11442_1005_C6_80cm_cube
H11442_C7	H11442_1005_C7_80cm_cube
H11442_C8	H11442_1005_C8_80cm_cube
H11442_C9	H11442_1005_C9_80cm_cube
H11442_C10	H11442_1005_C10_80cm_cube
H11442_C11	H11442_1005_C11_80cm_cube
H11442_C12	H11442_1005_C12_80cm_cube
H11442_C13	H11442_1005_C13_80cm_cube
H11442_C14	H11442_1005_C14_80cm_cube

The CUBE surfaces were reviewed using GeoZui 3D. A significant number of fliers were found in the data. Fliers were located in GeoZui 3D and then cleaned out in CARIS 6.0. The surfaces were then recomputed and opened in GeoZui 3D again. The methodology was repeated, but it was determined this would not resolve the issues of the fliers in the surfaces. Once fliers were located and deleted, fliers would then show up in a different area.

The surfaces were then reviewed in CARIS 6.0, viewing the hypothesis count surfaces with a color range of 0-3. Each area with more than one hypothesis was reviewed and resolved by deleting unnecessary data. The surfaces were then deleted and new surfaces were created and finalized. The surfaces were opened in GeoZui 3D and no fliers were found.

The CUBE surfaces for data acquired by launch 1014 were combined into four 3-meter surfaces contained within field sheets named H11442_1014_1, H11442_1014_2, H11442_1014_3 and H11442_1014_4. The CUBE surfaces for data acquired by launch 1005 were combined into three 3-meter surfaces contained within field sheets named H11442_1005_area1, H11442_1005_area2, H11442_1005_area3. The seven combined surfaces were finalized and imported into Pydro as the source of the soundings in this survey's PSS weighted grid bathy layer. The bathy layer was excessed using the character over-plot method with an over-plot removal character size of 1.8 and an over-plot removal scale of 1:10,000.

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

Crosslines

Launch 1005, and Launch 1014 acquired 42.3 nautical miles of crosslines (about 9% of the 470.9 nm of mainscheme MBES data). No traditional crossline comparison was performed on the multibeam data because quality control procedures have been incorporated into the CUBE algorithm used by CARIS 6.0. The crosslines have excellent agreement with mainscheme data.

*** Data filed at (AHB).**

Junctions *See also the Evaluation Report.*

Hydrographic survey H11442 junctions with the southeast corner of hydrographic survey H11520. Hydrographic survey H11520 was completed by the THOMAS JEFFERSON in 2003.

CORRECTIONS TO ECHO SOUNDING

All methods or instruments used were as described in the project DAPR.* The positions of all 216 sound velocity casts are loaded into the survey's PSS as individual chart GP features, with the depth versus sound velocity information contained in the remarks.

LIDAR and RESON 8125/8101 Feature Comparison**LIDAR Features Requiring Field Work**

51 geographic positions (GPs) were provided by Tenix LADS Inc., a LIDAR contract company, where it was considered that lesser depths may exist or that the survey depth was doubtful from the LIDAR bathymetry. Launches 1014 and 1005 acquired multibeam data for 19 of the 51 GPs. Bathymetry data was not acquired for 32 of the features due to the launches inability to operate safely in shoal waters.

These features were not given S-57 classifications. They represent areas where there were discrepancies in the LIDAR data and do not necessarily represent significant features. If it is an area with a significant feature, the feature is S-57 classified elsewhere in the feature reports.

See Appendix I-e for feature details.

LIDAR Test Area Features

Geographic positions (GPs) were provided by Tenix LADS Inc., a LIDAR contract company, for comparison of LIDAR sounding depths to multibeam bathymetry. A section of this project having 52 provided GPs was chosen as a test area. RESON 8125 or RESON 8101 multibeam data was acquired for 20 of the 52 GPs. The depths from the LIDAR data were compared with the multibeam data using the beta version of CARIS 6.0. Bathymetry data was not acquired for 32 of the features due to the launches inability to operate safely in shoal waters.

LIDAR GPs and attributes were provided as a MapInfo table. They were exported from MapInfo to a .dxf file format and opened as a background file in CARIS 6.0. The LIDAR GPs were overlaid on the multibeam bathymetry data and compared.

* *Data filed at (AHB).*

Soundings were determined to be in agreement if they were within the IHO Order 1 standard.

Originally, the LIDAR depths were compared to the depths generated by the three meter, combined CUBE surfaces. Approximately 30% of the 20 LIDAR features compared were found to disagree with the combined CUBE surface depths. Next, the LIDAR features were compared to the shoalest depth soundings from the RESON 8101 or RESON 8125 found using 'Subset Editor' in CARIS. Of the 20 features compared, 10% of the features had conflicting depths. See Appendix I-f for feature details.

A comprehensive analysis of the LIDAR as compared with the RESON 8125 and 8101 has been performed LCDR Shep Smith. For results, see Appendix V.6, Comprehensive Analysis of LIDAR data compared to RESON 8101 and 8125.

C. VERTICAL AND HORIZONTAL CONTROL *See also the Evaluation Report.*

VERTICAL CONTROL

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

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

Table 1: Preliminary Tide Zones & Correctors

ZONE NAME	CORRECTOR (min)	RATIO	REFERENCE
LIS95	+30	1.15	846-1490
LIS 97	+24	1.11	846-1490
LIS99	+12	1.07	846-1490
LIS100	+6	1.02	846-1490
LIS102	0	1.00	846-1490
LIS103	0	0.94	846-1490

A Request for Approved Tides letter was sent to N/OPS1 on April, 22 2005 (Appendix IV). Verified water levels from the N/OPS1 CO-OPS website were downloaded on May 31, 2005, and applied to all sounding data. Refer to the July-November 2005 Data Acquisition and Processing Report (DAPR)* dated April 2005

for a summary of the methods used to determine, evaluate, and apply tide corrections to sounding data. *Approved tides and zoning were applied during field operations.*

HORIZONTAL CONTROL

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

Horizontal dilution of precision (HDOP) was monitored daily on the both launches. The observed HDOP values did not exceed 4.00 during data acquisition.

D. RESULTS AND RECOMMENDATIONS *See also the Evaluation Report.*

CHART COMPARISON

There are nine charts affected by this survey:

Table 2: Affected Charts

Number	Version	Edition Date	Scale
12354	41	04/01/2004	1:80,000
12372	33	08/01/2002	1:20,000
13212_1	36	03/01/2004	1:20,000
13211_1	14	09/01/2004	1:20,000
13205_1	37	09/01/2004	1:80,000
12300_1	45	03/01/2005	1:400,000
13006_1	32	02/01/2005	1:675,000
13003_1	48	10/01/2004	1:1,200,000
5161_1	13	10/01/2033	1:1,058,400

General Agreement with Charted Soundings

The survey soundings vary substantially from the charted depths. There are several areas around the reefs and shoreline that are significantly shoaler than charted. See Appendix 1 for more details.

Dangers to Navigation (Dton's) *See also the Evaluation Report.*

There are 33 Dton's for this survey. See Appendix 1-a.

AWOIS Items

The item investigation reports describing this survey's 23 full investigation AWOIS items in Appendix 1-b.

Significant Uncharted Features

The item investigation reports describing 25 significant uncharted features are contained in Appendix I-c.

Non-AWOIS Charted Features & Notes

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

LIDAR Features & Notes

Item investigation reports on 51 LIDAR features identified by the LIDAR contractor, LIDAR features identified by Atlantic Hydrographic Branch personnel as needing further investigation, and 52 features identified within the system comparison test area are contained Appendix I-e and I-f.

ADDITIONAL RESULTS**Prior Surveys** *See also the Evaluation Report.*

A comparison with prior surveys was not required for this survey.

Aids to Navigation and Other Detached Positions

All identified floating aids to navigation within the survey area are consistent with the chart and serve their intended purpose.

Bridges and Overhead Cables

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

Ferry Routes

There are no ferry routes in the survey area.

Submarine Cables and Pipelines

There are no submarine cables or pipelines in the survey area.

Shoreline

No shoreline verification was performed.

E. APPROVAL SHEET

OPR-B370-TJ-05
Eastern Long Island Sound
New York & Connecticut

Survey Registry No. H11442

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

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

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

- SEPARATES TO ACCOMPANY PROJECT OPR-B370-TJ-05, SHEET H, H11442
- OPR-B370-TJ-05 HORIZONTAL AND VERTICAL CONTROL REPORT (*submitted 9/17/05*)
- SPRING HYDROGRAPHIC SYSTEMS CERTIFICATION REPORT (*effect date 4/10/05*)
- SPRING DATA ACQUISITION AND PROCESSING REPORT (*effect date 4/1/05*)

Respectfully Submitted:


AST Erin A. Campbell
Hydrographer

Approved and Forwarded:


LT Marc Moser, NOAA
Field Operations Officer


CAPT Emily B. Christman, NOAA
Commanding Officer

APPENDIX I: ITEM INVESTIGATION REPORTS

Following are item investigation reports detailing six groups of features:

- a) Charted Features
- b) Uncharted Features
- c) AWOIS Items
- d) Dangers to Navigation (Dton's)

H11442 Features Report

Registry Number: H11442
State: CT NY
Locality: Eastern Long Island
Sub-locality: Approaches to Niantic Bay
Project Number: OPR-B370-TJ-05
Survey Dates: 01/01/1990 - 11/13/2005

Charts Affected

Number	Version	Date	Scale
13213	41st Ed.	03/01/2004	1:10000
13211	14th Ed.	09/01/2004	1:20000
13212	36th Ed.	03/01/2004	1:20000
12372	33rd Ed.	08/01/2004	1:40000
12354	41st Ed.	04/01/2004	1:80000
13205	37th Ed.	09/01/2004	1:80000
12300	44th Ed.	07/01/2004	1:400000
13006	32nd Ed.	02/01/2005	1:675000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	637/2 - Uncharted 23 Rk and danger curve	Rock	7.18 m	41° 17' 24.887" N	072° 09' 22.204" W	---
1.2	278/54 - Uncharted 9 Rk	Rock	2.77 m	41° 18' 11.906" N	072° 08' 56.800" W	---
1.3	1660/96 - Uncharted 8 Rk	Rock	2.39 m	41° 18' 36.844" N	072° 12' 00.140" W	---
1.4	1698/23 - Uncharted 7 Rk	Rock	2.11 m	41° 17' 33.091" N	072° 14' 37.717" W	---
1.5	4725/96 - Uncharted 7 Rk and danger curve	Rock	2.20 m	41° 17' 32.602" N	072° 12' 03.217" W	---
1.6	1011/88 - Uncharted 23 Rk	Rock	7.14 m	41° 17' 13.870" N	072° 06' 51.285" W	---
1.7	1699/2 - Uncharted 8Rk	Rock	2.45 m	41° 18' 02.292" N	072° 12' 07.523" W	---
1.8	761/1 - AHB - Uncharted 10 Rk	Shoal	3.10 m	41° 18' 30.152" N	072° 09' 24.440" W	---
1.9	1089/101 - AHB - Charted 13 Rk (revise to 11 Rk)	Rock	3.39 m	41° 17' 50.467" N	072° 07' 54.562" W	---

1.10	2409/52 - AHB Charted 6 Rk (revise to 5 Rk)	Rock	1.58 m	41° 17' 47.514" N	072° 06' 35.553" W	---
1.11	1229/87 - AHB - Charted 10 Rk (revise to 9 Rk)	Rock	2.92 m	41° 18' 13.346" N	072° 11' 48.482" W	---
1.12	10 - Lidar - (Retain charted 2 Rk)	GP	1.40 m	41° 17' 15.720" N	072° 13' 20.280" W	---
1.13	12 AWOIS 12412 - Charted 6 Rk (retain)	Rock	2.89 m	41° 17' 20.400" N	072° 12' 55.800" W	---
1.14	13 Retain rock awash	GP	3.29 m	41° 17' 04.920" N	072° 12' 23.760" W	---
1.15	15 - Lidar - (Retain charted 5 Rk)	Rock	2.39 m	41° 17' 51.000" N	072° 12' 05.760" W	---
1.16	16 - Lidar - (Retain charted 4 Rk)	Rock	3.39 m	41° 17' 52.800" N	072° 12' 05.400" W	---
1.17	35 - Lidar - (Retain charted 2Rk)	Rock	1.44 m	41° 17' 53.520" N	072° 07' 40.080" W	---
1.18	43 - Lidar - (Retain Charted 3 Rk)	Rock	0.09 m	41° 16' 32.880" N	072° 08' 10.320" W	---
1.19	30 - Retain charted rock awash	GP	1.30 m	41° 18' 16.560" N	072° 09' 48.960" W	---
1.20	33 - Retain charted rock awash	GP	0.61 m	41° 18' 28.080" N	072° 09' 36.360" W	---
1.21	34 - Retain charted rock cov/uncov	GP	0.54 m	41° 17' 49.560" N	072° 09' 09.720" W	---
1.22	35 - Retain charted rock awash	GP	1.77 m	41° 17' 45.240" N	072° 09' 15.480" W	---
1.23	38 - Retain charted rock awash	GP	1.05 m	41° 18' 15.840" N	072° 08' 57.480" W	---
1.24	39 - Retain charted rocks (3) - cov/uncov	GP	0.98 m	41° 18' 20.520" N	072° 08' 48.120" W	---
1.25	42 - Lidar - (Retain Charted 6 Rk)	Rock	2.35 m	41° 18' 04.320" N	072° 08' 30.480" W	---
1.26	47 - Retain charted rocks (3) awash	GP	0.57 m	41° 17' 28.320" N	072° 08' 25.080" W	---
1.27	52 - Lidar - (Retain Charted 4 Rk)	Rock	1.85 m	41° 17' 05.640" N	072° 08' 08.520" W	---
1.28	59 - Retain charted rock awash and 3 Rk	GP	1.03 m	41° 17' 55.680" N	072° 07' 56.640" W	---
1.29	21 - Retain charted rocks awash (5)	GP	0.69 m	41° 19' 04.440" N	072° 10' 47.280" W	---
1.30	3146/86 - charted 10 Rk (relocate)	Rock	3.15 m	41° 17' 58.743" N	072° 07' 20.973" W	---
1.31	1236/8 - AHB - Charted 9 Rk (revise to 8 Rk)	Rock	2.51 m	41° 17' 52.600" N	072° 07' 58.787" W	---
1.32	436/9 - Charted 8 Rk (revise to a 7 Rk)	Obstruction	2.21 m	41° 18' 01.111" N	072° 07' 14.249" W	---
1.33	322/20 - Delete Charted 9 Rk, chart 11 Rk	Rock	3.43 m	41° 17' 44.193" N	072° 06' 22.704" W	---
2.1	1790/51 - Uncharted 25 Rk and danger curve	Rock	7.55 m	41° 17' 15.472" N	072° 09' 25.664" W	---
2.2	176/158 - Uncharted 20 Rk and danger curve	Rock	6.08 m	41° 16' 58.010" N	072° 12' 59.465" W	---
2.3	1613/93 - Uncharted 11 Rk and danger curve	Rock	3.48 m	41° 17' 11.213" N	072° 13' 18.395" W	---
2.4	3876/238 - Uncharted 12 Rk	Rock	3.79 m	41° 17' 03.109" N	072° 12' 14.070" W	---
2.5	703/1 - Charted 10 Obstn (crane) - (DtoN # 1)	Obstruction	3.10 m	41° 18' 02.268" N	072° 12' 01.007" W	---
2.6	454/159 - Uncharted 7 Rk	Rock	2.21 m	41° 17' 17.213" N	072° 13' 18.356" W	---
2.7	503/53 - AHB - Uncharted 4 Rk	Rock	1.38 m	41° 17' 34.517" N	072° 09' 03.577" W	---
2.8	379/49 - Uncharted 9 Rk	Rock	2.75 m	41° 18' 25.397" N	072° 09' 23.745" W	---
2.9	292/204 - AHB - Uncharted 23 Rks	Rock	7.06 m	41° 16' 50.011" N	072° 14' 30.034" W	---
2.10	344/14 - AHB - Uncharted 11 Obstn and danger curve	Obstruction	3.52 m	41° 17' 27.348" N	072° 14' 16.039" W	---
2.11	977/173 - Uncharted 10 Rk	Rock	3.27 m	41° 18' 24.430" N	072° 09' 33.466" W	---
2.12	351/206 - AHB - Uncharted 12 Rk	Rock	3.69 m	41° 17' 06.110" N	072° 13' 31.313" W	---

2.13	1084/215 - AHB - Uncharted 27 Rk	Rock	8.18 m	41° 16' 45.153" N	072° 14' 37.103" W	---
2.14	394/199 - Uncharted 12 Rk	Rock	3.59 m	41° 16' 57.205" N	072° 07' 56.818" W	---
2.15	3774/87 - Chart notation Rky	Rock	3.60 m	41° 17' 46.085" N	072° 06' 41.453" W	---
2.16	1009/3 - Uncharted 9 Rk	Rock	2.88 m	41° 18' 18.463" N	072° 11' 49.625" W	---
2.17	639/75 - AHB - Uncharted 12 Rk	Rock	3.76 m	41° 17' 25.039" N	072° 14' 36.738" W	---
2.18	390/1 - AHB - Uncharted 60 Obstn and danger curve	Obstruction	18.25 m	41° 16' 12.139" N	072° 13' 11.721" W	---
2.19	40 - Verified 3 Rk	GP	-0.89 m	41° 17' 58.560" N	072° 06' 03.600" W	---
2.20	67 - Lidar verified - (Delete 6Rk - Chart 4Rk)	Rock	1.30 m	41° 17' 59.640" N	072° 07' 14.880" W	---
2.21	5081/97 - Uncharted 13 Rk and danger curve	Rock	4.06 m	41° 17' 51.636" N	072° 07' 23.484" W	---
2.22	826/2 - Uncharted 16 Rk and danger curve	Rock	4.97 m	41° 17' 33.383" N	072° 06' 33.421" W	---
2.23	892/101 - AHB - Uncharted 8Rk	Rock	2.58 m	41° 17' 56.727" N	072° 07' 19.758" W	---
2.24	531/77 - AHB - Uncharted 7 Rk	Rock	2.27 m	41° 17' 53.304" N	072° 07' 45.820" W	---
2.25	1709/28 - AHB - Uncharted 6 Rk	Rock	1.80 m	41° 16' 39.119" N	072° 08' 04.486" W	---
3.1	AWOIS 12335 - Uncharted 25 Rk and danger curve	Rock	7.71 m	41° 16' 48.936" N	072° 13' 00.518" W	12335
3.2	AWOIS 12154 - Uncharted 26 Rk	Rock	8.02 m	41° 16' 52.630" N	072° 12' 18.074" W	12154
3.3	AWOIS 12333 - Uncharted 9 Rk	Rock	2.86 m	41° 17' 19.879" N	072° 13' 35.709" W	12333
3.4	AWOIS 12334 - Uncharted 16 Rk	Rock	4.80 m	41° 17' 08.038" N	072° 13' 06.350" W	12334
3.5	AWOIS 12330 - Uncharted 9 Rk	Rock	2.97 m	41° 17' 04.854" N	072° 13' 18.456" W	12330
3.6	AWOIS 12151 - Charted 12 Rk (relocate)	Rock	3.67 m	41° 18' 17.584" N	072° 10' 05.239" W	12151
3.7	AWOIS 12411 - Uncharted 39 Rk	Rock	11.89 m	41° 16' 23.773" N	072° 12' 06.007" W	12411
3.8	AWOIS 12153 - Uncharted 27 Rk	Rock	8.24 m	41° 17' 56.262" N	072° 10' 13.746" W	12153
3.9	AWOIS 12155 - Charted wire drag 7 Rk (revise to dang. 8 Rk)	Rock	2.51 m	41° 18' 23.308" N	072° 09' 04.002" W	12155
3.10	4077/7 - AWOIS 12331 - Charted 4 Rk (revise to 2 Rk awash)	Rock	0.71 m	41° 17' 09.703" N	072° 13' 25.036" W	12331
3.11	AWOIS 12148 - Little Rock - relocate rock awash	Rock	0.91 m	41° 18' 09.379" N	072° 10' 28.952" W	12148
3.12	1181/97 - AWOIS 12329 - AHB 3 Rk (relocate)	Rock	0.88 m	41° 17' 01.163" N	072° 13' 28.035" W	12329
3.13	AWOIS 12152 - Charted 14 Rk (revise to dang. 11 Rk)	Rock	3.52 m	41° 18' 03.911" N	072° 10' 28.564" W	12152
3.14	AWOIS 12156 - Charted 13 Rk (relocate)	Rock	4.04 m	41° 18' 20.437" N	072° 09' 14.841" W	12156
3.15	AWOIS 12157 - Uncharted 16 Rk	Rock	5.04 m	41° 18' 26.826" N	072° 09' 12.877" W	12157
3.16	AWOIS 12150 - Charted 8 Rk (relocate)	Rock	2.41 m	41° 18' 17.492" N	072° 10' 13.125" W	12150
3.17	AWOIS 12145 - Charted 4 Rk (revise to 3 Rk)	Rock	1.11 m	41° 18' 17.642" N	072° 11' 55.028" W	12145
3.18	AWOIS 1864 - disproven	Wreck	[None]	41° 18' 00.522" N	072° 08' 52.179" W	1864
3.19	AWOIS 12144 - Threefoot Rk	Rock	[None]	41° 18' 22.407" N	072° 11' 50.235" W	12144
3.20	AWOIS 12146 - disproven	Shoal	[None]	41° 18' 13.566" N	072° 11' 14.545" W	12146
3.21	AWOIS 12332 - Blackboys Rks -Retain	Rock	[None]	41° 17' 11.960" N	072° 13' 29.814" W	12332
3.22	AWOIS 12147 - Black Rk (retain)	Rock	[None]	41° 18' 35.800" N	072° 10' 39.593" W	12147
4.1	460/35 - Charted 26 Rk (DtoN # 2)	Rock	7.98 m	41° 17' 48.363" N	072° 08' 01.151" W	---

4.2	1644/123 - Charted 31 Rk (DtoN # 3 revised location)	Rock	9.53 m	41° 17' 02.379" N	072° 08' 36.736" W	---
4.3	1110/200 - Charted dang. 14 Rk (DtoN # 4)	Rock	4.29 m	41° 16' 26.484" N	072° 07' 59.787" W	---
4.4	5743/143 - Charted dang. 26 Rk (DtoN # 5)	Rock	7.92 m	41° 16' 39.982" N	072° 13' 19.096" W	---
4.5	901/97 - Charted 19 Rk (DtoN # 6)	Rock	5.88 m	41° 16' 47.064" N	072° 12' 40.457" W	---
4.6	555/233 - Charted 26 Rk (DtoN # 7)	Rock	7.91 m	41° 16' 40.331" N	072° 08' 19.048" W	---
4.7	3645/9 - Charted 14 Rk (DtoN # 8)	Rock	4.25 m	41° 17' 41.721" N	072° 12' 00.022" W	---
4.8	3140/43- Charted dang. 10 Rk (DtoN # 9)	Rock	3.25 m	41° 17' 29.337" N	072° 12' 01.573" W	---
4.9	1369/52 - Charted dang. 13 Rk (DtoN # 10)	Rock	4.17 m	41° 16' 25.096" N	072° 08' 06.501" W	---
4.10	949/6 - Charted dang. 5 Rk (DtoN # 11)	Rock	1.63 m	41° 17' 25.624" N	072° 09' 05.913" W	---
4.11	1148/227 - Charted dang. 10 Rk (DtoN # 12)	Rock	3.06 m	41° 16' 45.024" N	072° 08' 05.639" W	---
4.12	2231/171 - Charted dang. 18 Rk (DtoN # 13)	Rock	5.65 m	41° 16' 46.309" N	072° 08' 10.060" W	---
4.13	416/13- Charted dang. 8 Rk (DtoN # 14)	Rock	2.46 m	41° 16' 40.633" N	072° 08' 03.500" W	---
4.14	1136/29 - Charted 16 Rk (DtoN # 15)	Rock	4.81 m	41° 17' 28.184" N	072° 08' 31.646" W	---
4.15	1452/217 - Charted dang. 5 Rk (DtoN # 16 -verified)	Rock	1.71 m	41° 17' 21.347" N	072° 13' 16.520" W	---
4.16	698/81 - Charted dang. 8 Rk (DtoN # 17)	Rock	2.43 m	41° 17' 29.879" N	072° 09' 00.102" W	---
4.17	276/234 - Charted 21 Rk (DtoN # 18)	Rock	6.35 m	41° 16' 19.543" N	072° 08' 18.598" W	---
4.18	437/29 - Charted dang. 15 Rk (DtoN # 19)	Rock	4.51 m	41° 18' 15.693" N	072° 10' 16.307" W	---
4.19	964/218 - Charted dang. 30 Rk (DtoN # 20)	Rock	9.33 m	41° 17' 03.235" N	072° 08' 50.578" W	---
4.20	466/180 - Charted dang. 28 Rk (DtoN # 21)	Rock	8.55 m	41° 16' 57.989" N	072° 09' 01.701" W	---
4.21	223/101 - Charted dang. 25 Rk (DtoN # 22)	Rock	7.84 m	41° 16' 51.569" N	072° 12' 08.982" W	---
4.22	1298/100 - Charted dang. 15 Rk (DtoN # 23)	Rock	4.78 m	41° 16' 51.054" N	072° 12' 40.058" W	---
4.23	1141/97 - Charted 24 Rk (DtoN # 24)	Rock	7.45 m	41° 17' 52.227" N	072° 08' 11.566" W	---
4.24	320/17 - Charted 21 Rk (DtoN # 25)	Rock	6.44 m	41° 17' 12.332" N	072° 06' 37.099" W	---
4.25	1154/6 - Charted dang. 8 Rk (DtoN # 26)	Rock	2.36 m	41° 18' 15.553" N	072° 09' 38.527" W	---
4.26	1263/86 - Charted 13 Rk (DtoN # 27)	Rock	3.99 m	41° 18' 47.593" N	072° 10' 44.212" W	---
4.27	731/100 - Charted dang. 15 Rk (DtoN # 28)	Rock	4.77 m	41° 18' 09.423" N	072° 11' 45.696" W	---
4.28	5/62 - Charted 25 Rk (DtoN # 29)	Rock	7.78 m	41° 17' 46.299" N	072° 09' 33.977" W	---
4.29	619/55 - Charted 41 Rk (DtoN # 30)	Rock	12.66 m	41° 16' 28.914" N	072° 12' 08.335" W	---
4.30	2717/101 - Charted dang. 8 Rk (DtoN # 31)	Rock	2.65 m	41° 16' 32.067" N	072° 08' 05.420" W	---
4.31	3874/52 - Charted dang. 10 Rk (DtoN # 32)	Rock	3.19 m	41° 17' 43.990" N	072° 06' 47.815" W	---
4.32	1926/97 - Charted dang. 5 Rk (DtoN # 33)	Rock	1.68 m	41° 17' 49.595" N	072° 06' 46.574" W	---
4.33	397/8 - Charted 10 Obstn (crane) - (DtoN # 1) -- Delete 10 Obstn (Add 9 Obstn)	Obstruction	2.80 m	41° 18' 02.287" N	072° 12' 00.971" W	---

1 - Charted Features

1.1) 637/2 - Uncharted 23 Rk and danger curve

Survey Summary

Survey Position:	41° 17' 24.887" N, 072° 09' 22.204" W
Least Depth:	7.18 m
Timestamp:	2005-121.15:57:40.829 (05/01/2005)
Survey Line:	h11442 / 1014_mb / 2005-121 / 052_1556
Profile/Beam:	637/2
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-121/052_1556	637/2	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	52	5.83	027.6	Secondary
H11225_LIDAR_TestArea.csv	91	5.83	027.6	Secondary
h11442/1014_100/2005-112/208_1755	0002	6.77	305.4	Secondary

Hydrographer Recommendations

Chart as per digital data. Chart rock with a depth of 23 feet in Latitude 41°17'24.887"N, Longitude 072°09'22.204"W.

Cartographically-Rounded Depth (Affected Charts):

23ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

3 ¾fm (12300_1, 13006_1, 13003_1)

7.2m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 7.183 m

VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 23Rk and danger curve in Latitude 41°17'24.887"N, Longitude 72°09'22.204"W.

1.2) 278/54 - Uncharted 9 Rk

Survey Summary

Survey Position:	41° 18' 11.906" N, 072° 08' 56.800" W
Least Depth:	2.77 m
Timestamp:	2005-130.20:01:52.459 (05/10/2005)
Survey Line:	h11442 / 1014_mb / 2005-130 / 167_2001
Profile/Beam:	278/54
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-130/167_2001	278/54	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	30	19.85	053.1	Secondary
H11225_LIDAR_TestArea.csv	71	19.85	053.1	Secondary
h11442/1005_200/2005-111/408_1753	0001	21.18	132.2	Secondary
h11442/1014_mb/2005-130/167_2018	1219/126	23.33	043.4	Secondary
h11442/1014_100/2005-112/563_1231	0005	32.03	030.8	Secondary

Hydrographer Recommendations

Concur, chart a rock with a depth of 9 feet in Latitude 41°18'11.906"N, Longitude 72°08'56.800"W.

Cartographically-Rounded Depth (Affected Charts):

9ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

1 ½fm (12300_1, 13006_1, 13003_1)

2.7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR

QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 3:found by multi-beam
VALSOU - 2.772 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 9Rk in Latitude 41°18'11.906"N, Longitude 72°08'56.800"W.

1.3) 1660/96 - Uncharted 8 Rk

Survey Summary

Survey Position:	41° 18' 36.844" N, 072° 12' 00.140" W
Least Depth:	2.39 m
Timestamp:	2005-120.18:31:03.442 (04/30/2005)
Survey Line:	h11442 / 1005_mb / 2005-120 / 942_1830
Profile/Beam:	1660/96
Charts Affected:	12372_3, 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

LIDAR require field work feature. Sounding from LIDAR and MBES 1.5 foot shoaler than charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-120/942_1830	1660/96	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	19	8.00	204.2	Secondary

Hydrographer Recommendations

Chart rock with a depth of 8 feet in Latitude 41°18'36.844"N, Longitude 072°12'00.140"W.

Cartographically-Rounded Depth (Affected Charts):

8ft (12372_3, 13211_1, 12372_1, 12354_1, 13205_1)

1 ¼fm (12300_1, 13006_1, 13003_1)

2.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 2.392 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart an 8Rk in Latitude 41°18'36.844"N, Longitude 072°12'00.140"W.

1.4) 1698/23 - Uncharted 7 Rk

Survey Summary

Survey Position:	41° 17' 33.091" N, 072° 14' 37.717" W
Least Depth:	2.11 m
Timestamp:	2005-121.16:14:53.159 (05/01/2005)
Survey Line:	h11442 / 1005_mb / 2005-121 / 900_1614
Profile/Beam:	1698/23
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry and LIDAR. Least depth is near large rock outcrop that is exposed above water surface.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-121/900_1614	1698/23	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	1	2.95	343.0	Secondary
h11442/1005_200/2005-110/153_1522	0001	5.18	196.4	Secondary

Hydrographer Recommendations

Chart per digital data. Chart a Rk with a least depth of 7 ft. in 41°17'33.091" , -072°14'37.717"

Cartographically-Rounded Depth (Affected Charts):

- 7ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 1fm (12300_1, 13006_1, 13003_1)
- 2.1m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry and LIDAR. Least depth is near large rock outcrop that is exposed above water surface. QUASOU - 1:depth known STATUS - 1:permanent TECSOU - 3:found by multi-beam

VALSOU - 2.114 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur Chart a 7Rk in Latitude 41°17'33.091"N, Longitude 072°14'37.717"W.

1.5) 4725/96 - Uncharted 7 Rk and danger curve

Survey Summary

Survey Position: 41° 17' 32.602" N, 072° 12' 03.217" W

Least Depth: 2.20 m

Timestamp: 2005-123.15:27:08.592 (05/03/2005)

Survey Line: h11442 / 1005_mb / 2005-123 / 207_1524

Profile/Beam: 4725/96

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is large boulder imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-123/207_1524	4725/96	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	14	1.29	155.4	Secondary
h11442/1014_mb/2005-129/220_2009	2960/240	1.51	338.1	Secondary
h11442/1014_100/2005-111/140_1656	0008	1.62	186.8	Secondary
h11442/1014_100/2005-112/900_1535	0005	7.31	004.4	Secondary

Hydrographer Recommendations

Chart as per digital data. Chart a rock with a depth of 7 feet in latitude 41°17'32.602"N, longitude 072°12'03.217"W.

Cartographically-Rounded Depth (Affected Charts):

7ft (13211_1, 12372_1, 12354_1, 13205_1)

1 ¼fm (12300_1, 13006_1, 13003_1)

2.2m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 2.202 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 7Rk and danger curve in latitude 41°17'32.602"N, longitude 072°12'03.217"W.

1.6) 1011/88 - Uncharted 23 Rk

Survey Summary

Survey Position:	41° 17' 13.870" N, 072° 06' 51.285" W
Least Depth:	7.14 m
Timestamp:	2005-124.13:06:59.202 (05/04/2005)
Survey Line:	h11442 / 1005_mb / 2005-124 / 364_1306
Profile/Beam:	1011/88
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large boulder on the outer limits of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-124/364_1306	1011/88	0.00	000.0	Primary
h11442/1014_mb/2005-125/159_2104	275/228	1.49	349.6	Secondary
h11442/1005_100/2005-112/544_1623	0009	3.34	098.5	Secondary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	38	4.15	248.3	Secondary
H11225_LIDAR_TestArea.csv	79	4.15	248.3	Secondary
h11442/1005_200/2005-111/323_1937	0002	4.85	089.1	Secondary
h11442/1005_100/2005-112/544_1623	0017	30.39	344.7	Secondary
h11442/1005_100/2005-112/544_1623	0018	30.67	344.7	Secondary
h11442/1005_100/2005-112/544_1623	0012	39.80	137.7	Secondary
h11442/1005_200/2005-111/324_1931	0003	40.69	127.7	Secondary

Hydrographer Recommendations

Chart as per digital data. - Chart rock with a depth of 23 feet in Latitude 41°17'13.870"N, Longitude 072°06'51.285"W.

Cartographically-Rounded Depth (Affected Charts):

- 23ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 3 ¾fm (12300_1, 13006_1, 13003_1)
- 7.1m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - Feature is a large boulder on the outer limits of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry and LIDAR
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 7.143 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 23Rk in Latitude 41°17'13.870"N, Longitude 072°06'51.285"W.

1.7) 1699/2 - Uncharted 8Rk

Survey Summary

Survey Position:	41° 18' 02.292" N, 072° 12' 07.523" W
Least Depth:	2.45 m
Timestamp:	2005-125.16:52:18.182 (05/05/2005)
Survey Line:	h11442 / 1005_mb / 2005-125 / 253_1651
Profile/Beam:	1699/2
Charts Affected:	13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large rock/boulder imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-125/253_1651	1699/2	0.00	000.0	Primary
h11442/1014_100/2005-112/140_1530	0001	1.24	102.2	Secondary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	50	24.68	279.5	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 8 feet in Latitude 41°18'02.292"N, Longitude 072°12'07.523"W.

Cartographically-Rounded Depth (Affected Charts):

- 8ft (13211_1, 12372_1, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 2.450 m
	VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart an 8Rk in Latitude 41°18'02.292"N, Longitude 072°12'07.523"W.

1.8) 761/1 - AHB - Uncharted 10 Rk

Survey Summary

Survey Position:	41° 18' 30.152" N, 072° 09' 24.440" W
Least Depth:	3.10 m
Timestamp:	2005-121.13:34:39.706 (05/01/2005)
Survey Line:	h11442 / 1005_mb / 2005-121 / 960_1334
Profile/Beam:	761/1
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	
	[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-121/960_1334	761/1	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	22	9.72	106.2	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 10 feet in Latitude 41°18'30.152"N, Longitude 072°09'24.440"W.

Cartographically-Rounded Depth (Affected Charts):

- 10ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)
- 3.1m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 7:least depth unknown, safe clearance at value shown
	TECSOU - 3:found by multi-beam
	VALSOU - 3.099 m
	WATLEV - 3:always under water/submerged

Office Notes

Cocncur - Chart a 10Rk in Latitude 41°18'30.152"N, Longitude 072°09'24.440"W.

1.9) 1089/101 - AHB - Charted 13 Rk (revise to 11 Rk)

Survey Summary

Survey Position:	41° 17' 50.467" N, 072° 07' 54.562" W
Least Depth:	3.39 m
Timestamp:	2005-124.19:26:19.269 (05/04/2005)
Survey Line:	h11442 / 1005_mb / 2005-124 / 769_1925
Profile/Beam:	1089/101
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	rocky outcrop

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-124/769_1925	1089/101	0.00	000.0	Primary
h11442/1005_100/2005-112/171_1347	0034	14.10	284.5	Secondary
h11442/1005_100/2005-112/171_1347	0033	14.20	282.9	Secondary
h11442/1005_100/2005-112/171_1347	0037	14.70	283.8	Secondary
h11442/1005_100/2005-112/171_1347	0035	14.78	284.5	Secondary
h11442/1005_100/2005-112/171_1347	0038	14.91	285.5	Secondary
h11442/1005_100/2005-112/171_1347	0036	15.03	284.9	Secondary
h11442/1005_100/2005-112/171_1347	0039	15.12	285.6	Secondary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	34	19.60	287.2	Secondary
H11225_LIDAR_TestArea.csv	75	19.60	287.2	Secondary
h11442/1014_100/2005-112/546_1922	0001	23.47	016.2	Secondary
h11442/1005_100/2005-112/171_1347	0032	25.00	150.9	Secondary

Hydrographer Recommendations

Chart rock with a depth of 11 feet in Latitude 41°17'50.467"N, Longitude 072°07'54.562"W.

Cartographically-Rounded Depth (Affected Charts):

- 11ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)

3.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 3.394 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Delete charted 13Rk. Chart an 11Rk in Latitude 41°17'50.467"N, Longitude 72°07'54.562"W. Chart 11Rk.

1.10) 2409/52 - AHB Charted 6 Rk (revise to 5 Rk)

Survey Summary

Survey Position:	41° 17' 47.514" N, 072° 06' 35.553" W
Least Depth:	1.58 m
Timestamp:	2005-112.14:28:26.208 (04/22/2005)
Survey Line:	h11442 / 1005_mb / 2005-112 / 302_1427
Profile/Beam:	2409/52
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	Least depth on rock in rocky area

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-112/302_1427	2409/52	0.00	000.0	Primary
h11442/1005_100/2005-112/187_1454	0011	9.35	268.7	Secondary
h11442/1005_100/2005-112/435_1432	0007	11.21	233.1	Secondary
h11442/1005_100/2005-112/302_1427	0003	17.12	294.4	Secondary
h11442/1005_100/2005-112/171_1348	0018	27.06	103.1	Secondary
h11442/1005_100/2005-112/171_1348	0019	27.81	101.8	Secondary
h11442/1005_100/2005-112/187_1454	0010	30.26	314.2	Secondary
h11442/1005_100/2005-112/302_1427	0002	38.59	061.6	Secondary
h11442/1005_100/2005-112/302_1427	0004	39.14	061.7	Secondary
h11442/1005_100/2005-112/435_1432	0009	42.02	284.1	Secondary
h11442/1005_100/2005-112/187_1454	0004	42.87	282.2	Secondary
h11442/1005_100/2005-112/435_1432	0008	48.22	292.6	Secondary

Hydrographer Recommendations

Chart rock with a depth of 5 feet in Latitude 41°17'47.514"N, Longitude 72°06'35.553"W.

Cartographically-Rounded Depth (Affected Charts):

- 5ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ¾fm (12300_1, 13006_1, 13003_1)

1.6m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 1.582 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 6Rk. Chart a 5Rk in Latitude 41°17'47.514"N, Longitude 72°06'35.553"W.

1.11) 1229/87 - AHB - Charted 10 Rk (revise to 9 Rk)

Survey Summary

Survey Position:	41° 18' 13.346" N, 072° 11' 48.482" W
Least Depth:	2.92 m
Timestamp:	2005-129.19:39:16.472 (05/09/2005)
Survey Line:	h11442 / 1005_mb / 2005-129 / 541_1938
Profile/Beam:	1229/87
Charts Affected:	13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Large rock out crop

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/541_1938	1229/87	0.00	000.0	Primary

Hydrographer Recommendations

Charted a rock with a depth of 9 feet in Latitude 41°18'13.346"N, Longitude 72°11'48.482"W.

Cartographically-Rounded Depth (Affected Charts):

- 9ft (13211_1, 12372_1, 12354_1, 13205_1)
- 1 ½fm (12300_1, 13006_1, 13003_1)
- 2.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 2.919 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete charted 10Rk. Chart a 9Rk in Latitude 41°18'13.346"N, Longitude 72°11'48.482"W.

1.12) 10 - Lidar - (Retain charted 2 Rk)

Survey Summary

Survey Position:	41° 17' 15.720" N, 072° 13' 20.280" W
Least Depth:	1.40 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	ChartGPs - H11225_LIDAR_ReqFldWrk.csv
GP No.:	10
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Area of poor coverage close W Hydrographer's remark: Launches unable to acquire MBES data in area safely. Partial side scan imagery with the Klien 5000 was obtained in the area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/398_2118	934/238	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	10	33.59	166.1	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1:	Anchorage area (ACHARE)
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Office Notes

Concur - Retain charted 2Rk.

1.13) 12 AWOIS 12412 - Charted 6 Rk (retain)

Survey Summary

Survey Position:	41° 17' 20.400" N, 072° 12' 55.800" W
Least Depth:	2.89 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	ChartGPs - H11225_LIDAR_ReqFldWrk.csv
GP No.:	12
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: 4*4 meter spot spacing may not have detected least depth. Hydrographer's remark: AWOIS item 12412. Launch did not get sufficient coverage to determine least depth of large boulder/rock outcrop. 200% side scan imagery with the Klien 5000 was obtained in the area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	5	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12412	0.82	276.7	Secondary (grouped)
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	12	4.56	088.8	Secondary (grouped)
h11442/1014_100/2005-111/100_1259	0027	13.70	238.9	Secondary (grouped)
h11442/1014_100/2005-111/109_1515	0001	13.89	282.4	Secondary (grouped)
h11442/1014_100/2005-112/109_1548	0001	15.03	303.7	Secondary (grouped)
h11442/1005_200/2005-110/300_1408	0002	17.59	082.0	Secondary (grouped)
h11442/1014_100/2005-112/109_1548	0002	39.04	310.2	Secondary (grouped)

Hydrographer Recommendations

Retain as charted.

S-57 Data

[None]

Office Notes

Concur - Retain charted 6Rk.

1.14) 13 - Lidar - (Retain rock awash)

Survey Summary

Survey Position: 41° 17' 04.920" N, 072° 12' 23.760" W

Least Depth: 3.29 m

Timestamp: 1990-001.11:60:00.000 (01/01/1990)

GP Dataset: ChartGPs - H11225_LIDAR_ReqFldWrk.csv

GP No.: 13

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Not found existance doubtful Hydrographer's remark: Rock Awash south of Black Point. Sounding pole depth of 1.8m. No tide data. Unable to acquire multibeam or sidescan safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	13	0.00	000.0	Primary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur

1.15) 15 - Lidar - (Retain charted 5 Rk)

Survey Summary

Survey Position: 41° 17' 51.000" N, 072° 12' 05.760" W

Least Depth: 2.39 m

Timestamp: 1990-001.11:60:00.000 (01/01/1990)

GP Dataset: ChartGPs - H11225_LIDAR_ReqFldWrk.csv

GP No.: 15

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Lesser depths may exist at 4*4 meter laser spot spacing. Hydrographer's remark: Launches unable to acquire MBES or side scan data in area safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	15	0.00	000.0	Primary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted 5Rk.

1.16) 16 - Lidar - (Retain charted 4 Rk)

Survey Summary

Survey Position: 41° 17' 52.800" N, 072° 12' 05.400" W

Least Depth: 3.39 m

Timestamp: 1990-001.11:60:00.000 (01/01/1990)

GP Dataset: ChartGPs - H11225_LIDAR_ReqFldWrk.csv

GP No.: 16

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Existance doubtful Hydrographer's remark: Launches unable to acquire MBES or side scan data in area safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	16	0.00	000.0	Primary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted 4Rk.

1.17) 35 - Lidar - (Retain charted 2Rk)

Survey Summary

Survey Position:

41° 17' 53.520" N, 072° 07' 40.080" W

Least Depth:

1.44 m

Timestamp:

1990-001.11:60:00.000 (01/01/1990)

GP Dataset:

ChartGPs - H11225_LIDAR_ReqFldWrk.csv

GP No.:

35

Charts Affected:

13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Foul Hydrographer's remark: Launches unable to acquire MBES data in area safely. Partial side scan imagery with the Klein 5000 was obtained in the area. Large rock outcrop in area visible.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	35	0.00	000.0	Primary
H11225_LIDAR_TestArea.csv	76	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur Retain charted 2Rk.

1.18) 43 - Lidar - (Retain Charted 3 Rk)

Survey Summary

Survey Position:	41° 16' 32.880" N, 072° 08' 10.320" W
Least Depth:	0.09 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	ChartGPs - H11225_LIDAR_ReqFldWrk.csv
GP No.:	43
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Insufficient coverage Hydrographer's remark: LIDAR require field work feature within test area. Unable to acquire MBES data and side scan data. Area hazardous to launch acquisition.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	43	0.00	000.0	Primary
H11225_LIDAR_TestArea.csv	84	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1:	Anchorage area (ACHARE)
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Office Notes

Concur - Retain 3Rk.

1.19) 30 - Retain charted rock awash

Survey Summary

Survey Position:	41° 18' 16.560" N, 072° 09' 48.960" W
Least Depth:	1.30 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	5
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Foul Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	5	0.00	000.0	Primary
H11225_LIDAR_OK.csv	30	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

- 4ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ¾fm (12300_1, 13006_1, 13003_1)
- 1.3m (5161_1)

S-57 Data

Geo object 1:	Anchorage area (ACHARE)
Attributes:	CATACH - 1:unrestricted anchorage
	RESTRN - 1:anchoring prohibited
	STATUS - 1:permanent

Office Notes

Concur - Retain charted rock awash.

1.20) 33 - Retain charted rock awash

Survey Summary

Survey Position:	41° 18' 28.080" N, 072° 09' 36.360" W
Least Depth:	0.61 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	8
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Small gap in coverage close N Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	8	0.00	000.0	Primary
H11225_LIDAR_OK.csv	33	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

- 2ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ¼fm (12300_1, 13006_1, 13003_1)
- .6m (5161_1)

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted rock awash.

1.21) 34 - Retain charted rock cov/uncov

Survey Summary

Survey Position:	41° 17' 49.560" N, 072° 09' 09.720" W
Least Depth:	0.54 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	9
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	9	0.00	000.0	Primary
H11225_LIDAR_OK.csv	34	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

- 2ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ¼fm (12300_1, 13006_1, 13003_1)
- .5m (5161_1)

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted rock covers/uncovers.

1.22) 35 - Retain charted rock awash

Survey Summary

Survey Position:

41° 17' 45.240" N, 072° 09' 15.480" W

Least Depth:

1.77 m

Timestamp:

1990-001.11:60:00.000 (01/01/1990)

GP Dataset:

H11225_LIDAR_TestArea.csv

GP No.:

10

Charts Affected:

13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Foul close E Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	10	0.00	000.0	Primary
H11225_LIDAR_OK.csv	35	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

6ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

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

1.7m (5161_1)

S-57 Data

Geo object 1:

Anchorage area (ACHARE)

Office Notes

Concur - Retain charted rock awash.

1.23) 38 - Retain charted rock awash

Survey Summary

Survey Position:	41° 18' 15.840" N, 072° 08' 57.480" W
Least Depth:	1.05 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	13
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	Contractor's remark: Foul area Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	13	0.00	000.0	Primary
H11225_LIDAR_OK.csv	38	0.00	000.0	Secondary
h11442/1014_100/2005-112/177_1238	0001	33.84	275.5	Secondary
h11442/1005_200/2005-111/409_1755	0003	40.67	056.9	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

- 3ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ½fm (12300_1, 13006_1, 13003_1)
- 1.0m (5161_1)

S-57 Data

Geo object 1:	Anchorage area (ACHARE)
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Office Notes

Concur - Retain charted rock awash.

1.24) 39 - Retain charted rocks (3) - cov/uncov

Survey Summary

Survey Position:	41° 18' 20.520" N, 072° 08' 48.120" W
Least Depth:	0.98 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	14
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Foul area Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	14	0.00	000.0	Primary
H11225_LIDAR_OK.csv	39	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

- 3ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ½fm (12300_1, 13006_1, 13003_1)
- 1.0m (5161_1)

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted rock covers/uncovers.

1.25) 42 - Lidar - (Retain Charted 6 Rk)

Survey Summary

Survey Position:	41° 18' 04.320" N, 072° 08' 30.480" W
Least Depth:	2.35 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	17
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	17	0.00	000.0	Primary
H11225_LIDAR_OK.csv	42	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

- 7ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.3m (5161_1)

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted 6Rk.

1.26) 47 - Retain charted rocks (3) awash

Survey Summary

Survey Position:	41° 17' 28.320" N, 072° 08' 25.080" W
Least Depth:	0.57 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	22
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Small gap in coverage Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	22	0.00	000.0	Primary
H11225_LIDAR_OK.csv	47	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

- 2ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ¼fm (12300_1, 13006_1, 13003_1)
- .5m (5161_1)

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted rocks awash.

1.27) 52 - Lidar - (Retain Charted 4 Rk)

Survey Summary

Survey Position:	41° 17' 05.640" N, 072° 08' 08.520" W
Least Depth:	1.85 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	27
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Hydrographer's remark: Unable to acquire MBES and side scan data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	27	0.00	000.0	Primary
H11225_LIDAR_OK.csv	52	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

- 6ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1fm (12300_1, 13006_1, 13003_1)
- 1.8m (5161_1)

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted 4Rk.

1.28) 59 - Retain charted rock awash and 3 Rk

Survey Summary

Survey Position:	41° 17' 55.680" N, 072° 07' 56.640" W
Least Depth:	1.03 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	34
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Contractor's remark: Foul N Hydrographer's remark: LIDAR OK feature within test area. Unable to acquire MBES data. Area hazardous to launch acquisition.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	34	0.00	000.0	Primary
H11225_LIDAR_OK.csv	59	0.00	000.0	Secondary

Hydrographer Recommendations

Retain as charted.

Cartographically-Rounded Depth (Affected Charts):

3ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

0 ½fm (12300_1, 13006_1, 13003_1)

1.0m (5161_1)

S-57 Data

Geo object 1: Anchorage area (ACHARE)

Office Notes

Concur - Retain charted rock awash and charted 3Rk.

1.29) 21 - Retain charted rocks awash (5)

Survey Summary

Survey Position:	41° 19' 04.440" N, 072° 10' 47.280" W
Least Depth:	0.69 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_OK.csv
GP No.:	21
Charts Affected:	12372_3, 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Foul area Unable to acquire MBES data with launches safely.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_OK.csv	21	0.00	000.0	Primary

Hydrographer Recommendations

Retain as charted.

S-57 Data

[None]

Office Notes

Concur - Retain charted rocks awash.

1.30) 3146/86 - charted 10 Rk (relocate)

Survey Summary

Survey Position:	41° 17' 58.743" N, 072° 07' 20.973" W
Least Depth:	3.15 m
Timestamp:	2005-124.21:27:48.299 (05/04/2005)
Survey Line:	h11442 / 1005_mb / 2005-124 / 780_2125
Profile/Beam:	3146/86
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	
	[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-124/780_2125	3146/86	0.00	000.0	Primary
h11442/1005_100/2005-112/171_1348	0006	2.95	278.6	Secondary

Hydrographer Recommendations

Chart a rock with a dpth of 10 feet in Latitude 41°17'58.743"N, Longitude 072°07'20.973"W.

Cartographically-Rounded Depth (Affected Charts):

- 10ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)
- 3.1m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 3.146 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Revise location of charted 10Rk to Latitude 41°17'58.743"N, Longitude 072°07'20.973"W.

1.31) 1236/8 - AHB - Charted 9 Rk (revise to 8 Rk)

Survey Summary

Survey Position:	41° 17' 52.600" N, 072° 07' 58.787" W
Least Depth:	2.51 m
Timestamp:	2005-124.20:26:38.349 (05/04/2005)
Survey Line:	h11442 / 1005_mb / 2005-124 / 185_2025
Profile/Beam:	1236/8
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-124/185_2025	1236/8	0.00	000.0	Primary
h11442/1005_100/2005-112/171_1347	0031	36.17	005.8	Secondary

Hydrographer Recommendations

Charted a rock with a depth of 8 ft. in Latitude 41°17'52.600"N, Longitude 72°07'58.787"W.

Cartographically-Rounded Depth (Affected Charts):

- 8ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.5m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 2.514 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Delete charted 9Rk. Chart an 8Rk in Latitude 41°17'52.600"N, Longitude 72°07'58.787"W.

1.32) 436/9 - Charted 8 Rk (revise to a 7 Rk)

Survey Summary

Survey Position:	41° 18' 01.111" N, 072° 07' 14.249" W
Least Depth:	2.21 m
Timestamp:	2004-044.21:09:33.611 (02/13/2004)
Survey Line:	h11225_tenix_lads / h11225_tenix_lads / 2007-347 / sheetb_v1_639_0_2_8
Profile/Beam:	436/9
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	Charted 8 Rk, now a 7 Rk

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11225_tenix_lads/h11225_tenix_lads/2007-347/sheetb_v1_639_0_2_8	436/9	0.00	000.0	Primary

Hydrographer Recommendations

Revise the charted Rk to present survey depths per Lidar data.

Cartographically-Rounded Depth (Affected Charts):

- 7ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.2m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 7:found by laser
	VALSOU - 2.210 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Revise the charted 8 Rk to a 7 Rk in Latitude 41°18'01.111"N, Longitude 72°07'14.249"W.

1.33) 322/20 - Delete Charted 9 Rk, chart 11 Rk

Survey Summary

Survey Position:	41° 17' 44.193" N, 072° 06' 22.704" W
Least Depth:	3.43 m
Timestamp:	2004-055.01:19:01.333 (02/24/2004)
Survey Line:	h11225_tenix_lads / h11225_tenix_lads / 2007-347 / sheetb_v1_656_0_2_4
Profile/Beam:	322/20
Charts Affected:	13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Charted 9 Rk - revise with Lidar data.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11225_tenix_lads/h11225_tenix_lads/2007-347/sheetb_v1_656_0_2_4	322/20	0.00	000.0	Primary

Hydrographer Recommendations

Chart a Rk with a depth of 11 ft. in Latitude 41°17'44.193"N, Longitude 72°06'22.704"W.

Cartographically-Rounded Depth (Affected Charts):

- 11ft (13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)
- 3.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 7:found by laser
	VALSOU - 3.430 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur. Delete charted 9 Rk, chart an 11 Rk.

2 - New Features

2.1) 1790/51 - Uncharted 25 Rk and danger curve

Survey Summary

Survey Position:	41° 17' 15.472" N, 072° 09' 25.664" W
Least Depth:	7.55 m
Timestamp:	2005-118.14:28:57.371 (04/28/2005)
Survey Line:	h11442 / 1014_mb / 2005-118 / 533_1426
Profile/Beam:	1790/51
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 100% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-118/533_1426	1790/51	0.00	000.0	Primary
H11225_LIDAR_TestArea.csv	11	4.23	325.1	Secondary
H11225_LIDAR_OK.csv	36	4.23	325.1	Secondary
h11442/1014_100/2005-110/520_1410	0006	17.00	123.3	Secondary
h11442/1014_100/2005-110/520_1410	0007	46.03	004.7	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 25 feet in Latitude 41°17'15.472"N, Longitude 072°09'25.664"W.

Cartographically-Rounded Depth (Affected Charts):

- 25ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 4fm (12300_1, 13006_1, 13003_1)
- 7.5m (5161_1)

S-57 Data

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

VALSOU - 7.547 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 25Rk and danger curve in Latitude 41°17'15.472"N, Longitude 072°09'25.664"W.

2.2) 176/158 - Uncharted 20 Rk and danger curve

Survey Summary

Survey Position:	41° 16' 58.010" N, 072° 12' 59.465" W
Least Depth:	6.08 m
Timestamp:	2005-122.18:11:38.081 (05/02/2005)
Survey Line:	h11442 / 1014_mb / 2005-122 / 119_1811
Profile/Beam:	176/158
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/119_1811	176/158	0.00	000.0	Primary
h11442/1005_200/2005-110/367_1543	0017	2.54	076.8	Secondary
H11225_LIDAR_OK.csv	11	2.64	215.2	Secondary
h11442/1014_100/2005-111/116_1437	0002	2.95	136.8	Secondary
h11442/1014_mb/2005-122/123_1827	230/239	86.86	193.5	Secondary (grouped)
h11442/1005_200/2005-110/367_1543	0019	90.31	191.2	Secondary (grouped)

Hydrographer Recommendations

Chart as per digital data. Chart a rock with a depth of 20 feet in Latitude 41°16'58.010"N, Longitude 72°12'59.465"W.

Cartographically-Rounded Depth (Affected Charts):

- 20ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 3 ¼fm (12300_1, 13006_1, 13003_1)
- 6.1m (5161_1)

S-57 Data

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

TECSOU - 3:found by multi-beam
VALSOU - 6.078 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 20Rk an danger curve in Latitude 41°16'58.010"N, Longitude 72°12'59.465"W.

2.3) 1613/93 - Uncharted 11 Rk and danger curve

Survey Summary

Survey Position:	41° 17' 11.213" N, 072° 13' 18.395" W
Least Depth:	3.48 m
Timestamp:	2005-122.19:30:14.563 (05/02/2005)
Survey Line:	h11442 / 1014_mb / 2005-122 / 139_1928
Profile/Beam:	1613/93
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

LIDAR OK feature. Least depth of rock out crop. Depth needs to be added to chart. Outcrop has 15 meter deep scour to the north and is surrounded by shoaler depths. There is no indication of this rock on the chart.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/139_1928	1613/93	0.00	000.0	Primary
H11225_LIDAR_OK.csv	6	5.72	020.3	Secondary
h11442/1014_100/2005-111/115_1446	0016	15.71	344.2	Secondary
h11442/1005_200/2005-110/370_1558	0007	22.27	107.7	Secondary
h11442/1005_200/2005-110/300_1408	0006	23.79	093.5	Secondary
h11442/1014_100/2005-111/106_1525	0005	39.94	292.1	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 11 feet in Latitude 41°17'11.213"N, Longitude 72°13'18.395"W.

Cartographically-Rounded Depth (Affected Charts):

- 11ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)
- 3.5m (5161_1)

S-57 Data

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

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 3.481 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart an 11Rk an danger curve in Latitude 41°17'11.213"N, Longitude 72°13'18.395"W.

2.4) 3876/238 - Uncharted 12 Rk

Survey Summary

Survey Position: 41° 17' 03.109" N, 072° 12' 14.070" W

Least Depth: 3.79 m

Timestamp: 2005-122.22:12:41.970 (05/02/2005)

Survey Line: h11442 / 1014_mb / 2005-122 / 183_2209

Profile/Beam: 3876/238

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Least depth of boulder found by 8125 MBES is 12 feet and is in the location of a 17 ft. charted depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/183_2209	3876/238	0.00	000.0	Primary
h11442/1014_100/2005-111/140_1656	0002	3.73	198.0	Secondary
h11442/1005_200/2005-110/300_1345	0002	3.75	106.7	Secondary
h11442/1014_100/2005-111/100_1259	0026	5.49	086.6	Secondary

Hydrographer Recommendations

Chart a Rk with a depth of 12 ft. in Latitude 41°17'03.109"N, Longitude 72°12'14.070"W.

Cartographically-Rounded Depth (Affected Charts):

12ft (13211_1, 12372_1, 12354_1, 13205_1)

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

3.8m (5161_1)

S-57 Data

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

Attributes: QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3:found by multi-beam

VALSOU - 3.791 m

VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 12Rk in Latitude 41°17'03.109"N, Longitude 72°12'14.070"W.

2.5) 703/1 - Charted 10 Obstn (crane) - (DtoN # 1)

Survey Summary

Survey Position: 41° 18' 02.268" N, 072° 12' 01.007" W

Least Depth: 3.10 m

Timestamp: 2005-122.17:51:38.627 (05/02/2005)

Survey Line: h11442 / 1014_mb / 2005-122 / 901_1751

Profile/Beam: 703/1

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted obstruction. sunken crane. 10 ft. sounding from 8125 MBES at 18 ft charted contour. Submitted 5/5/2005

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/901_1751	703/1	0.00	000.0	Primary
h11442/1014_mb/2005-122/901_1751	704/1	0.14	000.0	Secondary (grouped)
h11442/1014_mb/2005-122/901_1751	704/2	0.14	180.0	Secondary (grouped)
h11442/1014_mb/2005-122/901_1751	705/2	0.28	180.0	Secondary (grouped)
h11442/1014_mb/2005-122/901_1751	705/1	0.29	180.0	Secondary (grouped)
h11442/1014_mb/2005-122/901_1751	706/1	0.45	352.7	Secondary (grouped)
h11442/1005_200/2005-111/384_1406	0001	1.62	204.4	Secondary (grouped)
h11442/1005_200/2005-110/301_1823	0001	3.86	227.8	Secondary
h11442/1014_100/2005-112/141_1527	0001	8.29	252.9	Secondary
h11442/1014_100/2005-111/141_2107	0001	10.82	323.0	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: CONDTN - 2:ruined

INFORM - DtoN #1. Obstruction.

NATCON - 7:metal
OBJNAM - Crane
QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 3.095 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

2.6) 454/159 - Uncharted 7 Rk

Survey Summary

Survey Position:	41° 17' 17.213" N, 072° 13' 18.356" W
Least Depth:	2.21 m
Timestamp:	2005-124.21:21:26.418 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 338_2120
Profile/Beam:	454/159
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/338_2120	454/159	0.00	000.0	Primary
H11225_LIDAR_OK.csv	5	3.33	060.5	Secondary
h11442/1005_200/2005-110/300_1408	0004	29.63	292.3	Secondary
h11442/1014_100/2005-111/100_1260	0003	42.51	320.1	Secondary
h11442/1014_100/2005-111/107_1521	0002	49.61	322.8	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 7 feet in Latitude 41°17'17.213"N, Longitude 72°13'18.356"W.

Cartographically-Rounded Depth (Affected Charts):

- 7ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.2m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 3:found by multi-beam
VALSOU - 2.209 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 7Rk in Latitude 41°17'17.213"N, Longitude 72°13'18.356"W.

2.7) 503/53 - AHB - Uncharted 4 Rk

Survey Summary

Survey Position:	41° 17' 34.517" N, 072° 09' 03.577" W
Least Depth:	1.38 m
Timestamp:	2005-124.11:25:27.753 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 391_1125
Profile/Beam:	503/53
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

5 ft. 8125 MBES least depth of boulder on rock outcrop southwest of Twotree Island found outside 12 ft charted contour

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/391_1125	503/53	0.00	000.0	Primary
h11442/1014_100/2005-112/200_1804	0012	5.40	182.0	Secondary
h11442/1014_mb/2005-124/390_1119	2609/3	24.80	207.7	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 4 feet in Latitude 41°17'34.517"N, Longitude 72°09'03.577"W.

Cartographically-Rounded Depth (Affected Charts):

- 4ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ¾fm (12300_1, 13006_1, 13003_1)
- 1.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 1.383 m
	VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 4Rk in Latitude 41°17'34.517"N, Longitude 72°09'03.577"W.

2.8) 379/49 - Uncharted 9 Rk

Survey Summary

Survey Position:	41° 18' 25.397" N, 072° 09' 23.745" W
Least Depth:	2.75 m
Timestamp:	2005-124.14:16:27.540 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 590_1416
Profile/Beam:	379/49
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

LIDAR OK feature within test area. Feature is High Rock. Least depth acquired from Reson 8125 multibeam as close to High Rock as launch could acquire data. 200% sidescan from Klein 5000 acquired

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/590_1416	379/49	0.00	000.0	Primary
h11442/1005_200/2005-111/415_1813	0005	16.88	244.3	Secondary
h11442/1014_100/2005-112/173_1249	0008	18.97	201.8	Secondary
h11442/1014_100/2005-112/173_1249	0006	20.05	179.5	Secondary
h11442/1014_100/2005-112/173_1249	0007	21.56	222.3	Secondary
h11442/1014_100/2005-112/173_1249	0004	22.77	205.8	Secondary
h11442/1014_100/2005-112/173_1249	0009	25.02	086.7	Secondary
h11442/1014_100/2005-112/173_1249	0001	25.64	214.7	Secondary
h11442/1014_100/2005-112/173_1249	0011	26.65	310.2	Secondary
h11442/1014_100/2005-112/173_1249	0010	27.32	306.2	Secondary
h11442/1014_100/2005-112/173_1249	0005	32.16	185.6	Secondary
h11442/1014_100/2005-112/173_1249	0012	37.01	352.1	Secondary
h11442/1014_mb/2005-124/595_1432	435/24	47.12	029.6	Secondary

Hydrographer Recommendations

Chart as per digital data. Feature is not charted High Rock. Feature is 47m NNE of High Rock. Chart a rock with a depth of 9 feet in Latitude 41°18'25.397"N, Longitude 072°09'23.745"W.

Cartographically-Rounded Depth (Affected Charts):

- 9ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ½fm (12300_1, 13006_1, 13003_1)
- 2.7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - LIDAR OK feature within test area. Least depth acquired from Reson 8125 multibeam as close to High Rock as launch could acquire data. 200% sidescan from Klein 5000 acquired
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 2.755 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 9Rk in Latitude 41°18'25.397"N, Longitude 072°09'23.745"W.

2.9) 292/204 - AHB - Uncharted 23 Rks

Survey Summary

Survey Position:	41° 16' 50.011" N, 072° 14' 30.034" W
Least Depth:	7.06 m
Timestamp:	2005-124.19:05:53.274 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 753_1905
Profile/Beam:	292/204
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Least depth of rock outcrop

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/753_1905	292/204	0.00	000.0	Primary
h11442/1014_100/2005-111/136_1641	0003	3.59	214.8	Secondary
h11442/1014_100/2005-111/136_1641	0002	36.21	014.0	Secondary
h11442/1005_200/2005-110/304_1804	0001	36.69	356.1	Secondary

Hydrographer Recommendations

Chart rocks with a depth of 23 feet in Latitude 41°16'50.011"N, Longitude 072°14'30.034"W.

Cartographically-Rounded Depth (Affected Charts):

23ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)

3 ¾fm (12300_1, 13006_1, 13003_1)

7.0m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 7.057 m

VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart 23Rks in Latitude 41°16'50.011"N, Longitude 072°14'30.034"W.

2.10) 344/14 - AHB - Uncharted 11 Obstn and danger curve

Survey Summary

Survey Position:	41° 17' 27.348" N, 072° 14' 16.039" W
Least Depth:	3.52 m
Timestamp:	2005-124.19:39:27.071 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 756_1939
Profile/Beam:	344/14
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

11.5 ft. 8125 MBES sounding outside 12 ft. charted contour near 15 ft. charted depth. Undefineable feature present in side scan and multibeam. Height off seafloor is just over 1 meter.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/756_1939	344/14	0.00	000.0	Primary
h11442/1014_100/2005-111/123_1405	0003	1.93	150.3	Secondary
h11442/1005_200/2005-110/437_1501	0001	3.20	323.2	Secondary

Hydrographer Recommendations

Chart an obstruction with a depth of 11 feet in Latitude 41°17'27.348"N, Longitude 072°14'16.039"W.

Cartographically-Rounded Depth (Affected Charts):

- 11ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)
- 3.5m (5161_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 3.525 m

VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart an 11 Obstrn and danger curve in Latitude 41°17'27.348"N, Longitude 072°14'16.039"W.

2.11) 977/173 - Uncharted 10 Rk

Survey Summary

Survey Position:	41° 18' 24.430" N, 072° 09' 33.466" W
Least Depth:	3.27 m
Timestamp:	2005-124.16:15:16.154 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 810_1614
Profile/Beam:	977/173
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/810_1614	977/173	0.00	000.0	Primary
h11442/1005_100/2005-112/171_1346	0013	4.25	232.5	Secondary
h11442/1005_100/2005-112/171_1346	0012	6.60	228.6	Secondary
H11225_LIDAR_TestArea.csv	7	42.37	092.1	Secondary
H11225_LIDAR_OK.csv	32	42.37	092.1	Secondary

Hydrographer Recommendations

Chart as per digital data. Chart a rock with a depth of 10 feet in Latitude 41°18'24.430"N, Longitude 72°09'33.466"W.

Cartographically-Rounded Depth (Affected Charts):

- 10ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)
- 3.2m (5161_1)

S-57 Data

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

VALSOU - 3.270 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 10Rk in Latitude 41°18'24.430"N, Longitude 72°09'33.466"W.

2.12) 351/206 - AHB - Uncharted 12 Rk

Survey Summary

Survey Position:	41° 17' 06.110" N, 072° 13' 31.313" W
Least Depth:	3.69 m
Timestamp:	2005-124.20:57:02.985 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 813_2056
Profile/Beam:	351/206
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/813_2056	351/206	0.00	000.0	Primary
h11442/1014_mb/2005-124/819_2053	462/1	58.56	207.3	Secondary (grouped)

Hydrographer Recommendations

Chart a rock with a depth of 12 feet in Latitude 41°17'06.110"N, Longitude 72°13'31.313"W. Chart notation Rky in Latitude 41°17'07.793"N, Longitude 72°13'30.163"W.

Cartographically-Rounded Depth (Affected Charts):

- 12ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 2fm (12300_1, 13006_1, 13003_1)
- 3.7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 3.695 m
	VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 12Rk in Latitude 41°17'06.110"N, Longitude 72°13'31.313"W.

2.13) 1084/215 - AHB - Uncharted 27 Rk

Survey Summary

Survey Position:	41° 16' 45.153" N, 072° 14' 37.103" W
Least Depth:	8.18 m
Timestamp:	2005-125.13:37:30.849 (05/05/2005)
Survey Line:	h11442 / 1014_mb / 2005-125 / 057_1327
Profile/Beam:	1084/215
Charts Affected:	13211_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

27 ft. 8125 MBES sounding found beyond 30 ft charted contour.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-125/057_1327	1084/215	0.00	000.0	Primary
h11442/1005_200/2005-110/303_1807	0002	3.33	110.0	Secondary
h11442/1014_100/2005-111/137_1645	0001	4.28	320.9	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 27 feet in Latitude 41°16'45.153"N, Longitude 72°14'37.103"W.

Cartographically-Rounded Depth (Affected Charts):

- 27ft (13211_1, 12372_11, 12354_1, 13205_1)
- 4 ½fm (12300_1, 13006_1, 13003_1)
- 8.2m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 8.179 m
	VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 27Rk in Latitude 41°16'45.153"N, Longitude 72°14'37.103"W.

2.14) 394/199 - Uncharted 12 Rk

Survey Summary

Survey Position:	41° 16' 57.205" N, 072° 07' 56.818" W
Least Depth:	3.59 m
Timestamp:	2005-129.15:02:34.975 (05/09/2005)
Survey Line:	h11442 / 1014_mb / 2005-129 / 194_1502
Profile/Beam:	394/199
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

12 ft. 8125 MBES sounding on 16 ft. charted depth

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-129/194_1502	394/199	0.00	000.0	Primary
h11442/1005_100/2005-112/218_1807	0002	5.92	221.3	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 12 feet in Latitude 41°16'57.205"N, Longitude 72°07'56.818"W.

Cartographically-Rounded Depth (Affected Charts):

- 12ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2fm (12300_1, 13006_1, 13003_1)
- 3.6m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 3.592 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 12Rk in Latitude 41°16'57.205"N, Longitude 72°07'56.818"W.

2.15) 3774/87 - Chart notation Rky

Survey Summary

Survey Position:	41° 17' 46.085" N, 072° 06' 41.453" W
Least Depth:	3.60 m
Timestamp:	2005-112.14:29:13.892 (04/22/2005)
Survey Line:	h11442 / 1005_mb / 2005-112 / 302_1427
Profile/Beam:	3774/87
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large rock or boulder imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry and LIDAR

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-112/302_1427	3774/87	0.00	000.0	Primary
h11442/1005_100/2005-112/302_1427	0007	5.11	028.9	Secondary

Hydrographer Recommendations

Chart as per digital data. Area is rocky with no distinct rocks. Chart area as rky.

Cartographically-Rounded Depth (Affected Charts):

- 12ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2fm (12300_1, 13006_1, 13003_1)
- 3.6m (5161_1)

S-57 Data

Geo object 1:	Seabed area (SBDARE)
Attributes:	NATSUR - 9:rock
	WATLEV - 3:always under water/submerged
Geo object 2:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam

VERDAT - 12:Mean lower low water

Office Notes

Concur - Chart the area as Rky in the vicinity of latitude 41°17'46.085"N, longitude 72°06'41.453"W.

2.16) 1009/3 - Uncharted 9 Rk

Survey Summary

Survey Position:	41° 18' 18.463" N, 072° 11' 49.625" W
Least Depth:	2.88 m
Timestamp:	2005-129.19:06:30.964 (05/09/2005)
Survey Line:	h11442 / 1005_mb / 2005-129 / 555_1906
Profile/Beam:	1009/3
Charts Affected:	13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a large rock out crop with 8125 MBES and 200 percent side scan data from a Klein 5000.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/555_1906	1009/3	0.00	000.0	Primary

Hydrographer Recommendations

Chart a rock with a depth of 9 feet in latitude 41°18'18.463"N, longitude 072°11'49.625"W.

Cartographically-Rounded Depth (Affected Charts):

- 9ft (13211_1, 12372_1, 12354_1, 13205_1)
- 1 ½fm (12300_1, 13006_1, 13003_1)
- 2.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 2.885 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 9Rk in latitude 41°18'18.463"N, longitude 072°11'49.625"W.

2.17) 639/75 - AHB - Uncharted 12 Rk

Survey Summary

Survey Position:	41° 17' 25.039" N, 072° 14' 36.738" W
Least Depth:	3.76 m
Timestamp:	2005-129.21:11:25.630 (05/09/2005)
Survey Line:	h11442 / 1005_mb / 2005-129 / 586_2111
Profile/Beam:	639/75
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	Large boulder

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/586_2111	639/75	0.00	000.0	Primary
h11442/1014_100/2005-112/126_1605	0001	6.35	352.6	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 12 feet in Latitude 41°17'25.039"N, Longitude 72°14'36.738"W.

Cartographically-Rounded Depth (Affected Charts):

- 12ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 2fm (12300_1, 13006_1, 13003_1)
- 3.7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 3.759 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 12Rk in Latitude 41°17'25.039"N, Longitude 72°14'36.738"W.

2.18) 390/1 - AHB - Uncharted 60 Obstn and danger curve

Survey Summary

Survey Position:	41° 16' 12.139" N, 072° 13' 11.721" W
Least Depth:	18.25 m
Timestamp:	2005-129.18:23:04.862 (05/09/2005)
Survey Line:	h11442 / 1005_mb / 2005-129 / 615_1822
Profile/Beam:	390/1
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Large boulder 8101 MBES sounding 20 feet shoaler than charted

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/615_1822	390/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart an obstruction with a depth of 60 feet in Latitude 41°16'12.139"N, Longitude 72°13'11.721"W.

Cartographically-Rounded Depth (Affected Charts):

- 60ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 10fm (12300_1, 13006_1, 13003_1)
- 18.2m (5161_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 18.249 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 60 Obstn and danger curve in Latitude 41°16'12.139"N, Longitude 72°13'11.721"W.

2.19) 40 - Verified 3 Rk

Survey Summary

Survey Position:

41° 17' 58.560" N, 072° 06' 03.600" W

Least Depth:

-0.89 m

Timestamp:

1990-001.11:60:00.000 (01/01/1990)

GP Dataset:

ChartGPs - H11225_LIDAR_ReqFldWrk.csv

GP No.:

40

Charts Affected:

13213_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Confirm whether drying rock or obstruction Not is survey area

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	40	0.00	000.0	Primary
H11225_LIDAR_TestArea.csv	81	0.00	000.0	Secondary

Hydrographer Recommendations

Verified charted 3 Rk.

S-57 Data

[None]

Office Notes

No change in charting.

2.20) 67 - Lidar verified - (Delete 6Rk - Chart 4Rk)

Survey Summary

Survey Position:	41° 17' 59.640" N, 072° 07' 14.880" W
Least Depth:	1.30 m
Timestamp:	1990-001.11:60:00.000 (01/01/1990)
GP Dataset:	H11225_LIDAR_TestArea.csv
GP No.:	42
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Hydrographer's remark: Feature is a large boulder imaged with 200% side scan from a Klein 5000. Unable to acquire MBES data. Area hazardous to launch acquisition.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11225_LIDAR_TestArea.csv	42	0.00	000.0	Primary
H11225_LIDAR_OK.csv	67	0.00	000.0	Secondary

Hydrographer Recommendations

Chart as per LIDAR data. Chart a rock with a depth of 4 feet in latitude 41°17'59.640"N, longitude 072°07'14.880"W.

Cartographically-Rounded Depth (Affected Charts):

- 4ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ¾fm (12300_1, 13006_1, 13003_1)
- 1.3m (5161_1)

S-57 Data

Geo object 1:	Anchorage area (ACHARE)
Geo object 2:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 7:found by laser
	VALSOU - 1.3 m

VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur - Delete charted 6Rk. Chart a 4Rk in latitude 41°17'59.640"N, longitude 72°07'14.880"W.

2.21) 5081/97 - Uncharted 13 Rk and danger curve

Survey Summary

Survey Position:	41° 17' 51.636" N, 072° 07' 23.484" W
Least Depth:	4.06 m
Timestamp:	2005-124.19:48:48.335 (05/04/2005)
Survey Line:	h11442 / 1005_mb / 2005-124 / 186_1944
Profile/Beam:	5081/97
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large boulder imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-124/186_1944	5081/97	0.00	000.0	Primary
h11442/1005_200/2005-111/320_1916	0003	4.40	128.9	Secondary
h11442/1005_100/2005-112/182_1557	0001	16.15	262.6	Secondary

Hydrographer Recommendations

Chart as per digital data. Chart a rock with a depth of 13 feet in Latitude 41°17'51.636"N, Longitude 72°07'23.484"W.

Cartographically-Rounded Depth (Affected Charts):

- 13ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2 ¼fm (12300_1, 13006_1, 13003_1)
- 4.0m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 4.056 m
	VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 13Rk with a danger curve in Latitude 41°17'51.636"N, Longitude 72°07'23.484"W.

2.22) 826/2 - Uncharted 16 Rk and danger curve

Survey Summary

Survey Position:	41° 17' 33.383" N, 072° 06' 33.421" W
Least Depth:	4.97 m
Timestamp:	2005-126.12:46:18.601 (05/06/2005)
Survey Line:	h11442 / 1005_mb / 2005-126 / 127_1245
Profile/Beam:	826/2
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large boulder imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-126/127_1245	826/2	0.00	000.0	Primary
h11442/1005_100/2005-112/192_1506	0008	3.67	106.7	Secondary

Hydrographer Recommendations

Chart as per digital data. Chart a rock with a depth of 16 feet in Latitude 41°17'33.383"N, Longitude 72°06'33.421"W.

Cartographically-Rounded Depth (Affected Charts):

- 16ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2 ¾fm (12300_1, 13006_1, 13003_1)
- 4.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 4.969 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 16Rk and danger curve in Latitude 41°17'33.383"N, Longitude 72°06'33.421"W.

2.23) 892/101 - AHB - Uncharted 8Rk

Survey Summary

Survey Position:	41° 17' 56.727" N, 072° 07' 19.758" W
Least Depth:	2.58 m
Timestamp:	2005-121.11:34:33.153 (05/01/2005)
Survey Line:	h11442 / 1005_mb / 2005-121 / 982_1134
Profile/Beam:	892/101
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	
	[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-121/982_1134	892/101	0.00	000.0	Primary

Hydrographer Recommendations

Chart rock with a depth of 8 feet in Latitude 41°17'56.727"N, Longitude 072°07'19.758"W.

Cartographically-Rounded Depth (Affected Charts):

- 8ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.6m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 2.581 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart an 8Rk in Latitude 41°17'56.727"N, Longitude 072°07'19.758"W.

2.24) 531/77 - AHB - Uncharted 7 Rk

Survey Summary

Survey Position:	41° 17' 53.304" N, 072° 07' 45.820" W
Least Depth:	2.27 m
Timestamp:	2005-124.20:37:50.178 (05/04/2005)
Survey Line:	h11442 / 1005_mb / 2005-124 / 205_2037
Profile/Beam:	531/77
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	
	[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-124/205_2037	531/77	0.00	000.0	Primary
h11442/1005_100/2005-112/171_1347	0042	7.24	276.6	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 7 feet in Latitude 41°17'53.304"N, Longitude 72°07'45.820"W.

Cartographically-Rounded Depth (Affected Charts):

- 7ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.2m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 2.268 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 7Rk in Latitude 41°17'53.304"N, Longitude 72°07'45.820"W.

2.25) 1709/28 - AHB - Uncharted 6 Rk

Survey Summary

Survey Position:	41° 16' 39.119" N, 072° 08' 04.486" W
Least Depth:	1.80 m
Timestamp:	2005-125.14:18:06.992 (05/05/2005)
Survey Line:	h11442 / 1005_mb / 2005-125 / 105_1417
Profile/Beam:	1709/28
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1
Remarks:	discovered in 1005 mb

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-125/105_1417	1709/28	0.00	000.0	Primary

Hydrographer Recommendations

Chart a dangerous Rk with a depth of 6 feet in Latitude 41°16'39.119"N, Longitude 72°08'04.486"W.

Cartographically-Rounded Depth (Affected Charts):

- 6ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1fm (12300_1, 13006_1, 13003_1)
- 1.8m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3:found by multi-beam
	VALSOU - 1.797 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 6Rk in Latitude 41°16'39.119"N, Longitude 72°08'04.486"W.

3 - AWOIS Features

3.1) AWOIS 12335 - Uncharted 25 Rk and danger curve

Primary Feature for AWOIS Item #12335

Search Position: 41° 16' 49.020" N, 072° 13' 00.700" W

Historical Depth: 7.92 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H8997/69 -- 26 FT SOUNDING NOW CHARTED IN POSITION: 41°16'49.02" N 072°13'00.7" W [NAD 83] [ENTERED 4/10/04 JCM]

Survey Summary

Survey Position: 41° 16' 48.936" N, 072° 13' 00.518" W

Least Depth: 7.71 m

Timestamp: 2005-120.13:26:09.781 (04/30/2005)

Survey Line: h11442 / 1014_mb / 2005-120 / 325_1319

Profile/Beam: 4968/79

Charts Affected: 13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12335: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry. Multibeam found a depth of 25 ft.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-120/325_1319	4968/79	0.00	000.0	Primary
h11442/1014_100/2005-110/506_1809	0001	3.04	026.9	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12335	4.97	121.4	Secondary
h11442/1005_200/2005-110/363_1642	0001	11.46	150.8	Secondary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	11	17.29	154.3	Secondary
h11442/1014_100/2005-111/129_1530	0001	19.70	308.5	Secondary

Hydrographer Recommendations

Chart a rock with a least depth of 25 feet in Latitude 41°16'48.936"N, Longitude 072°13'00.518"W.

Cartographically-Rounded Depth (Affected Charts):

- 25ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 4 ¼fm (12300_1, 13006_1, 13003_1)
- 7.7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12335
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 3,13:found by multi-beam,swept by side-scan sonar
	VALSOU - 7.715 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 25Rk and danger curve in Latitude 41°16'48.936"N, Longitude 072°13'00.518"W.

3.2) AWOIS 12154 - Uncharted 26 Rk

Primary Feature for AWOIS Item #12154

Search Position: 41° 16' 51.780" N, 072° 12' 17.110" W

Historical Depth: 8.84 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 29 FT SOUNDING NOW CHARTED IN POSITION:41°16'51.78" N 072°12'17.11" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 16' 52.630" N, 072° 12' 18.074" W

Least Depth: 8.02 m

Timestamp: 2005-120.16:08:31.264 (04/30/2005)

Survey Line: h11442 / 1014_mb / 2005-120 / 344_1608

Profile/Beam: 311/7

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12154: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-120/344_1608	311/7	0.00	000.0	Primary
h11442/1014_100/2005-111/111_1509	0004	10.39	207.5	Secondary
h11442/1014_mb/2005-120/341_1612	4347/41	28.05	300.7	Secondary
h11442/1014_mb/2005-120/345_1602	3625/203	32.44	170.2	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12154	34.59	319.5	Secondary
h11442/1014_100/2005-111/111_1509	0003	39.17	211.9	Secondary
h11442/1014_mb/2005-120/345_1602	3741/200	39.91	215.1	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 26 feet in Latitude 41°16'52.630"N, Longitude 72°12'18.074"W.

Cartographically-Rounded Depth (Affected Charts):

- 26ft (13211_1, 12372_1, 12354_1, 13205_1)
- 4 ¼fm (12300_1, 13006_1, 13003_1)
- 8.0m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item # 12154
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 8.024 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 26Rk in Latitude 41°16'52.630"N, Longitude 72°12'18.074"W.

3.3) AWOIS 12333 - Uncharted 9 Rk

Primary Feature for AWOIS Item #12333

Search Position: 41° 17' 18.950" N, 072° 13' 35.800" W

Historical Depth: 3.66 m

Search Radius: 75

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H8997/69 -- 12 FT SOUNDING LOCATED IN POSITION: 41°17'18.6" N 072°13'37.5" W [NAD 27] [ENTERED 4/10/04 JCM]

Survey Summary

Survey Position: 41° 17' 19.879" N, 072° 13' 35.709" W

Least Depth: 2.86 m

Timestamp: 2005-122.20:32:22.342 (05/02/2005)

Survey Line: h11442 / 1014_mb / 2005-122 / 108_2031

Profile/Beam: 434/9

Charts Affected: 13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12333: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/108_2031	434/9	0.00	000.0	Primary
h11442/1005_mb/2005-121/911_1532	840/1	4.36	334.9	Secondary
h11442/1005_200/2005-110/368_1436	0001	5.21	135.9	Secondary
h11442/1014_mb/2005-138/101_1132	245/201	24.50	352.5	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12333	28.82	004.2	Secondary
h11442/1014_mb/2005-122/116_2050	313/27	72.72	011.7	Secondary (grouped)
h11442/1014_mb/2005-122/104_2024	527/3	82.63	007.0	Secondary (grouped)

Hydrographer Recommendations

Chart a rock with a depth of 9 feet in Latitude 41°17'19.879"N, Longitude 72°13'35.709"W.

Cartographically-Rounded Depth (Affected Charts):

- 9ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 1 ½fm (12300_1, 13006_1, 13003_1)
- 2.8m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12333
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 2.861 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 9Rk in Latitude 41°17'19.879"N, Longitude 72°13'35.709"W.

3.4) AWOIS 12334 - Uncharted 16 Rk

Primary Feature for AWOIS Item #12334

Search Position: 41° 17' 05.730" N, 072° 13' 04.710" W

Historical Depth: 5.49 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H8997/69 -- 18 FT SOUNDING NOW CHARTED IN POSITION: 41°17'05.73" N 072°13'04.71" W [NAD 83] [ENTERED 4/10/04 JCM]

Survey Summary

Survey Position: 41° 17' 08.038" N, 072° 13' 06.350" W

Least Depth: 4.80 m

Timestamp: 2005-122.19:35:13.990 (05/02/2005)

Survey Line: h11442 / 1014_mb / 2005-122 / 141_1934

Profile/Beam: 286/95

Charts Affected: 13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12334: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/141_1934	286/95	0.00	000.0	Primary
h11442/1005_200/2005-110/370_1558	0005	5.59	148.8	Secondary
h11442/1014_100/2005-111/106_1525	0006	14.33	205.6	Secondary
H11225_LIDAR_OK.csv	8	21.49	329.3	Secondary
h11442/1014_mb/2005-122/131_1858	556/201	77.76	327.0	Secondary (grouped)
h11442/1014_100/2005-111/115_1446	0007	79.71	358.6	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12334	80.98	331.8	Secondary (grouped)
h11442/1014_100/2005-111/106_1525	0001	156.83	284.9	Secondary (grouped)

Hydrographer Recommendations

Chart a rock with a depth of 16 feet in Latitude 41°17'08.038"N, Longitude 72°13'06.350"W.

Cartographically-Rounded Depth (Affected Charts):

- 16ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 2 ½fm (12300_1, 13006_1, 13003_1)
- 4.8m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12334
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 4.804 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 16Rk and danger curve in Latitude 41°17'08.038"N, Longitude 72°13'06.350"W.

3.5) AWOIS 12330 - Uncharted 9 Rk

Primary Feature for AWOIS Item #12330

Search Position: 41° 17' 04.920" N, 072° 13' 18.580" W

Historical Depth: 3.35 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H8997/69 -- 11 FT SOUNDING NOW CHARTED IN POSITION: 41°17'04.92" N 072°13'18.58" W [NAD 83] [ENTERED 4/10/04 JCM]

Survey Summary

Survey Position: 41° 17' 04.854" N, 072° 13' 18.456" W

Least Depth: 2.97 m

Timestamp: 2005-122.20:10:25.663 (05/02/2005)

Survey Line: h11442 / 1014_mb / 2005-122 / 149_2009

Profile/Beam: 318/178

Charts Affected: 13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12330: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/149_2009	318/178	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12330	3.53	125.1	Secondary
h11442/1005_200/2005-110/365_1537	0002	10.69	099.7	Secondary
h11442/1014_100/2005-111/116_1437	0003	19.57	273.5	Secondary
h11442/1014_mb/2005-122/131_1858	1602/232	35.34	182.6	Secondary
h11442/1005_200/2005-110/367_1543	0021	39.90	163.2	Secondary
h11442/1014_100/2005-111/117_1421	0003	46.53	024.3	Secondary
h11442/1014_100/2005-111/116_1437	0005	90.91	332.1	Secondary (grouped)
h11442/1014_100/2005-111/116_1437	0006	95.14	309.2	Secondary (grouped)
h11442/1005_200/2005-110/365_1537	0003	105.35	334.7	Secondary (grouped)

h11442/1005_200/2005-110/363_1642	0003	110.57	016.8	Secondary (grouped)
h11442/1014_100/2005-111/117_1421	0011	132.45	332.0	Secondary (grouped)

Hydrographer Recommendations

Chart a rock with a depth of 9 feet in Latitude 41°17'04.854"N, Longitude 72°13'18.456"W.

Cartographically-Rounded Depth (Affected Charts):

10ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)

1 ½fm (12300_1, 13006_1, 13003_1)

2.9m (5161_1)

S-57 Data

- Geo object 1: Underwater rock / awash rock (UWTROC)
- Attributes: INFORM - AWOIS Item #12330
- QUASOU - 6:least depth known
- STATUS - 1:permanent
- TECSOU - 2,3:found by side scan sonar,found by multi-beam
- VALSOU - 2.972 m
- VERDAT - 12:Mean lower low water
- WATLEV - 3:always under water/submerged

Office Notes

Cocnur - Chart a 9Rk in Latitude 41°17'04.854"N, Longitude 72°13'18.456"W.

3.6) AWOIS 12151 - Charted 12 Rk (relocate)

Primary Feature for AWOIS Item #12151

Search Position: 41° 18' 17.900" N, 072° 10' 05.600" W

Historical Depth: 3.66 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 12 FT SOUNDING FROM A ROCK NOW CHARTED IN POSITION: 41°18'17.89" N 072°10'05.61" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 17.584" N, 072° 10' 05.239" W

Least Depth: 3.67 m

Timestamp: 2005-130.16:20:34.695 (05/10/2005)

Survey Line: h11442 / 1014_mb / 2005-130 / 142_1619

Profile/Beam: 505/182

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12151: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-130/142_1619	505/182	0.00	000.0	Primary
h11442/1014_100/2005-111/140_1660	0004	3.00	337.9	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12151	12.90	139.2	Secondary
h11442/1005_200/2005-111/301_1248	0011	22.12	051.2	Secondary
h11442/1014_100/2005-112/901_1330	0001	23.50	064.9	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 12 feet in Latitude 41°18'17.584"N, Longitude 072°10'05.239"W.

Cartographically-Rounded Depth (Affected Charts):

- 12ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2fm (12300_1, 13006_1, 13003_1)
- 3.6m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12151
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 3.669 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Revise location of charted 12Rk to Latitude 41°18'17.584"N, Longitude 072°10'05.239"W.

3.7) AWOIS 12411 - Uncharted 39 Rk

Primary Feature for AWOIS Item #12411

Search Position: 41° 16' 24.240" N, 072° 12' 06.370" W
Historical Depth: 12.19 m
Search Radius: 50
Search Technique: S2, MB, DI
Technique Notes: [None]

History Notes:

H09212 (1971) -- 40 FT SOUNDING NOW CHARTED IN POSITION: 41°16'24.24" N 072°12'06.37" W [NAD 83] [ENTERED 4/19/04 JCM]

Survey Summary

Survey Position: 41° 16' 23.773" N, 072° 12' 06.007" W
Least Depth: 11.89 m
Timestamp: 2005-119.16:00:14.855 (04/29/2005)
Survey Line: h11442 / 1005_mb / 2005-119 / 343_1543
Profile/Beam: 7804/52

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12411: Object found. Feature is a large rock outcrop imaged with 100% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-119/343_1543	7804/52	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12411	16.74	149.6	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 39 feet in Latitude 41°16'23.773"N, Longitude 72°12'06.007"W.

Cartographically-Rounded Depth (Affected Charts):

39ft (13211_1, 12372_1, 12354_1, 13205_1)
6 ½fm (12300_1, 13006_1, 13003_1)

11.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12411
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 11.889 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Cocnur - Chart a 39Rk in Latitude 41°16'23.773"N, Longitude 72°12'06.007"W.

3.8) AWOIS 12153 - Uncharted 27 Rk

Primary Feature for AWOIS Item #12153

Search Position: 41° 17' 56.500" N, 072° 10' 13.200" W
Historical Depth: 8.53 m
Search Radius: 50
Search Technique: S2, MB, DI
Technique Notes: [None]

History Notes:

H-8996/68 -- 28 FT SOUNDING NOW CHARTED IN POSITION: 41°17'56.52" N 072°10'13.2" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 17' 56.262" N, 072° 10' 13.746" W
Least Depth: 8.24 m
Timestamp: 2005-120.16:23:52.565 (04/30/2005)
Survey Line: h11442 / 1005_mb / 2005-120 / 013_1623
Profile/Beam: 763/8

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12153: Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-120/013_1623	763/8	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12153	14.70	240.0	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 27 feet in Latitude 41°17'56.262"N, Longitude 072°10'13.746"W.

Cartographically-Rounded Depth (Affected Charts):

27ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
4 ½fm (12300_1, 13006_1, 13003_1)

8.2m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12153
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 8.243 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 27Rk in Latitude 41°17'56.262"N, Longitude 072°10'13.746"W.

3.9) AWOIS 12155 - Charted wire drag 7 Rk (revise to dang. 8 Rk)

Primary Feature for AWOIS Item #12155

Search Position: 41° 18' 22.800" N, 072° 09' 05.000" W

Historical Depth: 2.13 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 7 FT SOUNDING NOW CHARTED IN POSITION: 41°18'22.81" N 072°09'05.01" W [NAD 83] THE SOURCE FOR THE 7 FT WIRE-DRAG CLEARANCE DEPTH WAS NOT DETERMINED. [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 23.308" N, 072° 09' 04.002" W

Least Depth: 2.51 m

Timestamp: 2005-121.12:28:00.981 (05/01/2005)

Survey Line: h11442 / 1005_mb / 2005-121 / 974_1227

Profile/Beam: 624/86

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12155: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-121/974_1227	624/86	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	28	3.00	199.2	Secondary
H11225_LIDAR_TestArea.csv	69	3.00	199.2	Secondary
h11442/1005_200/2005-111/302_1742	0007	6.47	285.2	Secondary
h11442/1014_100/2005-112/174_1247	0001	17.75	254.6	Secondary
h11442/1014_100/2005-112/175_1244	0003	22.41	079.5	Secondary
h11442/1005_200/2005-111/413_1807	0008	23.73	156.4	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12155	28.09	056.0	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 8 feet in Latitude 41°18'23.308"N, Longitude 72°09'04.002"W.

Cartographically-Rounded Depth (Affected Charts):

- 8ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.5m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item # 12155
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 2.510 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Delete 7Rk wire drag clearance. Chart an 8Rk in Latitude 41°18'23.308"N, Longitude 72°09'04.002"W.

3.10) 4077/7 - AWOIS 12331 - Charted 4 Rk (revise to 2 Rk awash)

Primary Feature for AWOIS Item #12331

Search Position: 41° 17' 09.410" N, 072° 13' 25.120" W
Historical Depth: 1.22 m
Search Radius: 50
Search Technique: S2, MB, DI
Technique Notes: [None]

History Notes:

H8997/69 -- 4 FT ROCK ("BLACKBOYS ROCK") NOW CHARTED IN POSITION: 41°17'09.41" N 072°13'25.12" W [NAD 83] [ENTERED 4/10/04 JCM]

Survey Summary

Survey Position: 41° 17' 09.703" N, 072° 13' 25.036" W
Least Depth: 0.71 m
Timestamp: 2005-122.22:34:52.653 (05/02/2005)
Survey Line: h11442 / 1005_mb / 2005-122 / 316_2230
Profile/Beam: 4077/7
Charts Affected: 13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12331: Object found. Feature is a large rock out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-122/316_2230	4077/7	0.00	000.0	Primary
h11442/1014_mb/2005-129/229_1711	92/51	0.73	348.6	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12331	9.26	012.2	Secondary
h11442/1005_200/2005-110/300_1409	0005	13.65	266.5	Secondary
h11442/1005_mb/2005-122/316_2230	1759/101	13.91	179.3	Secondary (grouped)
h11442/1014_100/2005-111/139_1417	0003	16.87	159.0	Secondary
h11442/1014_100/2005-111/115_1446	0015	17.88	191.9	Secondary

Hydrographer Recommendations

Chart a rock awash with a depth of 2 feet in Latitude 41°17'09.703"N, Longitude 72°13'25.036"W.

Cartographically-Rounded Depth (Affected Charts):

- 2ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 0 ¼fm (12300_1, 13006_1, 13003_1)
- .7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item # 12331
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 0.711 m
	VERDAT - 12:Mean lower low water
	WATLEV - 5:awash

Office Notes

Concur - Delete 4 Rk. Chart a 2Rk in Latitude 41°17'09.703"N, Longitude 72°13'25.036"W.

3.11) AWOIS 12148 - Little Rock - relocate rock awash

Primary Feature for AWOIS Item #12148

Search Position: 41° 18' 10.020" N, 072° 10' 27.520" W

Historical Depth: 2.44 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- THIS AWOIS ITEM ENCOMPASSES TWO ROCKS THAT THAT ARE CHARTED ~25 METERS APART. ONE IS CHARTED AS A ROCK AWASH AND THE OTHER IS CHARTED AS A SUBMERGED ROCK. BOTH ARE PART OF THE CHARTED "LITTLE ROCK" WHICH IS LABELED WITH AN 8 FT SOUNDING. THE CHARTED POSITION OF THE SUBMERGED ROCK IS: 41°18'10.02" N 072°10'27.52" W [NAD 83] [ENTERED 3/1/05 JCM]

Survey Summary

Survey Position: 41° 18' 09.379" N, 072° 10' 28.952" W

Least Depth: 0.91 m

Timestamp: 2005-129.13:50:41.341 (05/09/2005)

Survey Line: h11442 / 1005_mb / 2005-129 / 603_1349

Profile/Beam: 1091/101

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12148: Object found. Little Rock, Sounding pole depth 1m below surface 5/13/05. Launches unable to acquire data directly over feature safely. Partial bathymetric and side scan imagery data was acquired on the perimeter of the feature.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/603_1349	1091/101	0.00	000.0	Primary
h11225_tenix_lads/h11225_tenix_lads/2007-347/sheetb_v1_136_1_1_2	306/38	18.02	198.2	Secondary
H11225_LIDAR_OK.csv	26	23.53	202.9	Secondary
h11442/1014_100/2005-112/559_1302	0004	33.77	271.0	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12148	38.86	239.3	Secondary (grouped)
h11442/1014_100/2005-111/158_1733	0001	39.18	235.8	Secondary (grouped)
H11225_LIDAR_OK.csv	27	75.17	222.9	Secondary (grouped)

Hydrographer Recommendations

Do not concur - This feature is not part of AWOIS Item 12148 - the charted dangerous rock and rock awash of the Little Rock. Revise Little Rock dangerous rock awash to Latitude 41°18'09.933"N, Longitude 72°10'28.711"W, and revise Little Rock danger curve.

Cartographically-Rounded Depth (Affected Charts):

3ft (13211_1, 12372_1, 12354_1, 13205_1)
0 ½fm (12300_1, 13006_1, 13003_1)
.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - near AWOIS Item #12148
	OBJNAM - Little Rock
	QUASOU - 4:unreliable sounding
	STATUS - 1:permanent
	TECSOU - 1,7:found by echo-sounder,found by laser
	VALSOU - 0.911 m
	VERDAT - 12:Mean lower low water
	WATLEV - 5:awash

Office Notes

Concur with clarification - Revise location of Little Rock (rock awash) to Latitude 41°18'09.933"N, Longitude 72°10'28.711"W.

3.12) 1181/97 - AWOIS 12329 - AHB 3 Rk (relocate)

Primary Feature for AWOIS Item #12329

Search Position: 41° 17' 00.990" N, 072° 13' 27.660" W
Historical Depth: 0.91 m
Search Radius: 50
Search Technique: S2, MB, DI
Technique Notes: [None]

History Notes:

H8997/69 -- 3 FT ROCK NOW CHARTED IN POSITION: 41°17'00.99" N 072°13'27.66" W [NAD 83] [ENTERED 4/10/04 JCM]

Survey Summary

Survey Position: 41° 17' 01.163" N, 072° 13' 28.035" W
Least Depth: 0.88 m
Timestamp: 2005-129.17:01:24.596 (05/09/2005)
Survey Line: h11442 / 1005_mb / 2005-129 / 600_1700
Profile/Beam: 1181/97

Charts Affected: 13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/600_1700	1181/97	0.00	000.0	Primary
h11442/1014_mb/2005-129/157_1646	354/7	1.76	352.5	Secondary
h11442/1005_mb/2005-129/600_1700	1139/27	4.52	348.3	Secondary (grouped)
OPR-B370-TJ-05_AWOIS	AWOIS # 12329	10.27	301.5	Secondary
h11442/1014_mb/2005-129/156_1645	885/72	20.20	245.2	Secondary
h11442/1005_200/2005-110/363_1642	0004	20.75	290.5	Secondary
h11442/1005_200/2005-110/360_1647	0001	23.74	282.0	Secondary
h11442/1005_200/2005-110/358_1653	0001	24.36	043.5	Secondary
h11442/1005_200/2005-110/440_1551	0002	24.83	163.1	Secondary
h11442/1014_100/2005-111/129_1530	0005	27.82	105.7	Secondary

H11225_LIDAR_OK.csv	3	33.78	241.8	Secondary
h11442/1014_mb/2005-124/858_2108	488/1	37.63	251.3	Secondary
h11442/1014_mb/2005-124/858_2108	402/27	40.50	224.8	Secondary
h11442/1014_100/2005-111/117_1421	0010	40.88	219.2	Secondary
h11442/1014_mb/2005-138/135_1250	441/151	46.37	286.5	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 3 feet in Latitude 41°17'01.163"N, Longitude 072°13'28.035"W.

Cartographically-Rounded Depth (Affected Charts):

3ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
0 ½fm (12300_1, 13006_1, 13003_1)
.9m (5161_1)

S-57 Data

- Geo object 1: Underwater rock / awash rock (UWTROC)
- Attributes: INFORM - AWOIS Item #12329 correct feature depth and location
QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 0.879 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Revise location of charted 3Rk to Latitude 41°17'01.163"N, Longitude 72°13'28.035"W.

3.13) AWOIS 12152 - Charted 14 Rk (revise to dang. 11 Rk)

Primary Feature for AWOIS Item #12152

Search Position: 41° 18' 04.200" N, 072° 10' 28.700" W
Historical Depth: 4.27 m
Search Radius: 50
Search Technique: S2, MB, DI
Technique Notes: [None]

History Notes:

H-8996/68 -- 14 FT SOUNDING OF A ROCK NOW CHARTED IN POSITION: 41°18'04.19" N 072°10'28.66" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 03.911" N, 072° 10' 28.564" W
Least Depth: 3.52 m
Timestamp: 2005-120.16:27:35.567 (04/30/2005)
Survey Line: h11442 / 1005_mb / 2005-120 / 012_1627
Profile/Beam: 514/101

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12152: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-120/012_1627	514/101	0.00	000.0	Primary
h11442/1005_200/2005-111/448_1642	0002	8.98	202.4	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12152	9.49	160.4	Secondary
h11442/1014_100/2005-112/559_1302	0006	12.69	188.8	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 11 feet in Latitude 41°18'03.911"N, Longitude 72°10'28.564"W.

Cartographically-Rounded Depth (Affected Charts):

- 11ft (13211_1, 12372_1, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)
- 3.5m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12152
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 3.523 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Delete charted 14Rk. Chart an 11Rk in Latitude 41°18'03.911"N, Longitude 72°10'28.564"W.

3.14) AWOIS 12156 - Charted 13 Rk (relocate)

Primary Feature for AWOIS Item #12156

Search Position: 41° 18' 20.200" N, 072° 09' 14.900" W

Historical Depth: 3.96 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 13 FT SOUNDING FROM A ROCK NOW CHARTED IN POSITION: 41°18'20.21" N 072°09'14.88" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 20.437" N, 072° 09' 14.841" W

Least Depth: 4.04 m

Timestamp: 2005-121.13:18:31.067 (05/01/2005)

Survey Line: h11442 / 1005_mb / 2005-121 / 962_1318

Profile/Beam: 333/85

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12156: Object found. Feature is a large boulder imaged with 200% sidescan from a Klein 5000 with Reson 8101 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-121/962_1318	333/85	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12156	7.46	010.7	Secondary
h11442/1005_200/2005-111/412_1757	0003	7.87	081.6	Secondary
h11442/1014_100/2005-112/175_1244	0001	14.36	257.0	Secondary
h11442/1014_100/2005-112/176_1241	0003	30.64	356.1	Secondary
h11442/1014_100/2005-112/176_1241	0002	30.90	000.5	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 13 feet in Latitude 41°18'20.437"N, Longitude 072°09'14.841"W.

Cartographically-Rounded Depth (Affected Charts):

- 13ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2 ¼fm (12300_1, 13006_1, 13003_1)
- 4.0m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item 12156
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 4.044 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Revise charted 13Rk location to Latitude 41°18'20.437"N, Longitude 072°09'14.841"W.

3.15) AWOIS 12157 - Uncharted 16 Rk

Primary Feature for AWOIS Item #12157

Search Position: 41° 18' 26.500" N, 072° 09' 12.600" W
Historical Depth: 5.49 m
Search Radius: 50
Search Technique: S2, MB, DI
Technique Notes: [None]

History Notes:

H-8996/68 -- 18 FT SOUNDING NOW CHARTED IN POSITION: 41°18'26.52" N 072°09'12.6" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 26.826" N, 072° 09' 12.877" W
Least Depth: 5.04 m
Timestamp: 2005-121.13:29:32.122 (05/01/2005)
Survey Line: h11442 / 1005_mb / 2005-121 / 966_1329
Profile/Beam: 812/16

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12157: Object found. Feature is a rocky outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-121/966_1329	812/16	0.00	000.0	Primary
h11442/1005_200/2005-111/415_1813	0003	1.83	137.8	Secondary
h11442/1014_100/2005-112/174_1247	0003	4.54	156.8	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12157	11.96	327.3	Secondary
h11442/1005_200/2005-111/415_1813	0004	44.01	000.7	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 16 feet in Latitude 41°18'26.826"N, Longitude 072°09'12.877"W.

Cartographically-Rounded Depth (Affected Charts):

- 16ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2 ¾fm (12300_1, 13006_1, 13003_1)
- 5.0m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12157
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 5.037 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart a 16Rk in Latitude 41°18'26.826"N, Longitude 072°09'12.877"W.

3.16) AWOIS 12150 - Charted 8 Rk (relocate)

Primary Feature for AWOIS Item #12150

Search Position: 41° 18' 17.900" N, 072° 10' 12.700" W

Historical Depth: 2.44 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 8 FT SOUNDING FROM A ROCK NOW CHARTED IN POSITION: 41°18'17.94" N 072°10'12.74" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 17.492" N, 072° 10' 13.125" W

Least Depth: 2.41 m

Timestamp: 2005-123.18:49:50.445 (05/03/2005)

Survey Line: h11442 / 1005_mb / 2005-123 / 325_1849

Profile/Beam: 631/98

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12150: Object found. Feature is a large rock outcrop imaged with 200% sidescan from a Klein 5000 with Reson 8125 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-123/325_1849	631/98	0.00	000.0	Primary
h11442/1014_mb/2005-130/146_1602	410/135	1.09	036.6	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12150	16.04	218.2	Secondary
h11442/1014_100/2005-111/164_1846	0001	22.37	094.2	Secondary
h11442/1014_100/2005-112/164_1333	0001	30.44	273.8	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 8 feet in Latitude 41°18'17.492"N, Longitude 072°10'13.125"W.

Cartographically-Rounded Depth (Affected Charts):

- 8ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¼fm (12300_1, 13006_1, 13003_1)
- 2.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12150
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 2.410 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Revise location of charted 8Rk to Latitude 41°18'17.492"N, Longigutde 072°10'13.125"W.

3.17) AWOIS 12145 - Charted 4 Rk (revise to 3 Rk)

Primary Feature for AWOIS Item #12145

Search Position: 41° 18' 17.100" N, 072° 11' 54.700" W

Historical Depth: 1.22 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 4 FT SOUNDING FROM A ROCK. NOW CHARTED IN POSITION: 41°18'17.08" N 072°11'54.72" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 17.642" N, 072° 11' 55.028" W

Least Depth: 1.11 m

Timestamp: 2005-129.16:21:40.895 (05/09/2005)

Survey Line: h11442 / 1005_mb / 2005-129 / 573_1621

Profile/Beam: 897/2

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12145: Object found. Feature is a large boulder imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/573_1621	897/2	0.00	000.0	Primary
h11442/1005_mb/2005-129/566_1618	2962/85	3.64	341.7	Secondary
h11442/1005_200/2005-110/301_1823	0002	4.83	144.7	Secondary
h11442/1005_mb/2005-129/572_1623	864/4	17.49	206.9	Secondary
OPR-B370-TJ-05_AWOIS	AWOIS # 12145	18.42	335.5	Secondary
h11442/1014_100/2005-112/142_1510	0004	22.73	198.5	Secondary

Hydrographer Recommendations

Chart a rock with a depth of 3 feet in Latitude 41°18'17.642"N, Longitude 72°11'55.028"W.

Cartographically-Rounded Depth (Affected Charts):

- 3ft (13211_1, 12372_1, 12354_1, 13205_1)
- 0 ½fm (12300_1, 13006_1, 13003_1)
- 1.1m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12145
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 1.113 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Delete 4Rk. Chart a 3Rk in Latitude 41°18'17.642"N, Longitude 72°11'55.028"W.

3.18) AWOIS 1864 - disproven

Primary Feature for AWOIS Item #1864

Search Position: 41° 18' 00.350" N, 072° 08' 52.270" W

Historical Depth: [None]

Search Radius: 0

Search Technique: S2,MB,DI,SD

Technique Notes: [None]

History Notes:

NM33/19-- WRECK OF SUBMARINE G-2 LIES SUNK IN 81 FT OF WATER WITH 46 FT OVER PERISCOPE ON THE BEARINGS: 84 DEGREES FROM GOSHEN POINT, 258 DEGREES FROM TWO TREE ISLAND, AND 289 DEGREES FROM MILLSTONE POINT; PA LAT 41-17-50N, LONG 72-08-15W. (ENTERED MSM 9/89) H8996/58--OPR-414; NOT ASSIGNED FOR INVESTIGATION, NOT LOCATED. FE343SS/90--OPR-B660-HE; THE HYDROGRAPHER CONTACTED LOCAL MARINERS AND WAS ADVISED THAT THE G-2 WAS RAISED AND SALVAGED IN THE MID 1960'S. ITEM WAS REMOVED FROM THE CHART BEFORE THIS INVESTIGATION. (UPDATED 8/92 MCR) DESCRIPTION 24 NO.8659; SUBM., SUNK 1919, LD 46 FT, POS. ACCUR. 1 MILE AT POSITION 41-18N, 72-08-55W. 180 SUBMARINE; 161 FT. LONG; 13' 1" BEAM; 12 FT. DRAFT; BUILT 1909; USED FOR PRACTICE CRUISES; DECOMMISSIONED 1919; DESIGNATED AS TARGET FOR TESTING DEPTH CHARGES AND ORDNANCE NETS; 7/30/19 DURING INSPECTION BY MAINTENANCE CREW, BOAT SUDDENLY FLOODED AND SANK AT HER MOORING; WAS NEVER RAISED. NOT CHARTED

Survey Summary

Survey Position: 41° 18' 00.522" N, 072° 08' 52.179" W

Least Depth: [None]

Timestamp: 2005-316.13:50:50 (11/12/2005)

GP Dataset: ChartGPs - Digitized

GP No.: 1

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 1864: No feature found. Area was imaged with 200% side scan with a Klein 5000 with Reson 8125 multibeam bathymetry. Multibeam found a depth of 72 ft.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	1	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 1864	5.71	021.8	Secondary (grouped)

Hydrographer Recommendations

Item disproven.

S-57 Data

Geo object 1: Coverage (M_COVR)
Attributes: CATCOV - 1:coverage available
INFORM - AWOIS Item #1864 - disproven
STATUS - 18:existence doubtful

Office Notes

Concur - No change in charting.

3.19) AWOIS 12144 - Threefoot Rk

Primary Feature for AWOIS Item #12144

Search Position: 41° 18' 22.400" N, 072° 11' 50.200" W

Historical Depth: 0.91 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 3 FT SOUNDING NOW CHARTED IN POSITION: 41°18'22.44" N 072°11'50.28" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 22.407" N, 072° 11' 50.235" W

Least Depth: [None]

Timestamp: 2005-316.14:06:25 (11/12/2005)

GP Dataset: ChartGPs - Digitized

GP No.: 2

Charts Affected: 12372_3, 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12144: Unable to acquire least depth with launches. Area too shoal. Bathymetric and side scan imagery data were acquired around the perimeter of the feature. Found shoaler depth with Reson 8101 than charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	2	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12144	0.85	284.9	Secondary (grouped)
h11442/1005_mb/2005-129/562_1603	1106/3	5.31	227.2	Secondary (grouped)
h11442/1005_200/2005-110/301_1823	0003	30.17	019.6	Secondary (grouped)
h11442/1005_200/2005-111/385_1402	0004	34.15	356.5	Secondary (grouped)
h11442/1014_100/2005-112/142_1510	0001	37.91	115.7	Secondary (grouped)
h11442/1005_mb/2005-129/563_1557	1647/6	44.13	026.9	Secondary (grouped)
h11442/1014_100/2005-112/075_1505	0001	45.54	160.8	Secondary (grouped)

Hydrographer Recommendations

Threefoot rock is verified. Retain Threefoot Rk as charted.

S-57 Data

- Geo object 1:

Underwater rock / awash rock (UWTROC)
- Attributes:

QUASOU - 6:least depth known

STATUS - 1:permanent

TECSOU - 3,7:found by multi-beam,found by laser

VERDAT - 12:Mean lower low water

WATLEV - 5:awash

Office Notes

Concur

3.20) AWOIS 12146 - disproven

Primary Feature for AWOIS Item #12146

Search Position: 41° 18' 13.600" N, 072° 11' 14.500" W

Historical Depth: 3.05 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 10 FT SOUNDING FROM A ROCK NOW CHARTED IN POSITION: 41°18'13.62" N 072°11'48.52" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 13.566" N, 072° 11' 14.545" W

Least Depth: [None]

Timestamp: 2005-316.14:13:33 (11/12/2005)

GP Dataset: ChartGPs - Digitized

GP No.: 3

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12146: No feature found. Area imaged with 200% sidescan from a Klein 5000 with Reson 8101 multibeam bathymetry. Multibeam found a depth of 20 ft. Feature is not charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	3	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12146	1.50	225.1	Secondary (grouped)

Hydrographer Recommendations

Chart present survey depths.

S-57 Data

Geo object 1:	Coverage (M_COVR)
Attributes:	CATCOV - 1:coverage available
	INFORM - AWOIS Item #12146 - disproven
	STATUS - 18:existence doubtful

Office Notes

Concur - No change in charting.

3.21) AWOIS 12332 - Blackboys Rks -Retain

Primary Feature for AWOIS Item #12332

Search Position: 41° 17' 11.950" N, 072° 13' 29.750" W

Historical Depth: 1.22 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H8997/69 --(BLACKBOYS ROCK) TWO ROCKS AWASH UNCOVER 1 FT AT MLLW. CENTRAL POSITION BETWEEN THE TWO ROCK AWASH SYMBOLS IS: 41°17'11.6" N 072°13'31.47" W [NAD 27] [ENTERED 4/10/04 JCM]

Survey Summary

Survey Position: 41° 17' 11.960" N, 072° 13' 29.814" W

Least Depth: [None]

Timestamp: 2005-316.14:38:23 (11/12/2005)

GP Dataset: ChartGPs - Digitized

GP No.: 4

Charts Affected: 13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12332: Object found, Black Boys. Unable to acquire least depth with launches. Area too shoal. Feature is a large rock out crop. Bathymetric and side scan imagery data were acquired on perimeter of feature. Partial coverage obtained.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	4	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12332	1.52	281.1	Secondary (grouped)
h11442/1014_100/2005-111/139_1417	0005	10.48	039.7	Secondary (grouped)
h11442/1014_mb/2005-124/737_2026	492/240	39.47	163.5	Secondary (grouped)

Hydrographer Recommendations

Area not adequately surveyed. Retain as charted.

S-57 Data

Geo object 1:	Anchorage area (ACHARE)
Geo object 2:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12332
	OBJNAM - Black Boys
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 2,7:found by side scan sonar,found by laser
	VERDAT - 12:Mean lower low water
	WATLEV - 5:awash

Office Notes

Concur

3.22) AWOIS 12147 - Black Rk (retain)

Primary Feature for AWOIS Item #12147

Search Position: 41° 18' 35.800" N, 072° 10' 39.590" W

Historical Depth: 2.74 m

Search Radius: 50

Search Technique: S2, MB, DI

Technique Notes: [None]

History Notes:

H-8996/68 -- 9 FT SOUNDING FROM A ROCK AWASH ("BLACK ROCK") NOW CHARTED IN POSITION: 41°18'35.81" N 072°10'39.62" W [NAD 83] [ENTERED 1/15/04 JCM]

Survey Summary

Survey Position: 41° 18' 35.800" N, 072° 10' 39.593" W

Least Depth: [None]

Timestamp: 2005-317.16:29:07 (11/13/2005)

GP Dataset: ChartGPs - Digitized

GP No.: 6

Charts Affected: 12372_3, 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS 12147: Foul area Object found. Black Rock is a large boulder that covers and uncovers, sounding pole depth +0.3 m found on 5/3/05. Launches unable to acquire multibeam data in area safely. Imaged with 200% sidescan data from a Klein 5000.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	6	0.00	000.0	Primary
OPR-B370-TJ-05_AWOIS	AWOIS # 12147	0.07	000.0	Secondary (grouped)
h11442/1014_100/2005-111/161_1822	0001	17.29	075.5	Secondary (grouped)
h11442/1014_100/2005-111/162_1831	0004	17.37	246.0	Secondary (grouped)
H11225_LIDAR_OK.csv	23	54.43	158.7	Secondary (grouped)
h11442/1005_mb/2005-125/655_1849	769/101	67.86	163.2	Secondary (grouped)
h11442/1005_200/2005-111/394_1659	0001	82.09	059.5	Secondary (grouped)
h11442/1014_100/2005-111/162_1831	0005	95.33	161.3	Secondary (grouped)

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - AWOIS Item #12147
	OBJNAM - Black Rock
	QUASOU - 1:depth known
	STATUS - 1:permanent
	TECSOU - 7:found by laser
	VERDAT - 12:Mean lower low water
	WATLEV - 4:covers and uncovers

Office Notes

Concur

4 - Dangers to Navigation

4.1) 460/35 - Charted 26 Rk (DtoN # 2)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 17' 48.363" N, 072° 08' 01.151" W

Least Depth: 7.98 m

Timestamp: 2005-115.13:58:19.108 (04/25/2005)

Survey Line: h11442 / 1014_mb / 2005-115 / 646_1357

Profile/Beam: 460/35

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-115/646_1357	460/35	0.00	000.0	Primary
h11442/1005_100/2005-112/178_1633	0002	8.51	114.1	Secondary
h11442/1005_100/2005-112/178_1633	0004	28.93	016.0	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

26ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

4 ¼fm (12300_1, 13006_1, 13003_1)

8.0m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #2. Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 7.977 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.2) 1644/123 - Charted 31 Rk (DtoN # 3 revised location)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 02.379" N, 072° 08' 36.736" W
Least Depth:	9.53 m
Timestamp:	2005-116.21:19:27.436 (04/26/2005)
Survey Line:	h11442 / 1014_mb / 2005-116 / 560_2117
Profile/Beam:	1644/123
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large boulder that is near a rocky outcrop imaged with 100% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR data that required field work. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-116/560_2117	1644/123	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	51	5.28	097.2	Secondary
H11225_LIDAR_TestArea.csv	90	5.28	097.2	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 31ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 5 ¼fm (12300_1, 13006_1, 13003_1)
- 9.5m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #3. Feature is a large boulder that is near a rocky outcrop imaged with 100% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry and LIDAR data that requires field work. Submitted 8/30/05
	QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 9.534 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.3) 1110/200 - Charted dang. 14 Rk (DtoN # 4)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 26.484" N, 072° 07' 59.787" W
Least Depth:	4.29 m
Timestamp:	2005-116.13:10:41.510 (04/26/2005)
Survey Line:	h11442 / 1014_mb / 2005-116 / 687_1309
Profile/Beam:	1110/200
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-116/687_1309	1110/200	0.00	000.0	Primary
h11442/1014_mb/2005-116/687_1309	1104/207	1.61	212.0	Secondary (grouped)
h11442/1014_100/2005-112/539_1954	0009	2.52	029.0	Secondary
h11442/1014_100/2005-112/539_1954	0008	2.53	020.7	Secondary
h11442/1014_100/2005-112/539_1954	0011	2.69	023.5	Secondary
h11442/1014_100/2005-112/539_1954	0010	2.80	032.5	Secondary
h11442/1005_200/2005-112/331_1826	0009	4.42	158.3	Secondary

Hydrographer Recommendations

Chart DToN as per digital data.

Cartographically-Rounded Depth (Affected Charts):

14ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

2 ¼fm (12300_1, 13006_1, 13003_1)

4.3m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #4. Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 4.288 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.4) 5743/143 - Charted dang. 26 Rk (DtoN # 5)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 39.982" N, 072° 13' 19.096" W
Least Depth:	7.92 m
Timestamp:	2005-120.11:49:46.295 (04/30/2005)
Survey Line:	h11442 / 1014_mb / 2005-120 / 319_1140
Profile/Beam:	5743/143
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 100% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-120/319_1140	5743/143	0.00	000.0	Primary
H11225_LIDAR_OK.csv	9	3.89	141.2	Secondary
h11442/1014_100/2005-110/505_1821	0003	131.41	214.3	Secondary (grouped)
h11442/1014_100/2005-110/505_1821	0004	185.22	224.9	Secondary (grouped)

Hydrographer Recommendations

Chart DToN as per digital data.

Cartographically-Rounded Depth (Affected Charts):

- 26ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 4 ¼fm (12300_1, 13006_1, 13003_1)
- 7.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #5. Feature is part of a rocky outcrop imaged with 100% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 7.922 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.5) 901/97 - Charted 19 Rk (DtoN # 6)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 47.064" N, 072° 12' 40.457" W
Least Depth:	5.88 m
Timestamp:	2005-120.16:26:34.797 (04/30/2005)
Survey Line:	h11442 / 1014_mb / 2005-120 / 349_1625
Profile/Beam:	901/97
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-120/349_1625	901/97	0.00	000.0	Primary
H11225_LIDAR_OK.csv	88	16.43	018.5	Secondary
h11442/1014_100/2005-111/118_1426	0002	27.26	311.5	Secondary
h11442/1005_200/2005-110/365_1537	0004	28.07	314.1	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

19ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)

3 ¼fm (12300_1, 13006_1, 13003_1)

5.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #6. Feature is part of a rocky outcrop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 5.877 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.6) 555/233 - Charted 26 Rk (DtoN # 7)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 40.331" N, 072° 08' 19.048" W
Least Depth:	7.91 m
Timestamp:	2005-121.14:23:26.571 (05/01/2005)
Survey Line:	h11442 / 1014_mb / 2005-121 / 082_1422
Profile/Beam:	555/233
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is least depth of large boulder surrounded by several other large similar or smaller boulders imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-121/082_1422	555/233	0.00	000.0	Primary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 26ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 4 ¼fm (12300_1, 13006_1, 13003_1)
- 7.9m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #7. Feature is least depth of large boulder surrounded by several other large similar or smaller boulders imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 7.912 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.7) 3645/9 - Charted 14 Rk (DtoN # 8)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 17' 41.721" N, 072° 12' 00.022" W

Least Depth: 4.25 m

Timestamp: 2005-122.15:58:21.719 (05/02/2005)

Survey Line: h11442 / 1014_mb / 2005-122 / 202_1555

Profile/Beam: 3645/9

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is least depth of large rock surrounded by several other large similar size or smaller rocks imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/202_1555	3645/9	0.00	000.0	Primary
h11442/1005_200/2005-110/301_1822	0009	4.22	163.9	Secondary
h11442/1014_100/2005-112/900_1535	0002	5.27	016.8	Secondary
h11442/1014_100/2005-112/900_1535	0001	39.66	100.2	Secondary
h11442/1014_mb/2005-122/205_1613	4113/220	41.77	105.5	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

14ft (13211_1, 12372_1, 12354_1, 13205_1)

2 ¼fm (12300_1, 13006_1, 13003_1)

4.2m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #8. Feature is least depth of large rock surrounded by several other large similar size or smaller rocks imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

 QUASOU - 6:least depth known

 STATUS - 1:permanent

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

 VALSOU - 4.254 m

 VERDAT - 12:Mean lower low water

 WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.8) 3140/43- Charted dang. 10 Rk (DtoN # 9)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 17' 29.337" N, 072° 12' 01.573" W

Least Depth: 3.25 m

Timestamp: 2005-122.16:02:20.326 (05/02/2005)

Survey Line: h11442 / 1014_mb / 2005-122 / 204_1600

Profile/Beam: 3140/43

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is least depth of large rock surrounded by several other large similar size or smaller rocks imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-122/204_1600	3140/43	0.00	000.0	Primary
h11442/1014_100/2005-111/140_1656	0001	3.27	201.9	Secondary
h11442/1005_200/2005-110/301_1822	0001	4.89	183.2	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

10ft (13211_1, 12372_1, 12354_1, 13205_1)

1 ¾fm (12300_1, 13006_1, 13003_1)

3.2m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #9. Feature is least depth of large rock surrounded by several other large similar size or smaller rocks imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 3.253 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.9) 1369/52 - Charted dang. 13 Rk (DtoN # 10)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 25.096" N, 072° 08' 06.501" W
Least Depth:	4.17 m
Timestamp:	2005-123.15:54:07.994 (05/03/2005)
Survey Line:	h11442 / 1014_mb / 2005-123 / 262_1552
Profile/Beam:	1369/52
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is least depth of large boulder surrounded by several other large similar or smaller boulders imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-123/262_1552	1369/52	0.00	000.0	Primary
h11442/1005_100/2005-112/903_1911	0003	23.63	294.2	Secondary
h11442/1005_100/2005-112/903_1911	0006	35.74	043.7	Secondary
h11442/1005_200/2005-112/331_1826	0007	38.64	244.4	Secondary
h11442/1014_mb/2005-123/261_1633	1754/180	42.08	249.3	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 13ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2 ¼fm (12300_1, 13006_1, 13003_1)
- 4.1m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #10. Feature is least depth of large boulder surrounded by several other large similar or smaller boulders imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

 QUASOU - 6:least depth known

 STATUS - 1:permanent

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

 VALSOU - 4.173 m

 VERDAT - 12:Mean lower low water

 WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.10) 949/6 - Charted dang. 5 Rk (DtoN # 11)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 25.624" N, 072° 09' 05.913" W
Least Depth:	1.63 m
Timestamp:	2005-123.13:20:56.259 (05/03/2005)
Survey Line:	h11442 / 1014_mb / 2005-123 / 297_1320
Profile/Beam:	949/6
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is least depth of large boulder surrounded by several other large similar or smaller boulders imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-123/297_1320	949/6	0.00	000.0	Primary
h11442/1005_mb/2005-123/270_2113	2121/6	0.76	191.3	Secondary
h11442/1014_mb/2005-123/271_1316	2170/1	16.75	314.8	Secondary
h11442/1014_mb/2005-123/298_1348	1182/198	19.38	339.6	Secondary
h11442/1014_mb/2005-123/298_1348	1224/39	22.77	355.8	Secondary
h11442/1014_mb/2005-123/272_1205	2304/16	33.97	347.0	Secondary
h11442/1014_mb/2005-123/272_1205	2503/29	42.03	021.7	Secondary
h11442/1014_mb/2005-123/299_1322	1399/131	45.85	001.4	Secondary
h11442/1014_mb/2005-124/381_1220	4146/235	49.56	050.9	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 5ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 0 ¾fm (12300_1, 13006_1, 13003_1)
- 1.6m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #11. Feature is least depth of large boulder surrounded by several other large similar or smaller boulders imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 1.633 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.11) 1148/227 - Charted dang. 10 Rk (DtoN # 12)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 45.024" N, 072° 08' 05.639" W
Least Depth:	3.06 m
Timestamp:	2005-123.14:36:16.059 (05/03/2005)
Survey Line:	h11442 / 1014_mb / 2005-123 / 320_1435
Profile/Beam:	1148/227
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-123/320_1435	1148/227	0.00	000.0	Primary
h11442/1014_mb/2005-123/322_1432	1348/68	39.86	016.6	Secondary
h11442/1005_100/2005-112/217_1915	0008	42.45	007.6	Secondary
h11442/1005_200/2005-112/331_1826	0004	43.66	010.9	Secondary
h11442/1005_200/2005-110/330_2115	0010	45.10	135.4	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 10ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ½fm (12300_1, 13006_1, 13003_1)
- 3.0m (5161_1)

S-57 Data

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

Attributes:	INFORM - DtoN #12. Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 3.056 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.12) 2231/171 - Charted dang. 18 Rk (DtoN # 13)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 46.309" N, 072° 08' 10.060" W
Least Depth:	5.65 m
Timestamp:	2005-123.15:25:20.560 (05/03/2005)
Survey Line:	h11442 / 1014_mb / 2005-123 / 336_1523
Profile/Beam:	2231/171
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-123/336_1523	2231/171	0.00	000.0	Primary
h11442/1005_200/2005-112/341_1921	0002	5.35	163.4	Secondary
h11442/1005_200/2005-112/331_1826	0014	6.73	289.2	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 18ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 3fm (12300_1, 13006_1, 13003_1)
- 5.6m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #13. Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 5.650 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.13) 416/13- Charted dang. 8 Rk (DtoN # 14)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 40.633" N, 072° 08' 03.500" W
Least Depth:	2.46 m
Timestamp:	2005-123.18:39:21.979 (05/03/2005)
Survey Line:	h11442 / 1014_mb / 2005-123 / 459_1838
Profile/Beam:	416/13
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-123/459_1838	416/13	0.00	000.0	Primary
h11442/1005_100/2005-112/217_1915	0007	6.56	283.9	Secondary
h11442/1005_100/2005-112/217_1915	0006	6.56	283.9	Secondary
h11442/1005_100/2005-112/217_1915	0002	6.65	287.2	Secondary
h11442/1005_100/2005-131/016_1314	0001	46.33	275.0	Secondary
h11442/1005_100/2005-112/217_1915	0011	47.82	189.9	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

8ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

1 ¼fm (12300_1, 13006_1, 13003_1)

2.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #14. Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 2.459 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.14) 1136/29 - Charted 16 Rk (DtoN # 15)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 28.184" N, 072° 08' 31.646" W
Least Depth:	4.81 m
Timestamp:	2005-123.21:18:21.246 (05/03/2005)
Survey Line:	h11442 / 1014_mb / 2005-123 / 478_2117
Profile/Beam:	1136/29
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-123/478_2117	1136/29	0.00	000.0	Primary
h11442/1005_100/2005-112/216_1649	0002	36.36	122.3	Secondary
h11442/1005_200/2005-110/330_2116	0005	45.12	336.3	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 16ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2 ½fm (12300_1, 13006_1, 13003_1)
- 4.8m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #15. Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 4.810 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.15) 1452/217 - Charted dang. 5 Rk (DtoN # 16 -verified)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 21.347" N, 072° 13' 16.520" W
Least Depth:	1.71 m
Timestamp:	2005-124.21:31:55.310 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 336_2130
Profile/Beam:	1452/217
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky outcrop from island imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/336_2130	1452/217	0.00	000.0	Primary
ChartGPs - H11225_LIDAR_ReqFldWrk.csv	9	19.49	141.5	Secondary
h11442/1005_200/2005-110/379_1612	0002	27.13	232.3	Secondary
h11442/1005_200/2005-110/300_1408	0003	31.01	252.2	Secondary
h11442/1014_100/2005-111/108_1517	0003	40.58	286.9	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 5ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 0 ¾fm (12300_1, 13006_1, 13003_1)
- 1.7m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #16. Feature is part of a rocky outcrop from island imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

 QUASOU - 6:least depth known

 STATUS - 1:permanent

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

 VALSOU - 1.706 m

 VERDAT - 12:Mean lower low water

 WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.16) 698/81 - Charted dang. 8 Rk (DtoN # 17)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 29.879" N, 072° 09' 00.102" W
Least Depth:	2.43 m
Timestamp:	2005-124.11:44:59.908 (05/04/2005)
Survey Line:	h11442 / 1014_mb / 2005-124 / 397_1144
Profile/Beam:	698/81
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is large boulder on rocky outcrop from island imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-124/397_1144	698/81	0.00	000.0	Primary
h11442/1014_100/2005-112/200_1804	0010	26.07	029.9	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

8ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

1 ¼fm (12300_1, 13006_1, 13003_1)

2.4m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #17. Feature is large boulder on rocky outcrop from island imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent

TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 2.430 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.17) 276/234 - Charted 21 Rk (DtoN # 18)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 16' 19.543" N, 072° 08' 18.598" W

Least Depth: 6.35 m

Timestamp: 2005-129.15:43:53.482 (05/09/2005)

Survey Line: h11442 / 1014_mb / 2005-129 / 135_1543

Profile/Beam: 276/234

Charts Affected: 13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-129/135_1543	276/234	0.00	000.0	Primary
h11442/1005_200/2005-112/525_1952	0002	16.45	155.3	Secondary
H11225_LIDAR_TestArea.csv	31	16.85	091.8	Secondary
H11225_LIDAR_OK.csv	56	16.85	091.8	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

21ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

3 ½fm (12300_1, 13006_1, 13003_1)

6.3m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #18. Feature is part of a rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 6.350 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.18) 437/29 - Charted dang. 15 Rk (DtoN # 19)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 18' 15.693" N, 072° 10' 16.307" W
Least Depth:	4.51 m
Timestamp:	2005-130.15:57:46.965 (05/10/2005)
Survey Line:	h11442 / 1014_mb / 2005-130 / 147_1557
Profile/Beam:	437/29
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large boulder imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-130/147_1557	437/29	0.00	000.0	Primary
H11225_LIDAR_TestArea.csv	1	4.56	176.1	Secondary
H11225_LIDAR_OK.csv	24	4.56	176.1	Secondary
h11442/1014_100/2005-111/162_1831	0001	4.77	139.8	Secondary
h11442/1014_100/2005-112/162_1338	0001	15.72	093.6	Secondary
h11442/1005_200/2005-111/397_1731	0005	39.37	336.9	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 15ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 2 ½fm (12300_1, 13006_1, 13003_1)
- 4.5m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #19. Feature is a large boulder imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 4.506 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.19) 964/218 - Charted dang. 30 Rk (DtoN # 20)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 03.235" N, 072° 08' 50.578" W
Least Depth:	9.33 m
Timestamp:	2005-130.13:04:55.107 (05/10/2005)
Survey Line:	h11442 / 1014_mb / 2005-130 / 180_1303
Profile/Beam:	964/218
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large rock out crop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-130/180_1303	964/218	0.00	000.0	Primary
h11442/1014_100/2005-110/517_1513	0008	22.40	302.5	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 30ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 5fm (12300_1, 13006_1, 13003_1)
- 9.3m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #20. Feature is a large rock out crop imaged with 200% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05 QUASOU - 6:least depth known STATUS - 1:permanent

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

VALSOU - 9.333 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.20) 466/180 - Charted dang. 28 Rk (DtoN # 21)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 57.989" N, 072° 09' 01.701" W
Least Depth:	8.55 m
Timestamp:	2005-130.12:44:53.349 (05/10/2005)
Survey Line:	h11442 / 1014_mb / 2005-130 / 213_1244
Profile/Beam:	466/180
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is large boulder on rocky out crop imaged with 100% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1014_mb/2005-130/213_1244	466/180	0.00	000.0	Primary
h11442/1014_100/2005-110/516_1528	0002	94.43	260.5	Secondary (grouped)

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 28ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 4 ½fm (12300_1, 13006_1, 13003_1)
- 8.5m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #21. Feature is large boulder on rocky out crop imaged with 100% side scan from a Klein 5000 with Reson 8125 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent

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

VALSOU - 8.550 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.21) 223/101 - Charted dang. 25 Rk (DtoN # 22)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 16' 51.569" N, 072° 12' 08.982" W

Least Depth: 7.84 m

Timestamp: 2005-122.18:59:32.149 (05/02/2005)

Survey Line: h11442 / 1005_mb / 2005-122 / 163_1859

Profile/Beam: 223/101

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a rocky out crop imaged with 100% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-122/163_1859	223/101	0.00	000.0	Primary
H11225_LIDAR_OK.csv	14	1.05	156.5	Secondary
h11442/1014_mb/2005-120/341_1612	5111/238	5.42	193.7	Secondary
h11442/1014_100/2005-110/508_2006	0006	20.14	338.7	Secondary
h11442/1014_mb/2005-129/154_1938	116/219	32.73	297.2	Secondary
h11442/1014_mb/2005-120/350_1621	181/225	48.20	181.5	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 25ft (13211_1, 12372_1, 12354_1, 13205_1)
- 4 ¼fm (12300_1, 13006_1, 13003_1)
- 7.8m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #22. Feature is a rocky out crop imaged with 100% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 7.838 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.22) 1298/100 - Charted dang. 15 Rk (DtoN # 23)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 51.054" N, 072° 12' 40.058" W
Least Depth:	4.78 m
Timestamp:	2005-122.18:53:26.705 (05/02/2005)
Survey Line:	h11442 / 1005_mb / 2005-122 / 164_1851
Profile/Beam:	1298/100
Charts Affected:	13211_1, 12372_1, 12372_11, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a rocky out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-122/164_1851	1298/100	0.00	000.0	Primary
H11225_LIDAR_OK.csv	12	5.85	337.0	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 15ft (13211_1, 12372_1, 12372_11, 12354_1, 13205_1)
- 2 ½fm (12300_1, 13006_1, 13003_1)
- 4.8m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #23. Feature is a rocky out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05 QUASOU - 6:least depth known STATUS - 1:permanent

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

VALSOU - 4.779 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.23) 1141/97 - Charted 24 Rk (DtoN # 24)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 52.227" N, 072° 08' 11.566" W
Least Depth:	7.45 m
Timestamp:	2005-124.14:05:00.357 (05/04/2005)
Survey Line:	h11442 / 1005_mb / 2005-124 / 250_1403
Profile/Beam:	1141/97
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a rocky out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-124/250_1403	1141/97	0.00	000.0	Primary
h11442/1014_mb/2005-114/646_1818	2655/60	0.95	219.8	Secondary
h11442/1005_mb/2005-124/250_1403	1108/98	5.92	276.2	Secondary (grouped)
h11442/1005_mb/2005-124/250_1403	1237/101	17.57	142.6	Secondary (grouped)
h11442/1005_100/2005-112/178_1633	0006	42.12	162.1	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Original feature sounding data point is a flier, the current sounding data point is the correct position and depth of the feature. Chart a rock with s depth of 24 feet in Latitude 41°17'52.227"N, Longitude 72°08'11.566"W.

Cartographically-Rounded Depth (Affected Charts):

- 24ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 4fm (12300_1, 13006_1, 13003_1)
- 7.4m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #24. Feature is a rocky out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

 QUASOU - 6:least depth known

 STATUS - 1:permanent

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

 VALSOU - 7.454 m

 VERDAT - 12:Mean lower low water

 WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart 24 Rk and danger curve in Latitude 41°17'52.227"N, Longitude 72°08'11.566"W.

4.24) 320/17 - Charted 21 Rk (DtoN # 25)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 12.332" N, 072° 06' 37.099" W
Least Depth:	6.44 m
Timestamp:	2005-124.12:31:53.248 (05/04/2005)
Survey Line:	h11442 / 1005_mb / 2005-124 / 350_1231
Profile/Beam:	320/17
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large boulder surrounded by several other similar sized and smaller boulders on rocky out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-124/350_1231	320/17	0.00	000.0	Primary
h11442/1014_mb/2005-114/643_1907	959/216	0.70	139.5	Secondary
h11442/1005_200/2005-111/322_1944	0009	3.34	189.0	Secondary
h11442/1014_100/2005-112/542_1934	0005	5.69	066.0	Secondary
h11442/1014_100/2005-112/542_1934	0003	5.91	066.8	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 21ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 3 ½fm (12300_1, 13006_1, 13003_1)
- 6.4m (5161_1)

S-57 Data

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

Attributes:	INFORM - DtoN #25. Feature is a large boulder surrounded by several other similar sized and smaller boulders on rocky out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 6.438 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.25) 1154/6 - Charted dang. 8 Rk (DtoN # 26)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 18' 15.553" N, 072° 09' 38.527" W
Least Depth:	2.36 m
Timestamp:	2005-125.17:38:39.616 (05/05/2005)
Survey Line:	h11442 / 1005_mb / 2005-125 / 237_1737
Profile/Beam:	1154/6
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a rocky out crop on shoreline imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-125/237_1737	1154/6	0.00	000.0	Primary
H11225_LIDAR_TestArea.csv	6	2.25	355.7	Secondary
H11225_LIDAR_OK.csv	31	2.25	355.7	Secondary
h11442/1014_100/2005-112/559_1302	0001	14.18	142.4	Secondary
h11442/1005_100/2005-112/171_1346	0005	35.11	064.8	Secondary
h11442/1005_100/2005-112/171_1346	0007	41.95	279.1	Secondary
h11442/1005_100/2005-112/171_1346	0006	43.45	283.6	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

8ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

1 ¼fm (12300_1, 13006_1, 13003_1)

2.3m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #26. Feature is a rocky out crop on shoreline imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 2.364 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.26) 1263/86 - Charted 13 Rk (DtoN # 27)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 18' 47.593" N, 072° 10' 44.212" W
Least Depth:	3.99 m
Timestamp:	2005-129.14:28:40.213 (05/09/2005)
Survey Line:	h11442 / 1005_mb / 2005-129 / 515_1428
Profile/Beam:	1263/86
Charts Affected:	12372_3, 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a rocky out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/515_1428	1263/86	0.00	000.0	Primary
h11442/1014_100/2005-112/140_1346	0001	24.23	111.1	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 13ft (12372_3, 13211_1, 12372_1, 12354_1, 13205_1)
- 2fm (12300_1, 13006_1, 13003_1)
- 4.0m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #27. Feature is a rocky out crop imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05 QUASOU - 6:least depth known STATUS - 1:permanent

TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 3.986 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.27) 731/100 - Charted dang. 15 Rk (DtoN # 28)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 18' 09.423" N, 072° 11' 45.696" W

Least Depth: 4.77 m

Timestamp: 2005-129.19:31:17.280 (05/09/2005)

Survey Line: h11442 / 1005_mb / 2005-129 / 537_1931

Profile/Beam: 731/100

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large boulder imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-129/537_1931	731/100	0.00	000.0	Primary
h11442/1014_100/2005-112/146_1448	0001	4.50	146.2	Secondary
h11442/1014_100/2005-111/146_2034	0001	6.04	160.2	Secondary
h11442/1005_200/2005-111/387_1348	0002	6.50	147.7	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

15ft (13211_1, 12372_1, 12354_1, 13205_1)

2 ½fm (12300_1, 13006_1, 13003_1)

4.7m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #28. Feature is a large boulder imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 4.771 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.28) 5/62 - Charted 25 Rk (DtoN # 29)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 46.299" N, 072° 09' 33.977" W
Least Depth:	7.78 m
Timestamp:	2005-117.15:07:31.114 (04/27/2005)
Survey Line:	h11442 / 1005_mb / 2005-117 / 741_1507
Profile/Beam:	5/62
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Unknown feature imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-117/741_1507	5/62	0.00	000.0	Primary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 25ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 4 ¼fm (12300_1, 13006_1, 13003_1)
- 7.8m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #29. Unknown feature imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent
	TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 7.776 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.29) 619/55 - Charted 41 Rk (DtoN # 30)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 41° 16' 28.914" N, 072° 12' 08.335" W

Least Depth: 12.66 m

Timestamp: 2005-120.13:37:17.138 (04/30/2005)

Survey Line: h11442 / 1005_mb / 2005-120 / 357_1336

Profile/Beam: 619/55

Charts Affected: 13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a rocky out crop imaged with 100% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-120/357_1336	619/55	0.00	000.0	Primary
h11442/1014_100/2005-110/565_2021	0002	37.13	240.4	Secondary
h11442/1014_100/2005-110/564_2018	0005	85.56	135.3	Secondary (grouped)

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

41ft (13211_1, 12372_1, 12354_1, 13205_1)

6 ¾fm (12300_1, 13006_1, 13003_1)

12.6m (5161_1)

S-57 Data

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

Attributes: INFORM - DtoN #30. Feature is a rocky out crop imaged with 100% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 12.658 m
VERDAT - 12:Mean lower low water

Office Notes

No change in chart.

4.30) 2717/101 - Charted dang. 8 Rk (DtoN # 31)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 16' 32.067" N, 072° 08' 05.420" W
Least Depth:	2.65 m
Timestamp:	2005-125.14:28:23.550 (05/05/2005)
Survey Line:	h11442 / 1005_mb / 2005-125 / 100_1427
Profile/Beam:	2717/101
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large rock surrounded by several rocks of similar or smaller size on rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-125/100_1427	2717/101	0.00	000.0	Primary
h11442/1005_100/2005-131/016_1314	0005	3.56	350.2	Secondary
h11442/1005_100/2005-131/017_1317	0001	49.61	323.2	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 8ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ½fm (12300_1, 13006_1, 13003_1)
- 2.6m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #31. Feature is a large rock surrounded by several rocks of similar or smaller size on rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 2.649 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.31) 3874/52 - Charted dang. 10 Rk (DtoN # 32)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 43.990" N, 072° 06' 47.815" W
Least Depth:	3.19 m
Timestamp:	2005-126.15:10:11.408 (05/06/2005)
Survey Line:	h11442 / 1005_mb / 2005-126 / 147_1507
Profile/Beam:	3874/52
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large rock surrounded by several rocks of similar or smaller size imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-126/147_1507	3874/52	0.00	000.0	Primary
h11442/1005_100/2005-112/185_1446	0033	35.76	198.9	Secondary
h11442/1005_100/2005-112/435_1432	0002	37.76	268.7	Secondary
h11442/1005_100/2005-112/185_1446	0004	38.65	308.3	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

- 10ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)
- 1 ¾fm (12300_1, 13006_1, 13003_1)
- 3.2m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #32. Feature is a large rock surrounded by several rocks of similar or smaller size imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

QUASOU - 6:least depth known
STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 3.194 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.32) 1926/97 - Charted dang. 5 Rk (DtoN # 33)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 17' 49.595" N, 072° 06' 46.574" W
Least Depth:	1.68 m
Timestamp:	2005-126.14:49:50.544 (05/06/2005)
Survey Line:	h11442 / 1005_mb / 2005-126 / 159_1448
Profile/Beam:	1926/97
Charts Affected:	13211_1, 13212_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Feature is a large rock surrounded by several rocks of similar or smaller size on rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-126/159_1448	1926/97	0.00	000.0	Primary
h11442/1005_100/2005-112/171_1348	0021	23.57	129.0	Secondary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07.

Cartographically-Rounded Depth (Affected Charts):

5ft (13211_1, 13212_1, 12372_1, 12354_1, 13205_1)

0 ¾fm (12300_1, 13006_1, 13003_1)

1.7m (5161_1)

S-57 Data

Geo object 1:	Underwater rock / awash rock (UWTROC)
Attributes:	INFORM - DtoN #33. Feature is a large rock surrounded by several rocks of similar or smaller size on rocky reef imaged with 200% side scan from a Klein 5000 with Reson 8101 multibeam bathymetry. Submitted 8/30/05
	QUASOU - 6:least depth known
	STATUS - 1:permanent

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

VALSOU - 1.677 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

No change in charting.

4.33) 397/8 - Charted 10 Obstn (crane) - (DtoN # 1) -- Delete 10 Obstn (Add 9 Obstn)

DANGER TO NAVIGATION

Survey Summary

Survey Position:	41° 18' 02.287" N, 072° 12' 00.971" W
Least Depth:	2.80 m
Timestamp:	2005-125.16:39:17.558 (05/05/2005)
Survey Line:	h11442 / 1005_mb / 2005-125 / 246_1639
Profile/Beam:	397/8
Charts Affected:	13211_1, 12372_1, 12354_1, 13205_1, 12300_1, 13006_1, 5161_1, 13003_1

Remarks:

Uncharted obstruction. sunken crane. 10 ft. sounding from 8125 MBES at 18 ft charted contour. Submitted 5/5/2005

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11442/1005_mb/2005-125/246_1639	397/8	0.00	000.0	Primary

Hydrographer Recommendations

Chart DToN as per digital data. Item shown on chart 11311, 15th., Ed., Sep./07. Chart an obstruction with a depth of 9 feet in Latitude 41°18'02.287"N, Longitude 072°12'00.971"W.

Cartographically-Rounded Depth (Affected Charts):

- 9ft (13211_1, 12372_1, 12354_1, 13205_1)
- 1 ½fm (12300_1, 13006_1, 13003_1)
- 2.8m (5161_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	CONDTN - 2:ruined
	INFORM - DtoN #1 - Obstruction (crane)
	NATCON - 7:metal
	QUASOU - 6:least depth known

STATUS - 1:permanent
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 2.802 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

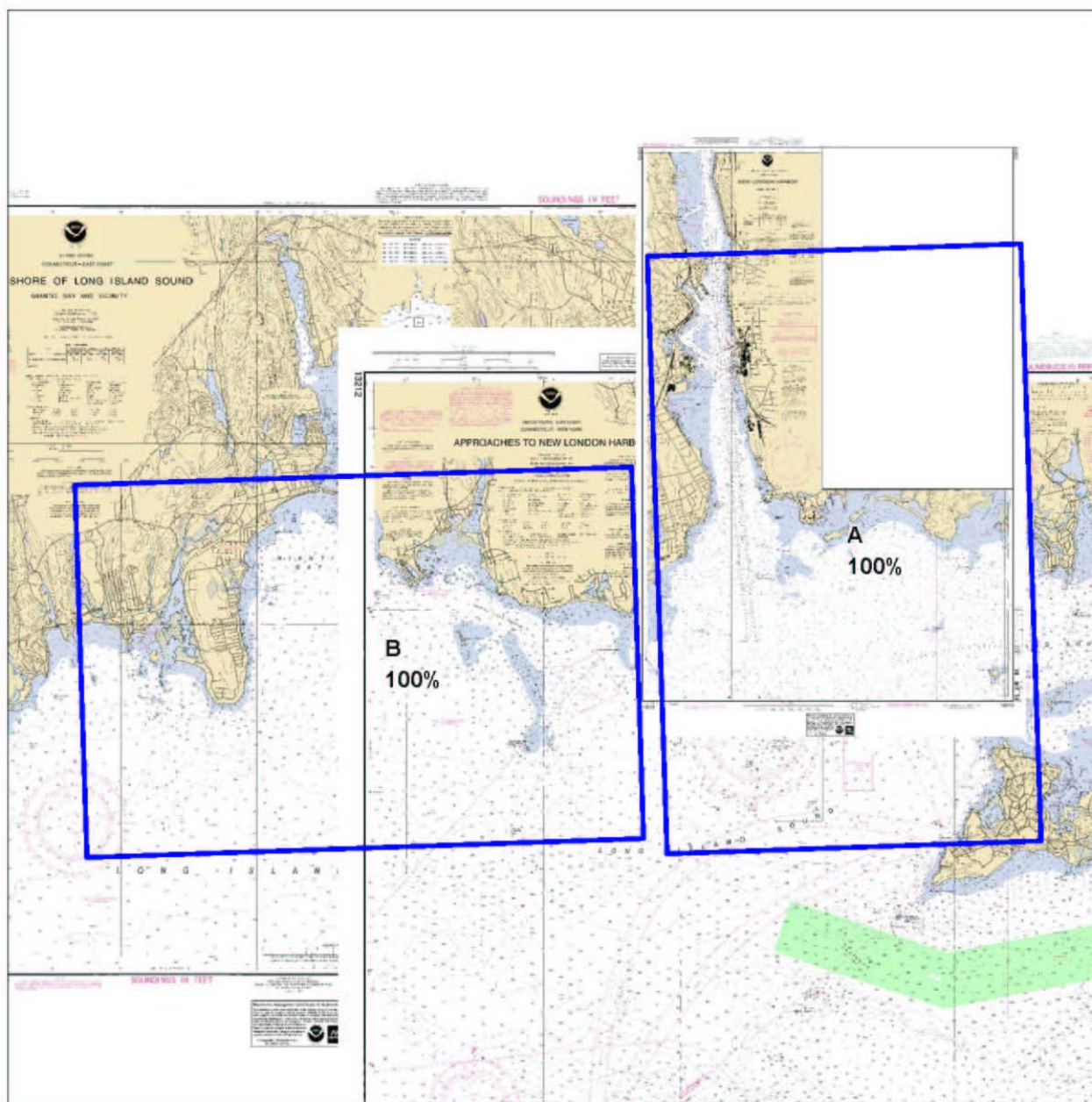
Office Notes

Concur - Delete a 10 Obstn and danger curve. Chart a 9 Obstn and danger curve in Latitude 41°18'02.287"N, Longitude 072°12'00.971"W.

APPENDIX II: LIST OF GEOGRAPHIC NAMES

Geographic names as displayed on chart were observed in common usage. The hydrographer has no particular recommendation on geographic names.

APPENDIX III: PROGRESS SKETCH



Project	Sheet_Letter	H_num	HQ_Est_SNM	CumIPercCompPrev	CumIPercCompCui	SNM_CompCurh
B370-TJ-05	A	H11441	14	0	100	14
B370-TJ-05	B	H11442	16	50	100	8

Project	Month	LNH_Hydr	LNH_MB	SV_Casts	Bottom_Sam	AWOIS_Items	Tide_Gauge_Inst	DAS	DTime equip_H	DTime_Weather	D_Time_other_J
B370	April	271.00	612.00	81.00	0.00	23.00	0.00	13.00	33.00	18.00	0.00
B370	May	450.00	1,329.00	275.00	0.00	47.00	0.00	23.00	80.00	0.00	0.00

Progress Sketch OPR-B370-TJ-05
May, 2005

APPENDIX IV: TIDES AND WATER LEVELS

- 1) Field Tide Note (Section 5 of Project Instructions)
- 2) Smooth Tide Request
- 3) Times of Hydrography
- 4) Final Tide Note

Tide Requirements for OPR-B370-TJ-2005
Long Island Sound, NY/CT
MMC 3/7/2005

5.0. TIDES

5.1. Purpose: All tide requirements in these instructions are in direct support of hydrographic survey operations.

5.2 through 5.6. Refer to Standing Instructions.

5.7. Vertical Datums:

Refer to Standing Instructions.

5.7.1. The operating National Water Level Observation Network (NWLON) stations at New London (846-1490), Montauk (851-0560), and New Haven (846-5705) will serve as datum control for the survey area as well as control for datum determination at the subordinate station. Therefore, it is critical that these stations remain in operation during all periods of hydrography.

5.7.1.1. Water level data acquisition monitoring

Refer to Standing Instructions.

5.7.1.2. Water level station operation and maintenance

Refer to Standing Instructions.

5.7.1.3. No leveling is required at New London (846-1490), Montauk (851-0560), and New Haven (846-5705) by NOAA Ship THOMAS JEFFERSON personnel.

5.8. Water Level Station Requirements: The operating water level stations at New London (846-1490), Montauk (851-0560), and New Haven (846-5705) will also provide water level reducers for this project, reiterating the importance of their operation during all periods of hydrography. See Sections 5.7.1.1. and 5.7.1.2. concerning responsibilities.

5.8.1. Subordinate Water Level Stations:

There are no subordinate stations required for this project

Section 5.8.1.2. Not applicable for this project.

5.9. Zoning: For hydrography in the area of Long Island Sound, New London (846-1490), Montauk (851-0560), and New Haven (846-5705) are the reference stations for predicted tides. Predictions may be retrieved in one month increments over the Internet from the CO-OPS Home Page at <http://www.co-ops.nos.noaa.gov/> and then clicking on "Predictions." Predictions are six-minute time series data relative to MLLW in metric units on Greenwich Mean Time. Apply the following time and height correctors to the predicted tides at New London, New Haven, and Montauk during the acquisition and preliminary processing phases of this project for correcting all sounding data.

<u>Zone Name</u>	<u>Time Corrector(mins)</u>	<u>Range Ratio</u>	<u>Predicted Reference</u>
BIS21	0	x1.11	851-0560
BIS24	+12	x1.11	851-0560
BIS25	+30	x1.11	851-0560
BIS26	+30	x1.14	851-0560
BIS27	+42	x1.16	851-0560
BIS28	+60	x1.18	851-0560
BIS29	+72	x1.21	851-0560
BIS30	+84	x1.21	851-0560
LIS45	-6	x0.99	846-5705
LIS48	-12	x0.96	846-5705
LIS51	-12	x0.93	846-5705
LIS66	-30	x0.76	846-5705
LIS66A	-12	x0.74	846-5705
LIS69	-30	x0.73	846-5705
LISI72	+66	x1.68	846-1490
LIS73	+72	x1.68	846-1490
LIS75	+60	x1.60	846-1490
LIS76	+72	x1.60	846-1490
LIS77	+78	x1.60	846-1490
LIS78	+60	x1.52	846-1490
LIS79	+72	x1.52	846-1490
LIS80	+54	x1.45	846-1490
LIS81	+66	x1.45	846-1490
LIS82	+54	x1.37	846-1490
LIS83	+48	x1.37	846-1490
LIS84	+60	x1.37	846-1490
LIS85	+54	x1.29	846-1490
LIS86	+60	x1.31	846-1490
LIS87	+60	x1.31	846-1490
LIS88	+66	x1.31	846-1490
LIS89	+78	x1.31	846-1490
LIS90	+42	x1.29	846-1490
LIS92	+42	x1.21	846-1490
LIS93	+36	x1.21	846-1490
LIS94	+42	x1.21	846-1490
LIS95	+30	x1.15	846-1490
LIS96A	+30	x1.09	846-1490
LIS97	+24	x1.11	846-1490
LIS98	+18	x1.02	846-1490
LIS99	+12	x1.07	846-1490
LIS99A	+18	x1.05	846-1490
LIS100	+6	x1.02	846-1490
LIS101	+6	x0.94	846-1490
LIS102	0	x1.00	846-1490
LIS103	0	x0.94	846-1490
LIS104	-12	x0.96	846-1490
LIS104A	-6	x0.92	846-1490
LIS105	-6	x0.98	846-1490
LIS106	0	x1.00	846-1490

LIS107	-12	x0.92	846-1490
LIS107A	-6	x0.92	846-1490
LIS108	-24	x0.92	846-1490

NOTE: The tide corrector values referenced to New London (846-1490), Montauk (851-0560), and New Haven (846-5705) are provided in the zoning file “**B370TJ2005CORP**” for this project and are in the **fourth** set of correctors designated as TS4. Longitude and latitude coordinates are in decimal degrees. Negative (-) longitude is a MapInfo representation of west longitude.

NOTE: For time corrections, a negative (-) time correction indicates that the time of tide in that zone is earlier than (before) the predicted tides at the reference station, whereas, a positive (+) time correction indicates that the time of tide in that zone is later than (after) the predicted tides at the reference station. For height corrections, the water level heights **relative to MLLW** at the reference station are multiplied by the range ratio to estimate the water level heights relative to MLLW in the applicable zone.

5.9.1. A zoning diagram, created in MapInfo, is provided in both digital and hard copy format to assist with the zoning provided in Section 5.9.

5.10. Tidal Records:

Refer to Standing Instructions on what data records, reports and requests to submit to CO-OPS and the address where these documents should be submitted too.

May 22, 2005

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

FROM: CDR Emily B. Christman, THOMAS JEFFERSON

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

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

Transmit data to:

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

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

Project No.: OPR-B370-TJ-05

Registry No.: H11442

State: CT

Locality: Eastern Long Island Sound

Sublocality: Approaches to Niantic Rover

Attachments containing:

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

cc: N/CS33

Year_DOY	Min Time	Max Time
2005_110	13:45:44	21:35:19
2005_111	12:48:11	21:20:02
2005_112	13:27:58	20:33:14
2005_114	17:22:50	20:01:35
2005_115	13:08:08	20:14:06
2005_116	10:59:19	21:49:24
2005_117	12:40:56	15:27:41
2005_118	12:42:34	21:07:23
2005_119	11:15:12	22:05:03
2005_120	11:21:29	22:32:08
2005_121	10:54:57	22:44:11
2005_122	11:08:36	22:34:58
2005_123	11:09:29	22:53:08
2005_124	10:47:49	22:51:47
2005_125	12:38:50	21:27:09
2005_126	12:45:49	15:28:46
2005_129	12:54:19	21:14:33
2005_130	10:57:27	21:52:19
2005_131	12:06:14	13:28:01
2005_137	11:14:16	12:29:09
2005_138	11:20:28	17:08:37
2005_139	10:55:51	14:29:52

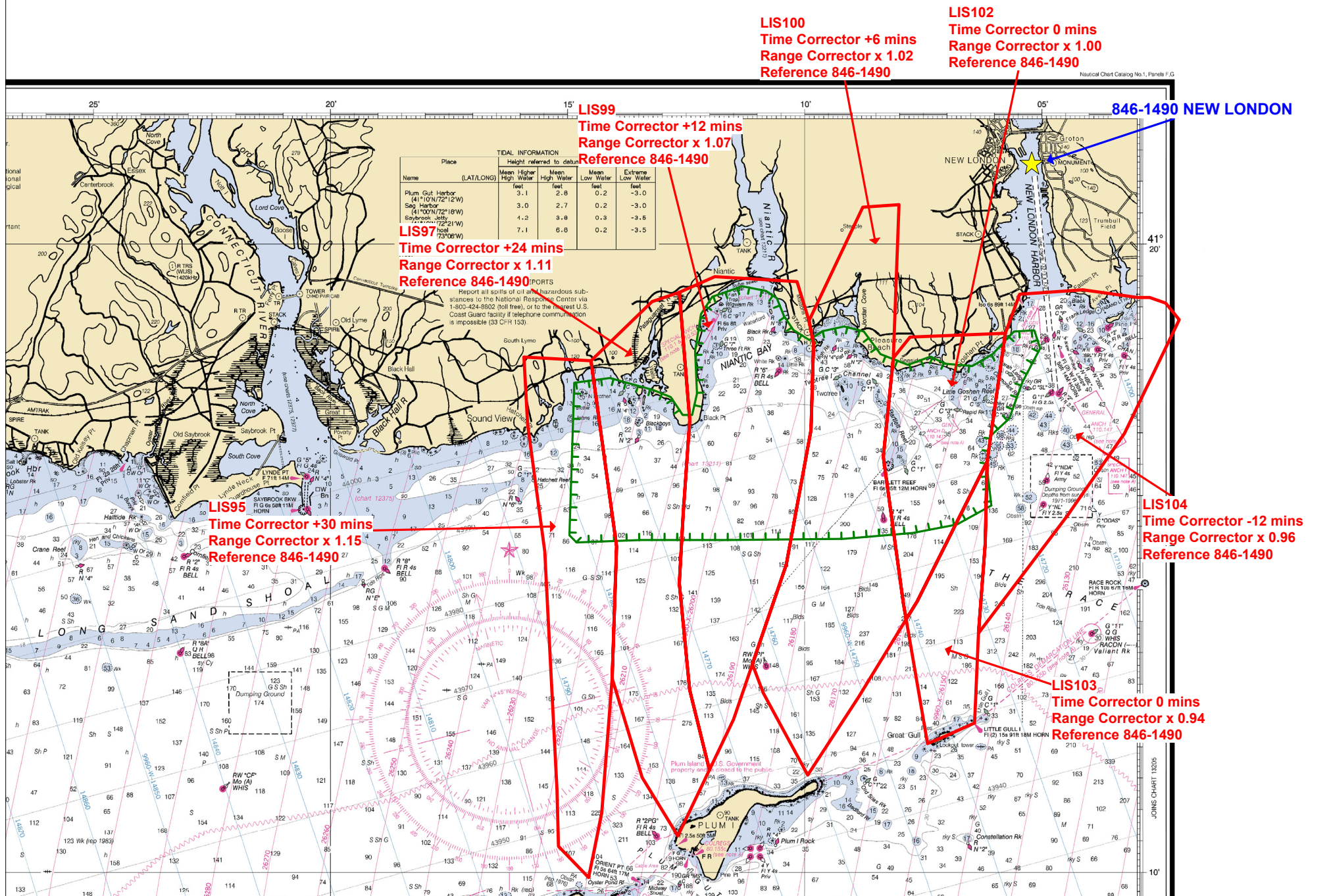


UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910



Final Tidal Zoning for OPR-B370-TJ-2005, Sheet H11442

Approaches to Niantic River, Long Island Sound, NY/CT



Final tide zone node point locations for OPR-B370-TJ-2005, H11442

Format: Tide Station (in recommended order of use)
Average Time Correction (in minutes)
Range Correction
Longitude in decimal degrees (negative value denotes Longitude West)
Latitude in decimal degrees

	Tide Station Order	AVG Time Correction	Range Correction
Zone LIS95	846-1490	+30	1.15
-72.263959 41.285594			
-72.257925 41.25191			
-72.256908 41.23695			
-72.25362 41.188577			
-72.253104 41.173613			
-72.242508 41.165331			
-72.240324 41.173256			
-72.237897 41.182451			
-72.234229 41.21824			
-72.23267 41.253278			
-72.241668 41.302506			
-72.265261 41.303491			
-72.263959 41.285594			
Zone LIS97	846-1490	+24	1.11
-72.234229 41.21824			
-72.23267 41.253278			
-72.241668 41.302506			
-72.22021 41.318205			
-72.210615 41.320663			
-72.206936 41.286826			
-72.209238 41.262012			
-72.210618 41.243468			
-72.206983 41.215222			
-72.200041 41.193904			
-72.211126 41.17639			
-72.223692 41.191904			
-72.234229 41.21824			
Zone LIS99	846-1490	+12	1.07
-72.210618 41.243468			

-72.206983 41.215222
-72.200041 41.193904
-72.19156 41.2073
-72.184921 41.222005
-72.172992 41.248418
-72.164281 41.284148
-72.163416 41.307083
-72.164985 41.313136
-72.169207 41.3235
-72.198151 41.324815
-72.210615 41.320663
-72.206936 41.286826
-72.209238 41.262012
-72.210618 41.243468

Zone LIS100

846-1490

+6

1.02

-72.147538 41.213316
-72.130834 41.233905
-72.131818 41.23823
-72.138858 41.277061
-72.135341 41.303266
-72.133356 41.343911
-72.146089 41.343226
-72.164985 41.313136
-72.163416 41.307083
-72.164281 41.284148
-72.172992 41.248418
-72.184921 41.222005
-72.181078 41.214325
-72.165451 41.192541
-72.147538 41.213316

Zone LIS102

846-1490

0

1.00

-72.130834 41.233905
-72.126992 41.23864
-72.102348 41.275812
-72.095961 41.309811
-72.129456 41.30881
-72.135341 41.303266
-72.138858 41.277061
-72.131818 41.23823
-72.130834 41.233905

Zone LIS103	846-1490	0	0.94
-72.130834 41.233905			
-72.126992 41.23864			
-72.102348 41.275812			
-72.103022 41.254049			
-72.105382 41.230242			
-72.106756 41.20639			
-72.117129 41.202875			
-72.123325 41.200896			
-72.130834 41.233905			

Zone LIS104	846-1490	-12	0.96
-72.105382 41.230242			
-72.103022 41.254049			
-72.102348 41.275812			
-72.095961 41.309811			
-72.090927 41.320153			
-72.068687 41.321329			
-72.04941 41.31931			
-72.04941 41.31931			
-72.045202 41.31931			
-72.039592 41.31783			
-72.034818 41.31341			
-72.054038 41.28325			
-72.074164 41.261424			
-72.105382 41.230242			

APPENDIX V: SUPPLEMENTAL RECORDS & CORRESPONDENCES

V.1. COAST PILOT REPORT, NOAA FORM 77-6

No coast pilot report was submitted for this survey.

V.2. BOTTOM SAMPLE, NOAA FORM 75-44

No bottom samples were acquired during this survey.

V.3. NONFLOATING AIDS OR LANDMARKS FOR CHARTS, NOAA FORM 76-40

No non-floating aids or landmarks were positioned during this survey.

V.4. DIVE INVESTIGATION REPORTS

Two dive investigation reports are submitted for this survey.

V.5. SHORELINE VERIFICATION DETACHED POSITION FORMS

Eight Detached Position forms are submitted for this survey.

V.6. COMPREHENSIVE ANALYSIS OF LIDAR DATA COMPARED TO RESON 8125 AND 8101 BY LCDR SHEPHARD M. SMITH, NOAA

(to be added by AHB)

NOAA Ship THOMAS JEFFERSON
Dive Investigation Report
Dive No. 2 - 6 May 2005

On 6 May 2005, Divers from the THOMAS JEFFERSON conducted an investigation of a contact imaged by KLEIN 5000 side scan SONAR and developed by RESON 8125 multibeam echosounder. The purpose of the dive was to identify the obstruction.

Equipment

Launch 1014 (see DAPR for details on 1014 hardware and software configurations)
Diver's slate.

Procedure

The dive boat, Launch 1014, is equipped with a RESON 8125 MBES. By looking at a DTM created from previous 8125 data, a line was drawn over the contact, which appeared to be a crane. The Cox'n for 1014 drove the launch over the line, while the Hydrographer In Charge dropped a Danforth anchor as a grapple to hook the target as the launch passed above it. The anchor was attached to a small rubber marker buoy by approximately 30 feet of line. The anchor snagged the contact approximately midway up a metal beam.

The divers were LCDR Shep Smith and ENS Matthew Jaskoski. Ensign Michael Davidson and AB Kathryn Perry served as surface tenders. Both divers were equipped with a slate.

The contact was determined to be a crane. Due to a thick coverage of algal growth and the brittle nature of the metal, the crane was estimated to have been on the bottom for 20 to 40 years. There was little evidence of monofilament line or netting on the crane. An earlier LIDAR survey showed no evidence of the crane, however divers noted that the crane which was dark in color had come to rest on light colored sand – this may have effected LIDAR's ability to resolve the object.

On the following page is a DTM of the contact.

NOAA Ship THOMAS JEFFERSON

Crane in Niantic Bay, CT

Position of Least Depth (3.130m)

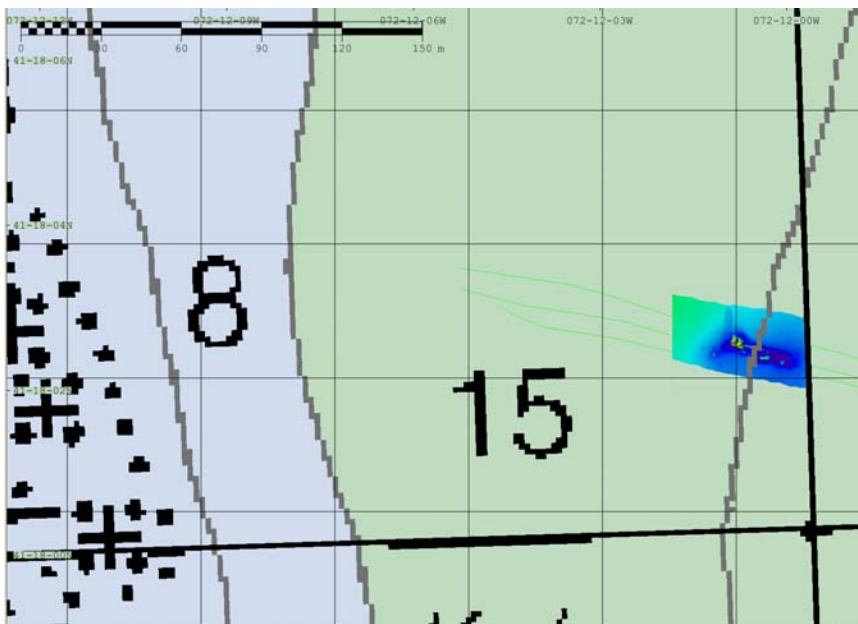
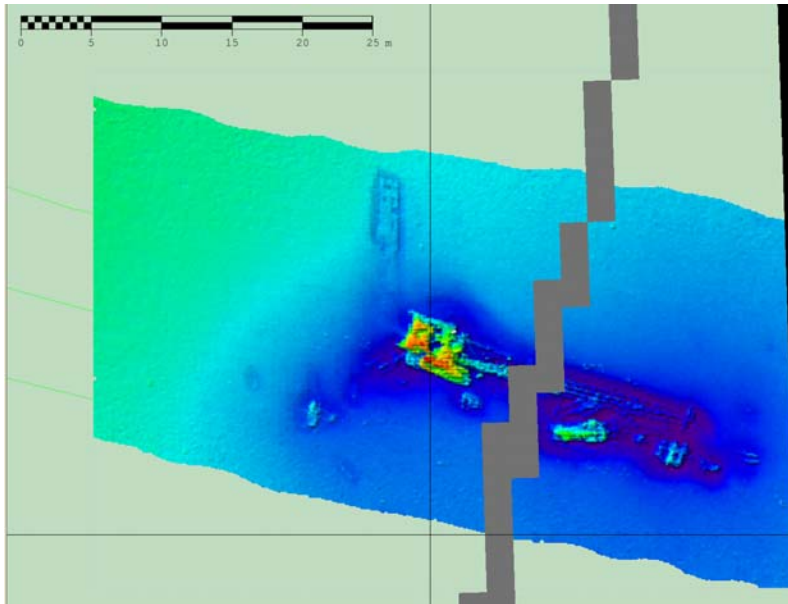
41-18.038N 072-12.017W

Published in NTM 5/05

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NOAA Ship THOMAS JEFFERSON
Dive Investigation Report
Dive No. 1 - 6 May 2005

On 6 May 2005, Divers from the THOMAS JEFFERSON conducted an investigation dive on a number of small contacts imaged by KLEIN 5000 SSS with bathymetry from RESON 8101 and 8125 MBES. The purpose of the dive was to record the dimensions of the contacts in situ for comparison with the dimensions measured from the SSS and MBES.

Equipment

Launch 1014 (see DAPR for details on 1014 hardware and software configurations)

100' survey tape

300' diver's reel

Diver's slate

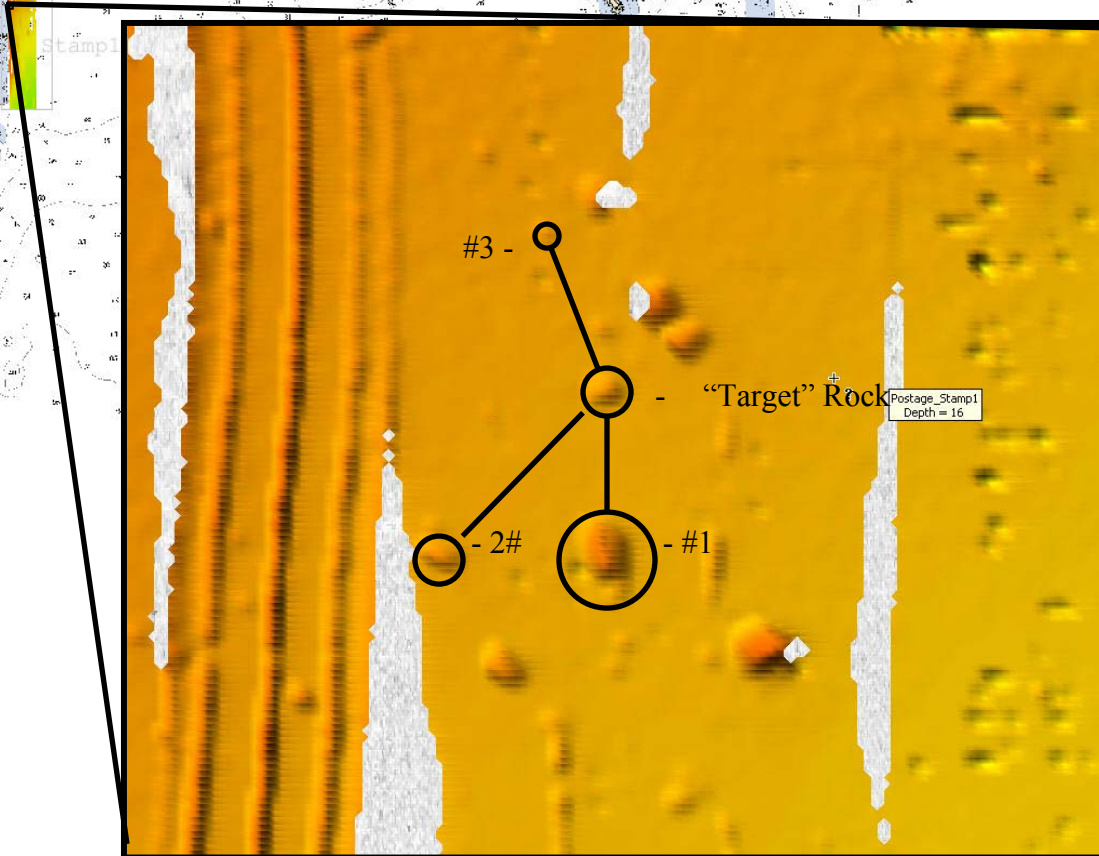
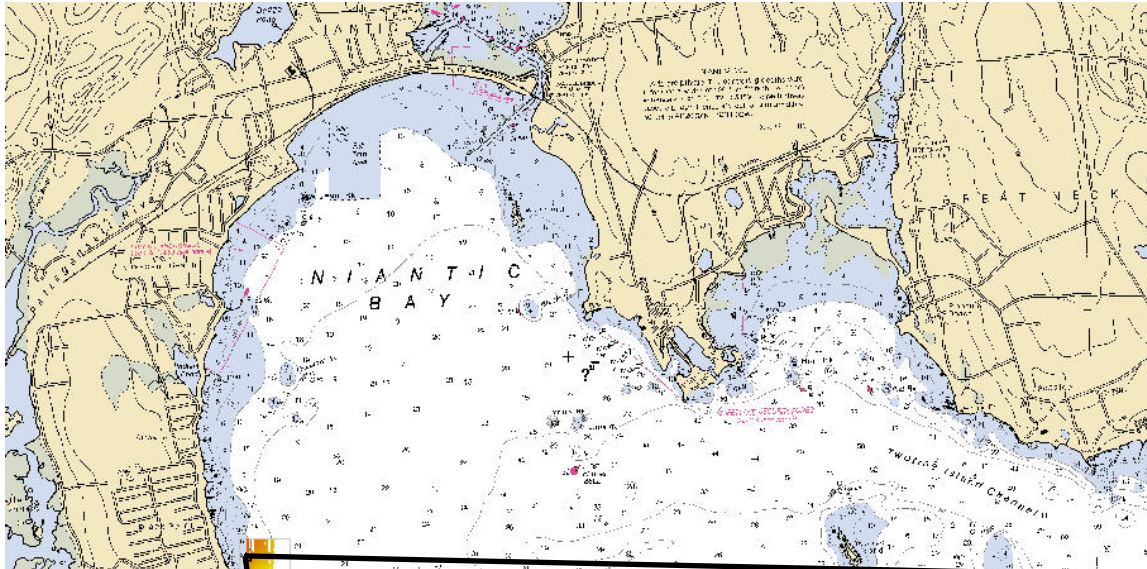
Procedure

The dive boat, Launch 1014, is equipped with a RESON 8125 MBES. By looking at a DTM created from previous 8125 data, a line was drawn over a contact selected as the "target" rock. The Cox'n for 1014 drove the launch over the line, and the Hydrographer In Charge (HIC) dropped a 35 lbs clump anchor on the target as the launch passed above it. The anchor was attached to a small rubber marker buoy by approximately 30 feet of line. The anchor came to rest within inches of the "target" rock. This "target" rock was the central location from which a circle search was conducted.

The divers on this dive were ENS Davidson and ENS Jaskoski, with LCDR Shep Smith and AB Perry surface tending. ENS Davidson was equipped with the diver's reel and ENS Jaskoski kept the survey tape and the slate. The reel was clipped onto the buoy line to serve as the measuring point for all the contacts to be surveyed. With the diver's reel and the end of the survey tape, ENS Davidson began a circle search for the other contacts. Once a contact was found, a line pull signaled ENS Jaskoski to pull the line tight and record the bearing from the anchor line to the contact. Once the bearing was recorded on the slate, the distance to the contact was read off the survey tape and recorded as well. Once the distance and bearing for the contact were recorded, ENS Jaskoski followed the line from the reel out to the contact, where the contact's dimensions were recorded. Once all the dimensions were recorded, ENS Jaskoski swam the survey tape back to the anchor and ENS Davidson continued the circle search until another contact was discovered. The process was repeated until the agreed upon depth and time limits had been reached. A total of three contacts plus the "target" rock were measured and recorded.

The contacts were covered in a thick mat of kelp that measured as much as 0.3 meters in thickness. The divers made every attempt to record accurate length, width, and height measurements; however, due to the thickness of the kelp, the field measurements should be considered a close approximation and not an absolute measurement. It is unclear to what extent the kelp affected the MBES.

On the following page are the contacts, their field measurements, their MBES measurements, and a graphic depicting the dive site.



“Target” Rock

2.2m X 1.5m X 0.96m –measured by divers

2.1m X 1.5m X 0.7m – from MBES

Rock #1 6.9m @ 200° pmc (~185° T)

2.5m X 1.4m X 1.2m – measured by divers

3.5m X 2.1m X 1.6m – from MBES

Rock #2 12.1m @ 230° pmc (~215° T)

2.5m X 0.94m X 1.14m – measured by divers

2.3m X 1.5m X 0.85m – from MBES

Rock #3 10.1m @ 000° pmc (~345° T)

0.85m X 1.15m X 0.3m – measured by divers

0.8m X 0.90m X 0.4m – from MBES

NOAA SHIP THOMAS JEFFERSON DETACHED POSITION FORM

VESSEL: FRB DAY: 5/4/05 FIELD SHEET: H11442 OPR: B370-TJ-05

Position #: _____ Time: (0850LT)

Feature: ROCK, REEF, LEDGE, OTHER PILINGS

Source: DM, CHART, NEW, AWOIS, OTHER LIDAR

Photo: Y/N Disproval: Y/N

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

SV: _____ (FT #1 Only)

Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: NANTIC BAY

POINT OF OFF CRESCENT BEACH. L

2 ROWS OF PILINGS EXT TO SHORE

#2300, #2299 PHOTO

Sketch

Position #: _____ Time: (0900LT)

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

SV: _____ (FT #1 Only)

Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: NANTIC BAY

WILLIAM ROCK. PICTURE #2301

Sketch

Position #: _____ Time: (0910LT)

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth 2m Ex/Below

SOUNDING PILE

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

SV: _____ (FT #1 Only)

Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: ROCK NEAR GC "9" BUOY

COVERED W/ SEAWEED AND FLAT

IMAGE #2315

Sketch

NOAA SHIP THOMAS JEFFERSON DETACHED POSITION FORM

VESSEL: FRB DAY: 5/4/05 FIELD SHEET: H11442 OPR: B370-TJ-05

LIDAR Reg. File #13

Position #: _____ Time: (0935LT)

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER LIDAR

Photo: Y/N Disproval: Y/N

Depth 1.8 m Ex/Below SOUNDING POLE

Tide Corr: _____ (Feature Type #1 & #2) Size: _____ (m)

SV: _____ (FT #1 Only) Range: _____ (m)

Draft: _____ (FT #1 Only) Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: Rock AWASH South of BLACK POINT.

Sketch

Position #: _____ Time: (1010LT)

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth 2.8 m Ex/Below SOUNDING POLE

Tide Corr: _____ (Feature Type #1 & #2) Size: _____ (m)

SV: _____ (FT #1 Only) Range: _____ (m)

Draft: _____ (FT #1 Only) Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: PICTURE OF BLACK POINT LOOKING NORTH.

Sketch

#2302 AND #2303 PICTURES

#2

Position #: _____ Time: (1010LT)

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER LIDAR

Photo: Y/N Disproval: Y/N

Depth 2.8 m Ex/Below SOUNDING POLE

Tide Corr: _____ (Feature Type #1 & #2) Size: _____ (m)

SV: _____ (FT #1 Only) Range: _____ (m)

Draft: _____ (FT #1 Only) Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

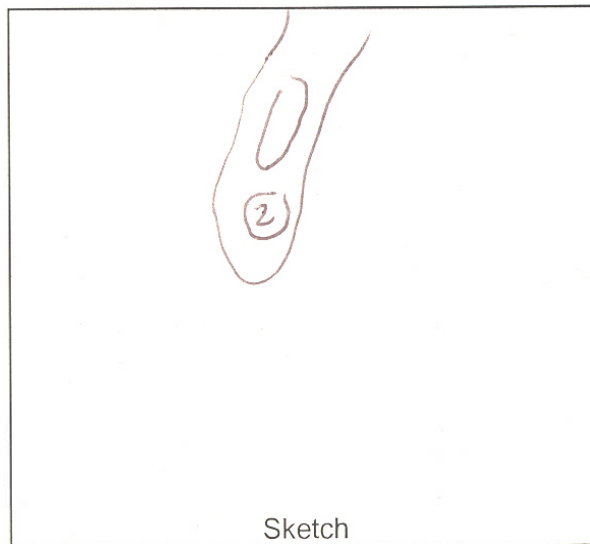
Description/ Comments: Rock off of GIANT NECK CHARTED Rock AWASH. PICTURE OF SURROUNDING Rocks #2304

Sketch

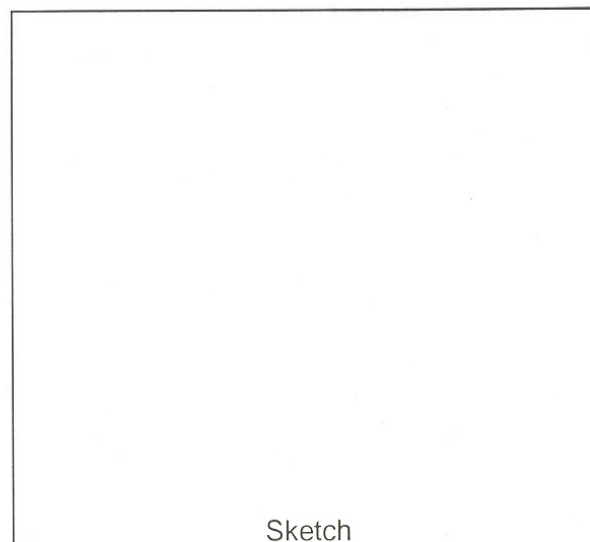
DN125
NOAA SHIP THOMAS JEFFERSON DETACHED POSITION FORM

VESSEL: FRB DAY: 5/4/05 FIELD SHEET: 411442 OPR: B370-TJ-05

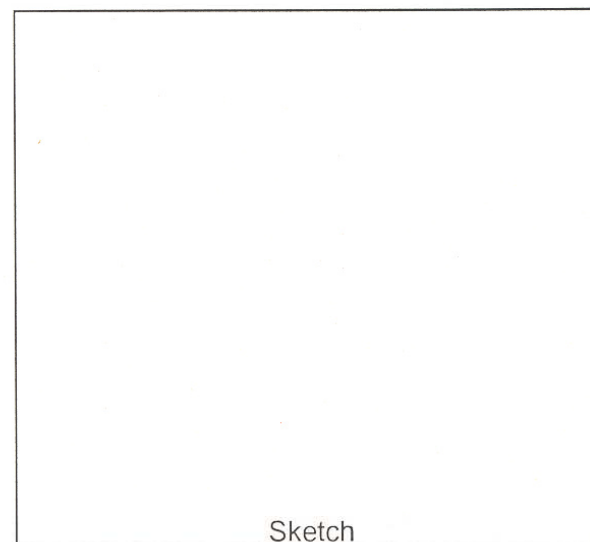
Position #: _____ Time: (1050LT)
 Feature: ROCK, REEF, LEDGE, OTHER
 Source: DM, CHART, NEW, AWOIS, OTHER LIDAR
 Photo: Y/N Disproval: Y/N
 Depth 1.3m Ex/Below SOUNDING POLE
 Tide Corr: _____ (Feature Type #1 & #2) Size: _____ (m)
 SV: N/A (FT #1 Only) Range: _____ (m)
 Draft: N/A (FT #1 Only) Bearing: _____ (mag)
 Corr Depth: _____ Ex/Below
 Description/ Comments: ROCK TO SOUTH OF
LONG LEDGE. CHARTED 2 FT.



Position #: _____ Time: (1055LT)
 Feature: ROCK, REEF, LEDGE, OTHER
 Source: DM, CHART, NEW, AWOIS, OTHER _____
 Photo: Y/N Disproval: Y/N
 Depth _____ Ex/Below _____
 Tide Corr: _____ (Feature Type #1 & #2) Size: _____ (m)
 SV: _____ (FT #1 Only) Range: _____ (m)
 Draft: _____ (FT #1 Only) Bearing: _____ (mag)
 Corr Depth: _____ Ex/Below _____
 Description/ Comments: BOUY #4 NORTH OF
LONG LEDGE
IMAGES #2305, #2306, #2307



Position #: _____ Time: _____
 Feature: ROCK, REEF, LEDGE, OTHER
 Source: DM, CHART, NEW, AWOIS, OTHER _____
 Photo: Y/N Disproval: Y/N
 Depth _____ Ex/Below _____
 Tide Corr: _____ (Feature Type #1 & #2) Size: _____ (m)
 SV: _____ (FT #1 Only) Range: _____ (m)
 Draft: _____ (FT #1 Only) Bearing: _____ (mag)
 Corr Depth: _____ Ex/Below _____
 Description/ Comments: _____



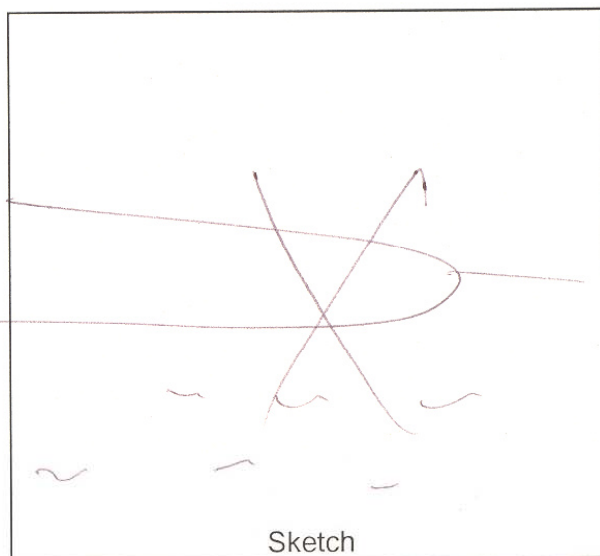
NOAA SHIP THOMAS JEFFERSON DETACHED POSITION FORM

VESSEL: FRB DAY: 5/3/05 FIELD SHEET: 11442 OPR: B370-TJ-05

Position #: _____ Time: (0912LT)
 Feature: ROCK, REEF, LEDGE, OTHER _____
 Source: DM, CHART, NEW, AWOIS, OTHER _____
 Photo: Y/N Disproval: Y/N
 Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)
 Size: _____ (m)
 SV: _____ (FT #1 Only)
 Range: _____ (m)
 Draft: _____ (FT #1 Only)
 Bearing: _____ (mag)

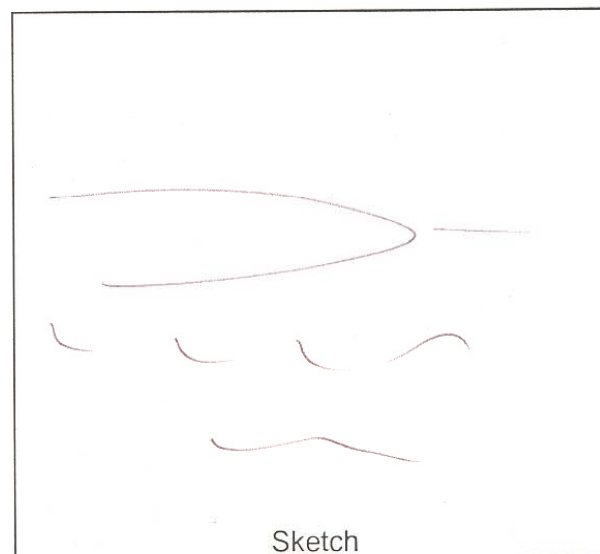
Corr Depth: _____ Ex/Below
 Description/ Comments: CORORANT ROCK
observed



Position #: _____ Time: (0925LT)
 Feature: ROCK, REEF, LEDGE, OTHER _____
 Source: DM, CHART, NEW, AWOIS, OTHER _____
 Photo: Y/N Disproval: Y/N
 Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)
 Size: _____ (m)
 SV: _____ (FT #1 Only)
 Range: _____ (m)
 Draft: _____ (FT #1 Only)
 Bearing: _____ (mag)

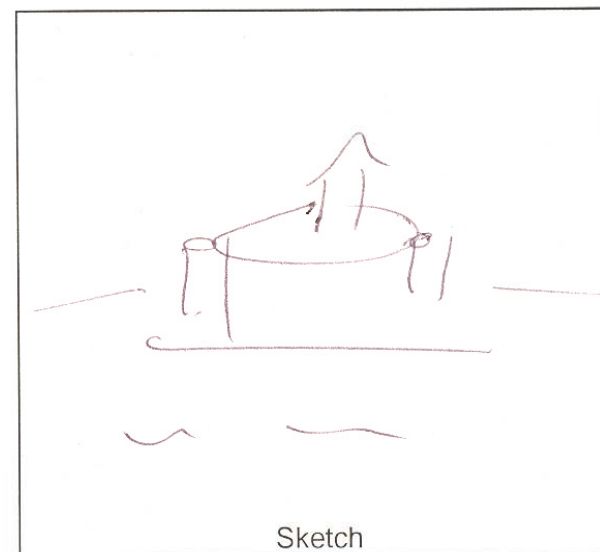
Corr Depth: _____ Ex/Below
 Description/ Comments: PICTURE OF GOSMON PT
LOOKING NE



Position #: _____ Time: (0930LT)
 Feature: ROCK, REEF, LEDGE, OTHER _____
 Source: DM, CHART, NEW, AWOIS, OTHER _____
 Photo: Y/N Disproval: Y/N
 Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)
 Size: _____ (m)
 SV: _____ (FT #1 Only)
 Range: _____ (m)
 Draft: _____ (FT #1 Only)
 Bearing: _____ (mag)

Corr Depth: _____ Ex/Below
 Description/ Comments: STATO SAN. RUBIN
LOOKING NORTH
#2291



NOAA SHIP THOMAS JEFFERSON DETACHED POSITION FORM

VESSEL: FRB DAY: 5/3/05 FIELD SHEET: _____ OPR: _____

Position #: _____ Time: 0940-11

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)
Size: _____ (m)

SV: _____ (FT #1 Only) Range: _____ (m)

Draft: _____ (FT #1 Only) Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: Rocky off of SE side
PT. WEST of SAN JUAN

Sketch

Position #: _____ Time: _____

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)
Size: _____ (m)

SV: _____ (FT #1 Only) Range: _____ (m)

Draft: _____ (FT #1 Only) Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: _____

Sketch

Position #: _____ Time: _____

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)
Size: _____ (m)

SV: _____ (FT #1 Only) Range: _____ (m)

Draft: _____ (FT #1 Only) Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: _____

Sketch

NOAA SHIP THOMAS JEFFERSON DETACHED POSITION FORM

VESSEL: FAB DAY: 5/3/05 FIELD SHEET: 411442 OPR: B 770-05-Position #: _____ Time: 10:10

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N _____ Disproval: Y/N _____

Depth 1.5m Ex/Below AWAS 12148

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

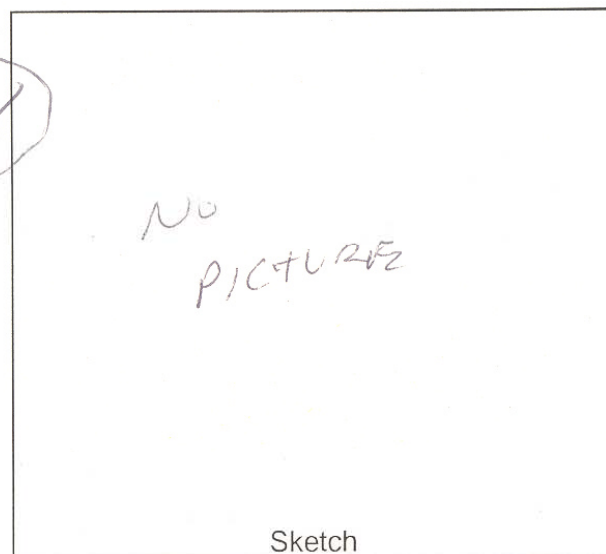
SV: _____ (FT #1 Only)

Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: LITTLE ROCK1.5m Below SURFACE120m NORTH OF NUN #640m S.E. OF WHITE ROCK

Position #: _____ Time: _____

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N _____Depth 0.2m Ex/Below AWAS 12149

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

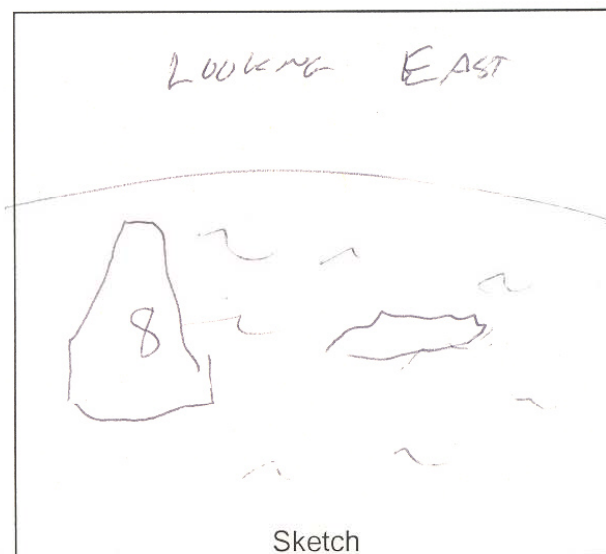
SV: _____ (FT #1 Only)

Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: BLACK ROCK50m WEST OF NUN #8#2297

Position #: _____ Time: _____

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N _____ Disproval: Y/N _____

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

SV: _____ (FT #1 Only)

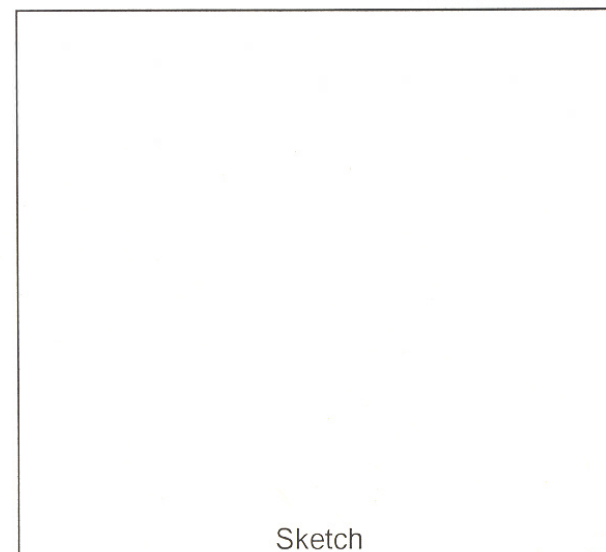
Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: _____



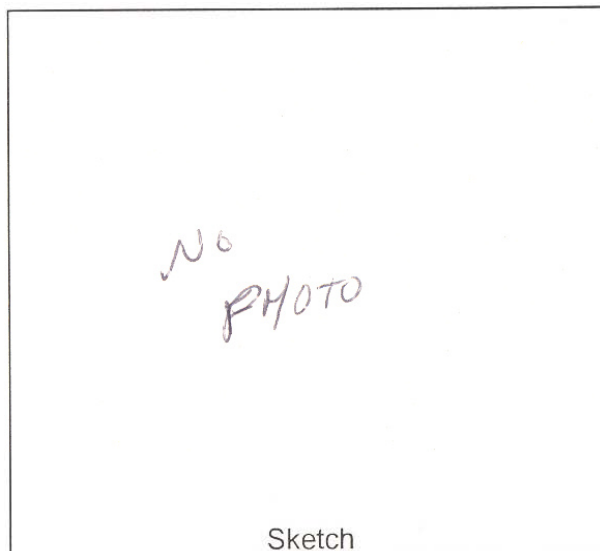
NOAA SHIP THOMAS JEFFERSON DETACHED POSITION FORM

VESSEL: FRB DAY: 5/3/05 FIELD SHEET: H11442 OPR: BB70-17-05

Position #: _____ Time: 09 48
 Feature: ROCK, REEF, LEDGE, OTHER _____
 Source: DM, CHART, NEW, AWOIS, OTHER _____
 Photo: Y/N (Y) Disproval: Y/N _____
 Depth 1 m Ex/Below (Below)

Tide Corr: _____ (Feature Type #1 & #2)
 Size: _____ (m)
 SV: _____ (FT #1 Only)
 Range: _____ (m)
 Draft: _____ (FT #1 Only)
 Bearing: _____ (mag)

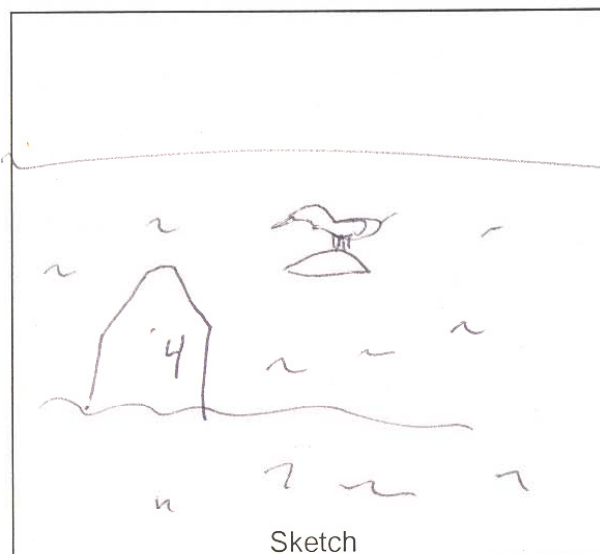
Corr Depth: _____ Ex/Below
 Description/ Comments: FOUND FLAT ROCK
UNDER ~ 1 meter
30-40 METERS WEST OF
NUN #2 OFF LIGHT POINT



Position #: _____ Time: 09 55
 Feature: ROCK, REEF, LEDGE, OTHER _____
 Source: DM, CHART, NEW, AWOIS, OTHER _____
 Photo: Y/N (Y) Disproval: Y/N _____
 Depth 1.3 m Ex/Below (Below)

Tide Corr: _____ (Feature Type #1 & #2)
 Size: _____ (m)
 SV: _____ (FT #1 Only)
 Range: _____ (m)
 Draft: _____ (FT #1 Only)
 Bearing: _____ (mag)

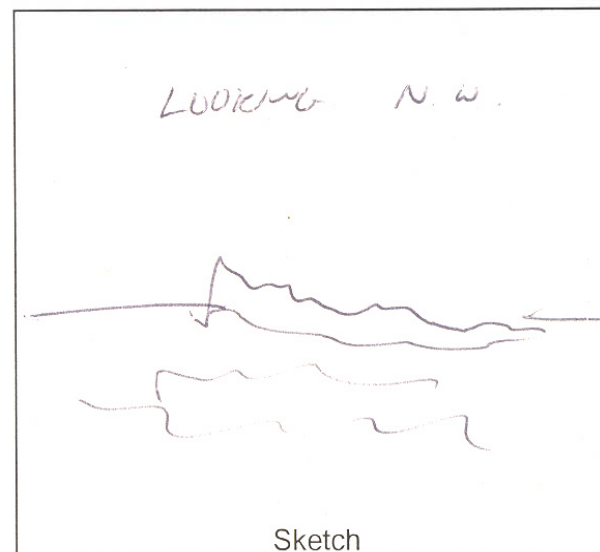
Corr Depth: _____ Ex/Below
 Description/ Comments: HIGH ROCK
LOOKING NORTH



Position #: _____ Time: _____
 Feature: ROCK, REEF, LEDGE, OTHER _____
 Source: DM, CHART, NEW, AWOIS, OTHER _____
 Photo: Y/N _____ Disproval: Y/N _____
 Depth _____ Ex/Below _____

Tide Corr: _____ (Feature Type #1 & #2)
 Size: _____ (m)
 SV: _____ (FT #1 Only)
 Range: _____ (m)
 Draft: _____ (FT #1 Only)
 Bearing: _____ (mag)

Corr Depth: _____ Ex/Below
 Description/ Comments: FOUND WHITE
ROCK
SE OF WHITE ROCK



NOAA SHIP THOMAS JEFFERSON DETACHED POSITION FORM

VESSEL: FRB DAY: 123 FIELD SHEET: H11442 OPR: B370-85-05Position #: _____ Time: 0940

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

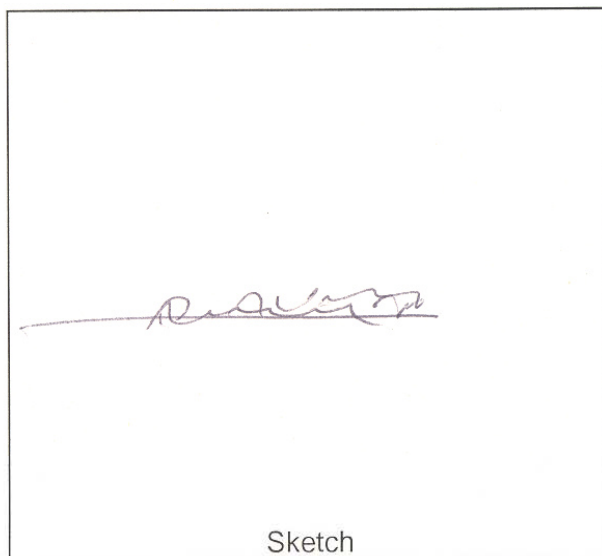
SV: _____ (FT #1 Only)

Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: TWO TREE ISLANDLOOKING S.WPosition #: _____ Time: 0945

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

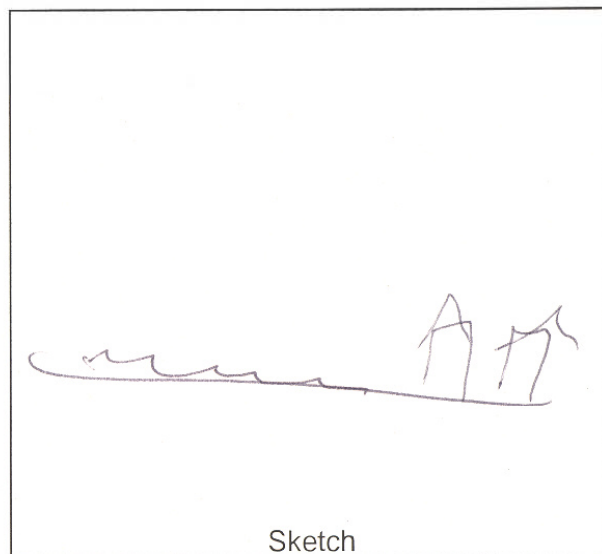
SV: _____ (FT #1 Only)

Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: ROCKS OFFLIGHT PT LOOKING NORTHPosition #: _____ Time: 0947

Feature: ROCK, REEF, LEDGE, OTHER _____

Source: DM, CHART, NEW, AWOIS, OTHER _____

Photo: Y/N Disproval: Y/N

Depth _____ Ex/Below

Tide Corr: _____ (Feature Type #1 & #2)

Size: _____ (m)

SV: _____ (FT #1 Only)

Range: _____ (m)

Draft: _____ (FT #1 Only)

Bearing: _____ (mag)

Corr Depth: _____ Ex/Below

Description/ Comments: ROCKS OFF LIGHTPT LOOKING