

H11078

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Side Scan Sonar/Multibeam
Field No. OPR-S-B904-WH-01
Registry No. H11078

LOCALITY

State Massachusetts
General Locality South Coast of Massachusetts
Sublocality Pollock Rip Channel

2001

CHIEF OF PARTY
CDR Steven R. Barnum

LIBRARY & ARCHIVES

DATE

September 30, 2002

NOAA FORM 77-28
(11-72)

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

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

H11078

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: **Massachusetts**

General Locality: **South Coast of Massachusetts**

Sub-Locality: **Pollock Rip Channel**

Scale: **1:10,000** Date of Survey: **September 10-13, 2001**

Instructions Dated: **08/10/01** Project Number: **OPR-S-B904-WH**

Vessel: **NOAA Ship WHITING, S-329**

Chief of Party: **Commander Steven R. Barnum, NOAA**

Surveyed by: **WHITING Personnel**

Soundings by: **Odom Echotrac DF3200 MK II Echosounder**

Graphic record scaled by: **WHITING Personnel**

Graphic record checked by: **WHITING Personnel**

Protracted by: **N/A** Automated Plot: **HP-750C (*field*)**
HP2500CP (*office*)

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

Soundings in: **~~Meters~~ *Feet* at MLLW**

Remarks:

- 1) *All Times are UTC.*
- 2) *This is a basic Hydrographic Survey.*
- 3) *Projection is UTM Zone 19.*

Bold, red, italicized notes were made during office processing.

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DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SURVEY H11078

Scale of Survey: 1:10,000
Year of Survey: 2000-2001
NOAA Ship WHITING
CDR Steven R. Barnum, Commanding

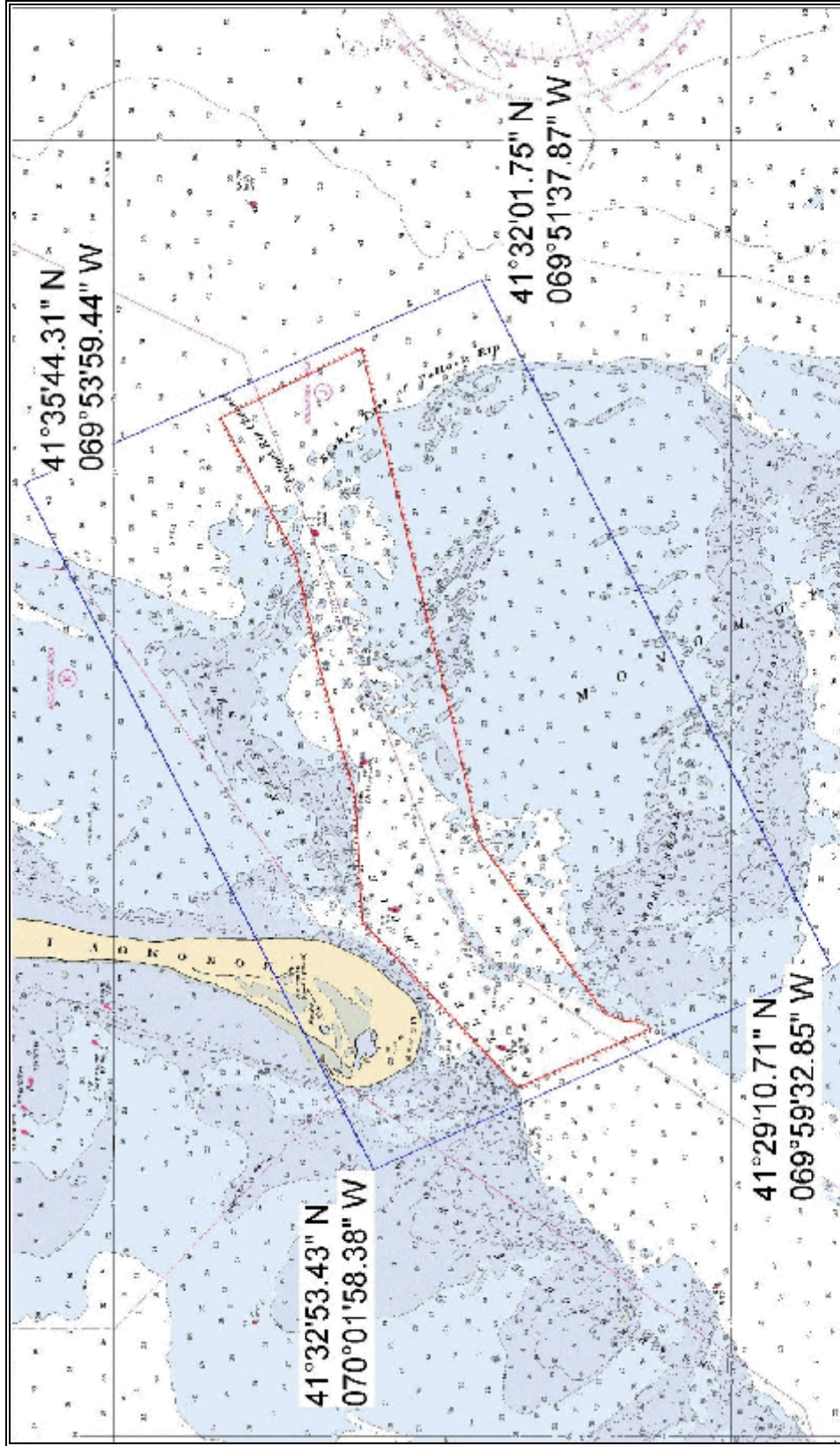
A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project S-B904-WH, Pollock Rip Channel, Massachusetts. The original instructions are dated August 10, 2001.

This Descriptive Report pertains to sheet "C" of project S-B904-WH, which includes Pollock Rip Channel. The assigned registry number for this sheet is H11078, as prescribed in the Letter Instruction.

This survey responds to requests from the Coast Guard for modern hydrography in Pollock Rip Channel. Due to the transitory nature of the local shoals, this survey was needed to verify the existence of a channel which would be safe for navigation. Pollock Rip, a federally maintained, natural channel, is the most direct entrance into Nantucket Sound from Cape Cod. This area is frequented by small fishing vessels and pleasure craft seeking a shorter route to avoid the more seaward Great Round Shoal Channel. During survey operations, large passenger ferries were seen using this channel.

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



Chartlet 1 of 1 Chart 13244, 38th Edition, November 26th, 1984, Scale 1:40,000
 East Entrance to Nantucket Sound

This chartlet may be up to date with the latest
 Local Notice to Mariners information dated 7/26/01.

NOT FOR NAVIGATION.

 <p>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE</p>	<p>Project: S-B604-14H Survey: F17078 State: Massachusetts Locality: South Coast of Massachusetts Sub-locality: Pollock Rip Channel Survey Scale: 1:10,000</p>	<p>Sounding Units: Feet Horizontal Datum: MLLW Horizontal Datum: NAD 83 Projection: UTM '98 Central Meridian: 069° 00' 00" Scale Factor: 0.9996</p>	<p>NOAA Ship WHITING CDR Steven R. Barnum Commanding September 10 to September 13, 2001</p>
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B. DATA ACQUISITION AND PROCESSING EQUIPMENT

Data were acquired by NOAA Ship WHITING's Launch 1005 and Launch 1014. These launches are 8.5-meter aluminum Jensen vessels with a 0.5-meter transducer draft.

Launch 1005 acquired shallow water multibeam (SWMB), side scan sonar (SSS), and VBES¹, data. An Odom Echotrac DF3200 MK II echosounder was used for VBES hydrography. SWMB data were acquired with a Reson SeaBat 8101 shallow water multibeam system. SSS data were acquired with an Edgetech model 272-T towed side scan sonar. Launch 1005 utilizes a TSS POS/MV 320 (version 2) GPS-aided inertial motion sensor to determine both positioning and attitude.

Launch 1014 acquired VBES data and High Speed High Resolution Side Scan Sonar (HSHRSSS) data. Equipment for VBES data acquisition are as described above. The KLEIN T5000 HSHRSSS was hull mounted during data acquisition. Positioning was determined with a Trimble DSM212L integrated differential GPS receiver. Attitude data were determined using a TSS DMS-05 attitude sensor.

Sound velocity data were acquired by both survey platforms. All velocity casts were conducted with Sea-Bird SBE 19 SEACAT Profiler instruments.

No unusual equipment configurations were used. No problems were encountered which would affect accuracy of data. Refer to the Data Acquisition and Processing Report (DAPR)* for detailed equipment and vessel configuration information. **Data filed with original records.*

QUALITY CONTROL

Side Scan Sonar Quality Control

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. A good check consisted of distinguishing contacts or sand waves across the entire range of the side scan trace.

Crosslines

14.5 nautical miles of VBES crosslines comprising 11% of the 100% and 200% SSS data were acquired. Crossline and mainscheme comparisons were made in MAPINFO 5.0, and differences were minimal. Due to the dynamic seafloor within the survey area, these comparisons showed differences of one to two feet. Comparisons were also generated in spreadsheet format and can be viewed in Separate V*. **Data filed with original records.*

¹Launch 1005 VBES data were not processed when SWMB data were acquired.

Junctions

There were no contemporary survey junctions with this sheet.

B.3. CORRECTIONS TO ECHO SOUNDING

All survey methods and instruments were implemented as described in the Correction to Echo Soundings section of the DAPR for this project.

A table detailing all sound velocity casts is contained in Separates III* - Sound Velocity Profile Data. Sound velocity data has been submitted on CD-ROM with the digital data package. Cast data is structured as follows: vessel / day of cast / cast data.

**Data filed with original records.*

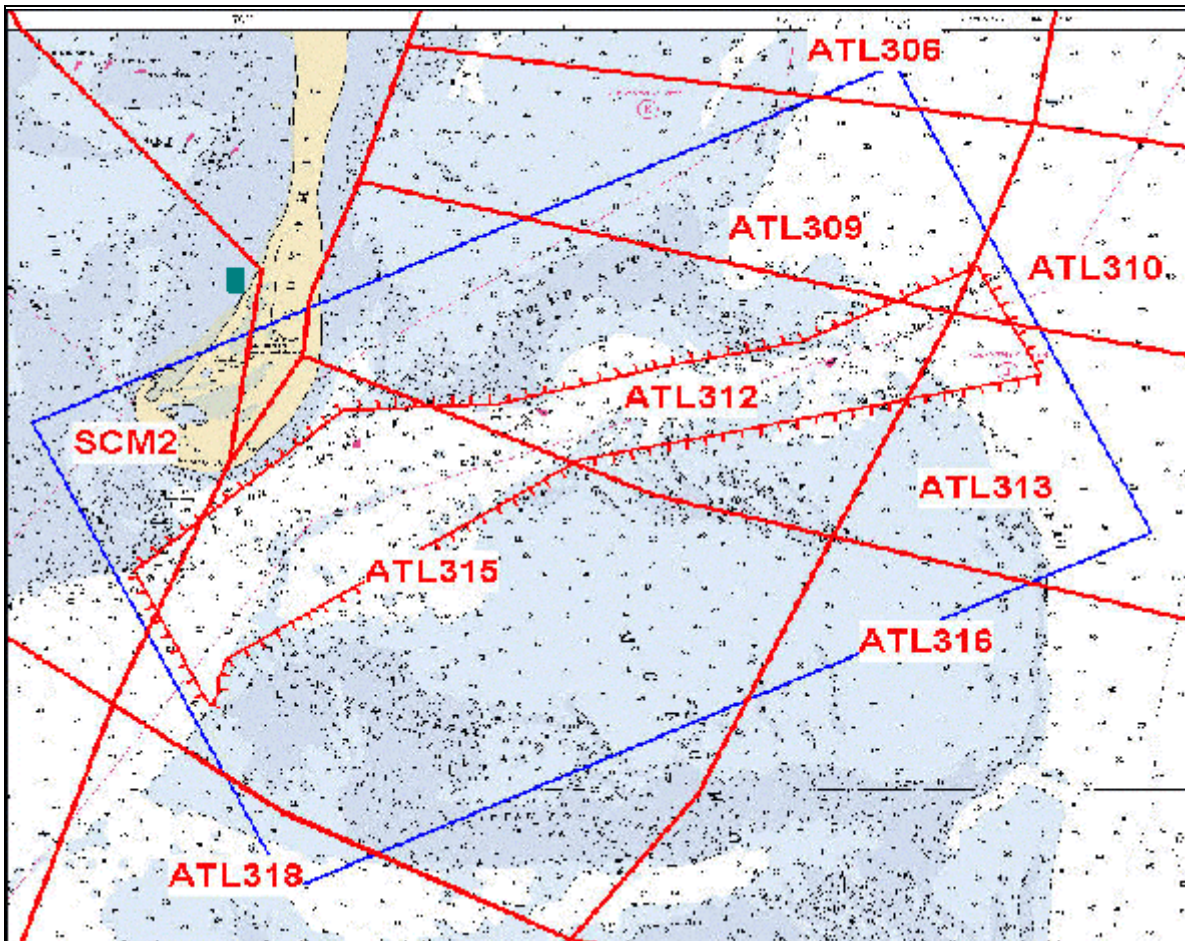
C. VERTICAL AND HORIZONTAL CONTROL

Vertical Control

The tidal datum for this project is Mean Lower Low Water (MLLW). The primary tide station at Nantucket, MA (844-9130) served as control for datum determination. One tertiary, 30-day gauge at Monomoy Island was installed for this project to provide ancillary tide data.

Tidal zoning for this survey is consistent with the Letter Instructions. The zones used for this survey are shown below.

A Request for Approved Tides letter was sent to N/OPS1 on September 24, 2001 (Appendix IV). Verified tides from the N/OPS1 CO-OPS website were downloaded on September 24, 2001, and applied to all sounding data.



Horizontal Control

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 19.

Horizontal position control was obtained using Global Positioning System (GPS) augmented with U.S. Coast Guard differential GPS reference-station correctors. The primary differential beacon used for this survey was Chatham, MA, and the secondary differential beacon was Montauk Point, NY. No local horizontal control stations were established for this survey.

Beacon Name	Beacon Latitude	Beacon Longitude	Transmission Frequency	Site ID
Chatham	41°40'03" N	069°57'00" W	325	802
Montauk Point	41°04'00" N	071°51'06" W	293	803

The Horizontal Dilution of Precision (HDOP) was monitored daily by all vessels. This value never exceeded 4.00*, and adequate satellite coverage was maintained throughout the survey in accordance with Hydrographic Surveys Specifications and Deliverables (HSSD). All positioning equipment was operated in a manner consistent with the manufacturers requirements and as described in the DAPR. There were no equipment malfunctions or atmospheric conditions which affected the positional quality of the data.

** change 4.00 to 2.50 (clarification from the field)*

D. RESULTS AND RECOMMENDATIONS

Chart Comparison *See also Evaluation Report*

This survey is located within the limits of seven NOS charts, however only two display sounding data which are effected by this survey. Those charts are:

13237 38th Edition, March 3, 2001 *at scale of 1:80,000*

13244 38th Edition, November 26, 1994 *at scale of 1:40,000*

General Agreement with Charted soundings

The survey limits within sheet H11078 were investigated using 200% SSS and VBES. In areas where shoaling was evident, VBES splits were run. Significant contacts were developed with SWMB. Sounding data revealed significant discrepancies between survey soundings and charted depths. Soundings along the northern channel edges were generally shoaler than charted with differences up to 30ft. *Concur.* The following is a general discussion of features and soundings in the main geographic areas within the survey.

Butler Hole

Butler Hole is located at the west edge of the survey limit and is the western approach into the Pollock Rip Channel. The 30ft curve along Monomoy Point is encroaching into the channel at 41°32'35.05" N 069°59'27.09" W with a 28 ft atop a charted 43ft depth at this position.

In the vicinity of Shovelful Shoal many soundings were much deeper than charted; in some cases by up to twenty feet. *Concur.*

Shoaling has occurred at position 41°33'01.18*32'59.45*" N 069°58'39.01*39.37*" W with depths from ~~10~~*11*ft to ~~18~~*17*ft outside the 18ft curve. *Concur.*

The 30ft contour south and east of the channel at buoy C "9" has moved south toward Stonehorse Shoal. *Concur.*

Pollock Rip

Pollock Rip and Bearse Shoal have migrated toward each other to form one continual shoal across the channel. The 30ft contour has converged at positions 41°33'01.93" N 069°56'01.89" W, 41°33'09.78" N 069°54'34.67" W and 41°33'18.69" N 069°54'07.42" W. Several 11ft soundings located along the north portion of the channel were submitted as Dangers to Navigation. *Concur.*

Pollock Rip Channel/Anchorage Area J

Pollock Rip Channel is located at the east edge of the survey limit and is the eastern approach into Pollock Rip. Soundings in this area agreed well with charted depths and in most cases were deeper by five to 10ft. **Concur.** The 18ft contour depicted at position 41°32'39.24" N 069°59'35.89" W no longer exists with 20ft being the shoalest sounding observed. It is likely this shoal has shifted like many of the others in this survey. **Concur.**

Pollock Rip is subject to heavy currents which, according to prior NOS hydrographic survey reports, create sand waves up to 35ft in height. As with all areas of swift currents, these sand waves are in a constant state of change. The hydrographer recommends extending the survey area further south to better delineate where the shoals have migrated and the area be surveyed routinely to maintain accurate charted depths. **Concur.**

AWOIS Item Investigations and Significant Contacts

There were ~~ten~~ **six** AWOIS items within the survey limits. The following are discussions of each item as well as significant contacts with charting recommendations.

AWOIS: 825

Item Description: Sounding

Source: H9750/78--OPR S-B314-WH-78, LNM36/85(9/4/85), OPR-B118-MI-85,
H10198/85--OPR-B118-MI-85

Item Position: Latitude 41°33'32.01" N, Longitude 069°55'24.84" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation Used: N/A

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This item fell outside the survey limits and due to time constraints was not investigated.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends retaining the charted 8ft at position 41°33'31.99" N 069°55'24.89" W. **Concur.**

AWOIS: 1,928

Item Description: Wreck *F/V WINIFRED MARTIN*

Source: NM48/45(5896), NM6/46(793), H8171/54-56, H9750/78--94

Item Position: Latitude 41°31'56.41" N, Longitude 069°59'52.05" W

Required Investigation: SD, S2, SWMB, DI

Radius: 500

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: N/A

Date(s): 255, 256

Least Depth Position Number: N/A

Investigation Used: 200% SSS, VBES

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% SSS coverage was acquired over the entire 500m search radius. No contacts were observed within the assigned AWOIS radius. ~~No soundings greater than 35ft were observed.~~ This item has been disproved.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends the charted Wreck at Latitude 41°31'56.41" N, Longitude 069°59'52.05" W be removed. *Concur. (Delete also Charted notation "49ft Rep")*

AWOIS: 1,931

Item Description: Wreck *DIXIE SWORD*

Source: NM9/42(600), NM27/42(1997), NM29/42(2145), FE35/42WD, H8171/54-56, H9750/78

Item Position: Latitude 41°32'57.47" N, Longitude 069°58'50.11" W

Required Investigation: SD, S2, SWMB, DI

Radius: 500

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_256_122_1819_1, 2001_256_221_1753_1

Date(s): 256

Least Depth Position Number: Ping:1032 Beam:1 Line Number: 123_1820

Investigation Used: 200% SSS, VBES

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% SSS coverage was acquired over approximately 75% of the 500m search radius. Two correlating contacts were observed approximately 75m from the predicted AWOIS position indicating the presence of a small wreck. SWMB developments were not conducted due to time constraints.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends retaining the charted wreck at position Latitude 41°32'58.21 **57.47**" N, Longitude 069°58'46.08 **50.11**" W. **Concur.**

AWOIS: 1,933

Item Description: Tanker *PENDLETON*

Source: NM10/52(1083), NM12/52 (1334), NM13/52(1474), NM36/54(4359), H8349/56, H9750/78, H8349/56, CL938/79, LNM33/79, LNM38/79

Item Position: Latitude 41°35'14.85" N, Longitude 069°57'38.32" W

Required Investigation: SD, S2, SWMB, DI

Radius: 500

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation Used: N/A

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This item fell outside the survey limits and due to time constraints was not investigated.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends retaining the charted Wreck at position Latitude 41°35'14.85" N, Longitude 069°57'38.32" W. *Concur.*

AWOIS: 7,843

Item Description: Wreck *HARATIO HALL*

Source: H9750/78

Item Position: Latitude 41°33'07.11" N, Longitude 069°54'03.29" W

Required Investigation: SD, S2, SWMB, DI

Radius: 700

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_256_006_2237_2

Date(s): 253, 256

Least Depth Position Number: Ping:5487 Beam:1 Line Number: 101_1731

Investigation Used: 200% SSS, VBES, SWMB

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% SSS was acquired over the entire 700m AWOIS radius. Six correlating contacts were observed indicating the presence of a wreck and debris. These contacts (which were tightly grouped within a 50m radius) were investigated with SWMB. A least depth of 24**21**ft (6.71m corrected with verified tides) was determined. ~~This item was submitted as a DtoN.~~
This item was reviewed by Atlantic Hydrographic Branch personnel and is not considered a DtoN.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting a Wreck at position Latitude 41°33'10.16**09.71** " N, Longitude 069°54'09.39**09.35**" W with a least depth of 24**21**ft.

Concur.

Chart 21 Wk w/danger curve

AWOIS: 7,847

Item Description: Wreck *ARANSAS*

Source: H8350/56

Item Position: Latitude 41°35'26.45" N, Longitude 069°52'28.97" W

Required Investigation: SD, S2, SWMB, DI

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation Used: N/A

Surveyed Position: N/A

Position Determined By: N/A

Investigation Summary: This item fell outside the survey limits and due to time constraints was not investigated.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends the Wreck at position Latitude 41°35'26.45" N, Longitude 069°52'28.97" W remain as charted. *Concur.*

AWOIS: 8,295

Item Description: Wreck *WEST VIRGINIA*

Source: H8350/56

Item Position: Latitude 41°35'18.03" N, Longitude 069°52'27.06" W

Required Investigation: SD, S2, SWMB, DI

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: N/A

Date(s): N/A

Least Depth Position Number: N/A

Investigation Used: N/A

Surveyed Position: N/A

Position Determined By: N/A

Investigation Summary: This item fell outside the survey limits and due to time constraints was not investigated.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends the Wreck at position Latitude 41°35'18.03" N, Longitude 069°52'27.06" W remain as charted. ***Do not concur.***

The current edition of chart 13244 (39th Ed. Mar 30/02) shows no wreck at the above location. No change in charting is recommended.

AWOIS: 8,296

Item Description: Obstruction

Source: H387/1853, H1149/1872, H2224/1895, H2698/1904, H8171/54-56

Item Position: Latitude 41°32'39.75" N, 069°55'45.88" W Longitude

Required Investigation: SD, S2, SWMB, DI

Radius: 500

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_256_603_2223_1

Date(s): 253, 255, 256

Least Depth Position Number: Ping:174 Beam:44 Line Number: 826_1434

Investigation Used: 200% SSS, SWMB, VBES

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% SSS was acquired over the entire 500m search radius. Three contacts were observed indicating the presence of an Obstruction. SWMB was conducted revealing a least depth of **±513ft** (4.56**3.96**m corrected with Verified tides). No dive verification was performed due to time constraints. Historical record suggests this Obstruction is the remains of Pollock Rip Lighthouse but previously no NOS surveys have been conducted to prove or disprove this. The hydrographer believes this Obstruction was adequately surveyed to warrant representation on the chart.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting an Obstruction at position Latitude 41°32'39.75**4**" N, 069°55'45.88**74**" W Longitude with a least depth of **±513ft**. **Concur**

Chart 13 Obstn w/danger curve

AWOIS: 8,298

Item Description: Wreck Steam Yacht *ALVA*

Source: H1573/1883-188, NM32/1892(636), NM3/1893(43), NM33/1893(677), H9750/78

Item Position: Latitude 41°33'24.02" N Longitude 069°54'23.99" W

Required Investigation: SD, S2, SWMB, DI

Radius: 500

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_253_202_1924_1

Date(s): 253, 256

Least Depth Position Number: Ping:249 Beam:12 Line Number: 815_1457

Investigation Used: 200% SSS, SWMB, VBES

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: 200% SSS was acquired over the entire 500m radius. Two contacts were observed indicating the presence of a small Wreck. SWMB was conducted revealing a least depth of **2927** feet (8.78**8.23**m corrected with Verified tides). No dive verification was performed due to time constraints. Historical record indicates Steam Yacht *ALVA* sank in 1892 after a collision with the *H.F. DIMOCK*. In the years after her sinking, several other vessels have run aground over her wreckage, knocking off her fore topmast and smokestack.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting a Wreck at position Latitude 41°33'19.95" N Longitude 069°54'54.16**069°54'16.10**" W with a least depth of **2927**ft.

Concur

Chart 27 Wk w/danger curve

AWOIS: 11,062

Item Description: Wreck PA

Source: N/A

Item Position: Latitude 41°33'00.03" N Longitude 069°57'45.99" W

Required Investigation:

Radius: 1000

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: N/A

Date(s): 255, 256

Least Depth Position Number: N/A

Investigation Used: 200% SSS, VBES

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: The navigable area within the assigned AWOIS radius was investigated with 200% SSS and no contacts were observed.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends removing the charted Wreck PA at position Latitude 41°33'00.03" N Longitude 069°57'45.99" W. ***Do not concur. See the Evaluation Report***

Item: 2001_253_107_1421_1

Item Description: Wreck

Source: SSS

Item Position: Latitude 41°33'41.49" N Longitude 069°54'09.52" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_253_107_1421_1, 2001_256_206_1351_1

Date(s): 253, 256

Least Depth Position Number: Ping:252 Beam:90 Line Number:819_1527

Investigation Used: 200% SSS, SWMB

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This item was identified during mainscheme side scan operations. SWMB revealed a least depth of 32 **30** feet (9.78**9.14** m corrected with Verified Tides). Imagery indicated the presence of a Wreck. No dive investigations were conducted due to time constraints. The hydrographer believes this wreck was investigated adequately to warrant representation on the chart. This item was submitted as a DToN. *This item was reviewed by Atlantic Hydrographic Branch personnel and is not considered a DtoN.*

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting a Wreck at position Latitude 41°33'41.49**79**" N Longitude 069°54'09.52**23**" W with a least depth of 32**30** ft.

Concur

Chart 30 Wk w/danger curve

Item: 2001_253_201_1855_1

Item Description: Wreck

Source: SSS

Item Position: Latitude 41°32'45.58" N Longitude 069°56'45.84" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_253_201_1855_1, 2001_255_212_1744_1, 2001_253_101_1733_1

Date(s): 253, 256

Least Depth Position Number: Ping:202 Beam:18 Line Number: 843_1403

Investigation Used: 200% SSS, SWMB

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This item was identified during mainscheme side scan operations. SWMB revealed a least depth of 3937 feet (11.9628 m corrected with Verified Tides). Imagery indicated the presence of a Wreck. No dive investigations were conducted due to time constraints. The hydrographer believes this wreck was investigated adequately to warrant representation on the chart. This item was submitted as a DToN. *This item was reviewed by Atlantic Hydrographic Branch personnel and is not considered a DtoN.*

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting a Wreck at position Latitude 41°32'45.58" N Longitude 069°56'45.84" W with a least depth of 3937 ft. *Concur*

Chart 37 Wk w/danger curve

Item: 2001_256_112_1539_1

Item Description: Wreck

Source: SSS

Item Position: Latitude 41°31'39.26" N Longitude 069°59'04.22" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_256_112_1539_1, 2001_255_212_1745_1, 2001_255_212_1746_1

Date(s): 255, 256

Least Depth Position Number: Ping:305 Beam:64 Line Number: 862_2051

Investigation Used: 200% SSS, SWMB

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This item was identified during mainscheme side scan operations. SWMB revealed a least depth of 36 ~~34~~ feet (11.101 ~~10.36~~ m corrected with Verified Tides). Imagery indicated the presence of a Wreck. No dive investigations were conducted due to time constraints. The hydrographer believes this wreck was investigated adequately to warrant representation on the chart. This item was submitted as a DToN. *This item was reviewed by Atlantic Hydrographic Branch personnel and is not considered a DtoN.*

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting a Wreck at position Latitude 41°31'39.68 ~~26~~ " N Longitude 069°59'03.31 ~~04.22~~ " W with a least depth of 36 ~~34~~ ft. *Concur*

Chart 34 Wk w/danger curve

Item: 2001_255_212_1746_2

Item Description: Wreck

Source: SSS

Item Position: Latitude 41°31'21.98 **22.20**" N Longitude 069°59'35.56**33.48**" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_255_212_1746_2, 2001_256_111_1517_1

Date(s): 255, 256

Least Depth Position Number: Ping:80**154** Beam:4**24** Line Number: 857_2102

Investigation Used: 200% SSS, SWMB

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This item was identified during mainscheme side scan operations. SWMB revealed a least depth of ~~17~~**23** feet (~~5.37~~**7.01** m corrected with Verified Tides). Imagery indicated the presence of a Wreck. No dive investigations were conducted due to time constraints. The hydrographer believes this wreck was investigated adequately to warrant representation on the chart. This item was submitted as a DToN.

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting a Wreck at position Latitude 41°31'21.98" N Longitude 069°59'35.56" W with a least depth of 17ft. **Concur with clarification - The 17 foot least depth was incorrectly applied to the wreck by the hydrograher. Chart a wreck in Latitude 41°31'22.2"N Longitude 069°59'33.48"W with a least depth of 23 feet.**

Chart 23 Wk w/danger curve

Item: 2001_253_217_2012_1

Item Description: Wreck

Source: SSS

Item Position: Latitude 41°31'25.28" N Longitude 070°00'07.60" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_253_217_2012_1, 2001_253_114_2047_1

Date(s): 253

Least Depth Position Number: Ping:188 Beam:84 Line Number: 848_2134

Investigation Used: 200% SSS, SWMB

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This item was identified during mainscheme side scan operations. SWMB revealed a least depth of 3735 feet (11.2710.67m corrected with Verified Tides). Imagery indicated the presence of a Wreck. No dive investigations were conducted due to time constraints. The hydrographer believes this wreck was investigated adequately to warrant representation on the chart. This item was submitted as a DToN. *This item was reviewed by Atlantic Hydrographic Branch personnel and is not considered a DtoN.*

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting a Wreck at position Latitude 41°31'25.28" N Longitude 070°00'07.60" W with a least depth of 3735ft. *Concur.*

Chart 35 Wk w/danger curve

Item: 2001_255_212_1746_3

Item Description: Wreck

Source: SSS

Item Position: Latitude 41°31'03.58" N Longitude 070°00'18.45" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_255_212_1746_3, 2001_256_112_1538_1

Date(s): 255, 256

Least Depth Position Number: Ping:299 Beam:21 Line Number: 851_2114

Investigation Used: 200% SSS, SWMB

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This item was identified during mainscheme side scan operations. SWMB revealed a least depth of ~~4644~~ feet (~~14.02~~**13.41** m corrected with Verified Tides). Imagery indicated the presence of a Wreck. No dive investigations were conducted due to time constraints. The hydrographer believes this wreck was investigated adequately to warrant representation on the chart. This item was submitted as a DToN. *This item was reviewed by Atlantic Hydrographic Branch personnel and is not considered a DtoN.*

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting a Wreck at position Latitude 41°31'03.58" N Longitude 070°00'18.45" W with a least depth of ~~4644~~ft. **Concur.**

Chart 44 Wk w/danger curve

Item: 2001_253_115_1919_1

Item Description: Shoal

Source: SSS

Item Position: Latitude 41°31'37.96" N 069°59'51.15" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_253_115_1919_1

Date(s): 253, 256

Least Depth Position Number: Ping:261 Beam:41 Line Number: 802_2136

Investigation Used: 200% SSS, SWMB

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This shoal was identified during mainscheme side scan operations. SWMB revealed a least depth of ~~1816~~ feet (~~5.654.88~~ m corrected with Verified Tides). Imagery indicated the presence of large sand waves. *This item was submitted as a DtoN (#5).*

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting an ~~1816~~ ft sounding at position Latitude 41°31'37.96" N 069°59'51.15" W. *Concur*

Item: 2001_253_104_1347_1

Item Description: Shoal

Source: SSS

Item Position: Latitude 41°33'18.39" N Longitude 069°55'09.89" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_253_104_1347_1

Date(s): 253, **256**

Least Depth Position Number: Ping: 2678 Beam: 1 Line Number: 543_1700

Investigation Used: 200% SSS, VBES

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This shoal was identified during mainscheme side scan operations. VBES revealed a least depth of ~~11~~**10** feet (~~3.34~~**08** m corrected with Verified Tides). Imagery indicated the presence of large sand waves. This item was submitted as a DtoN. **Concur. (#19)**

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting an ~~11~~**10**ft sounding at position Latitude 41°33'18.39~~34~~**34**" N Longitude 069°55'09.89~~66~~**66**" W. **Concur.**

Item: 2001_253_104_1347_2

Item Description: Shoal

Source: SSS

Item Position: Latitude 41°33'20.7" N Longitude 069°54'48.66" W

Required Investigation: N/A

Radius: N/A

Charts Affected: 13237, 13244

INVESTIGATION

Contact No: 2001_253_104_1347_2

Date(s): 253

Least Depth Position Number: Ping: 9367 Beam: 1 Line Number: 104_1346

Investigation Used: 200% SSS, VBES

Surveyed Position: N/A

Position Determined By: Differential GPS

Investigation Summary: This shoal was identified during mainscheme side scan operations. VBES revealed a least depth of ~~11~~**10** feet (3.~~44~~**05**m corrected with Verified Tides). Imagery indicated the presence of large sand waves. This item was submitted as a DtoN. **(22) Concur.**

CHARTING RECOMMENDATION

Recommendations: The hydrographer recommends charting an ~~11~~**10**ft sounding at position Latitude 41°33'20.~~7~~**20**" N Longitude 069°54'48.~~66~~**29**" W. **Concur.**

Dangers to Navigation

Twenty-seven items were submitted as a Danger to Navigation associated with this survey. Seven were Wrecks and three were Obstructions. For a complete listing, see Appendix I.

Six items were determined to be a Danger to Navigation during office processing. Only one of them was a wreck.

D.2. ADDITIONAL RESULTS

Aids to Navigation (AToN) and Other Detached Positions

Due to time limitations, Detached Positions were not taken on Aids to Navigation for this survey.

Shoreline

There was no shoreline within this survey.

E. APPROVAL SHEET**S-B904-WH-01
Pollock Rip Channel
Massachussetts****Survey Registry No. H11078**

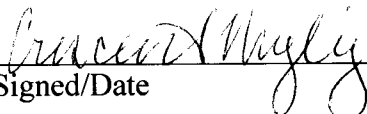
Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All field sheets, this Descriptive Report, and all accompanying records and data are approved.

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

Respectfully,

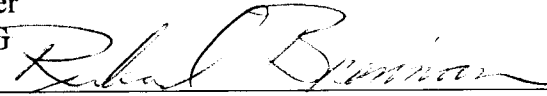
Compiled By:

Crescent H. Moegling
Senior Survey Technician
NOAA Ship WHITING


Signed/Date 12/11/01

Submitted:

Richard T. Brennan
Lieutenant, NOAA
Field Operations Officer
NOAA Ship WHITING


Signed/Date 3/11/02

Approved and Forwarded:

Steven R. Barnum
Commander, NOAA
Commanding Officer
NOAA Ship WHITING


Signed/Date 3/12/02

REPORT OF DANGERS TO NAVIGATION

Survey Registry Number: H11078
State: Massachusetts
Locality: South Coast of Massachusetts
Sub-Locality: Pollock Rip Channel

Project Number: S-B904-WH-01

Survey Dates: September 10 - 13, 2001

Soundings are reduced to Mean Lower Low Water (MLLW) using Preliminary Water Levels.
Horizontal datum is NAD 83.

Chart(s) Affected:

13237 38th Edition, March 3, 2001
13244 38th Edition, November 26, 1994

DANGERS TO NAVIGATION

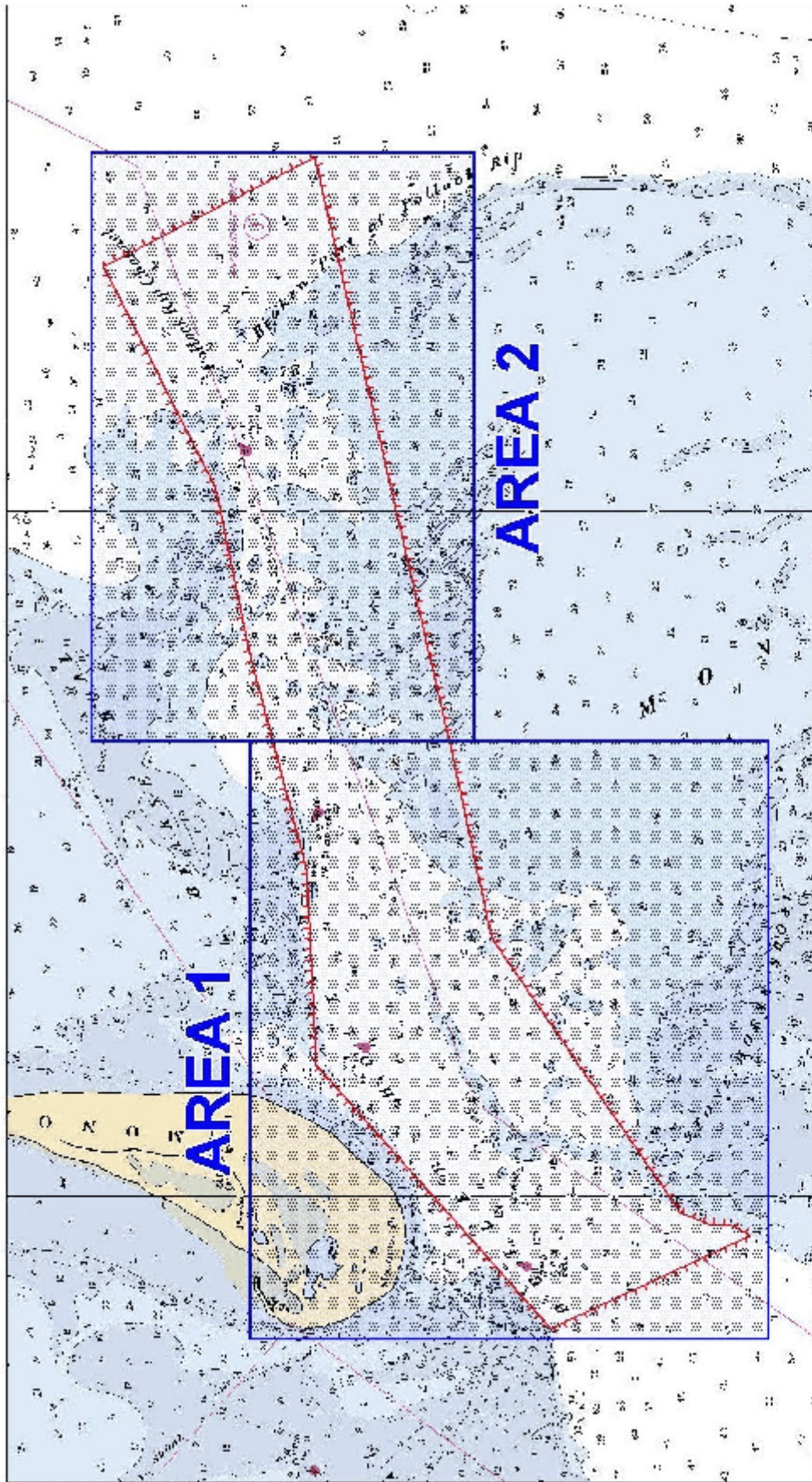
Twenty-seven dangers to navigation (see Attachment 1) were discovered during mainscheme hydrography on Sheet H11078, Pollock Rip Channel. Significant shoaling is evident along the northern portion of the channel with several 11ft soundings in this area. The enclosed plot includes the 12, 18 and 30ft contours showing dramatic changes in the 30-foot curve. The Descriptive Report will be submitted shortly to expedite removal of current charted soundings and the addition of contemporary survey soundings to reflect the transient nature of these shoals.

Questions concerning this report should be directed to the Chief, Atlantic Hydrographic Branch at (757)441-6746.

Attachment 1

DTon #	Observed Depth (ft)	Description	Surveyed Position	
			Latitude	Longitude
1*	46 44	Wreck	41°31'03"	070°00'18"
2*	37 35	Wreck	41°31'25"	070°00'07"
3*	22 21	Shoaling	41°31'27"	069°59'51"
4	17 23	Wreck	41°31'22"	069°59'35"
5	18 16	Shoaling	41°31'37"	069°59'51"
6*	36 34	Wreck/Obstn	41°31'39"	069°59'04"
7*	35 33	Shoaling	41°32'28"	069°59'34"
8*	28 26	Shoaling	41°32'34"	069°59'27"
9*	10	Wreck, AWOIS	41°32'59"	069°58'50"
10*	22	Shoaling	41°32'00"	069°58'12"
11	17 15	Shoaling	41°32'07"	069°57'40"
12*	15 10	Shoaling	41°32'12"	069°57'23"
13*	12 11	Shoaling	41°32'22"	069°56'25"
14*	39 37	Wreck	41°32'45"	069°56'45"
15	6 5	Shoaling	41°33'06"	069°57'03"
16*	15 13	Obstn, AWOIS	41°32'39"	069°55'45"
17*	24 22	Shoaling	41°33'13"	069°55'49"
18*	11 10	Shoaling	41°33'21"	069°55'17"
19	11 10	Shoaling	41°33'18"	069°55'09"
20*	13 11	Shoaling	41°32'27"	069°56'06"
21*	16 11	Shoaling	41°33'15"	069°54'55"
22	11 10	Shoaling	41°33'20"	069°54'48"
23*	17 16	Shoaling	41°33'17"	069°54'41"
24*	27 26	Shoaling	41°33'02"	069°54'39"
25*	22 21	Wreck, AWOIS	41°33'09"	069°54'09"
26*	29 27	Obstn, AWOIS	41°33'19"	069°54'16"
27*	32 30	Wreck	41°33'41"	069°54'09"

** These items were determined not to be Dton, during office processing. Correction determined during office processing.*



Chartlet 1 of 3
 Chart 13244, 38th Edition, November 26th, 1994, Scale 1:40,000
 East Entrance to Nantucket Sound

This chartlet may be up to date with the latest
 Local Notice to Mariners information dated 7/28/01.
NOT FOR NAVIGATION.



**NATIONAL OCEANIC AND
 ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE**

Project: S-8904-WH
 Survey: HJ1078
 State: Massachusetts
 Locality: South Coast of Massachusetts
 Sub-locality: Pollock Rip Channel
 Survey Scale: 1:10,000

Sounding Units: Feet
 Sounding Datum: MLLW
 Horizontal Datum: NAD 83
 Projection: UTM 19
 Central Meridian: 089° 00 00
 Scale Factor: 0.9996

NOAA Ship WHITING
CDR Steven R. Barnum
 Commanding
 September 10 to
 September 13, 2001

Appendix II

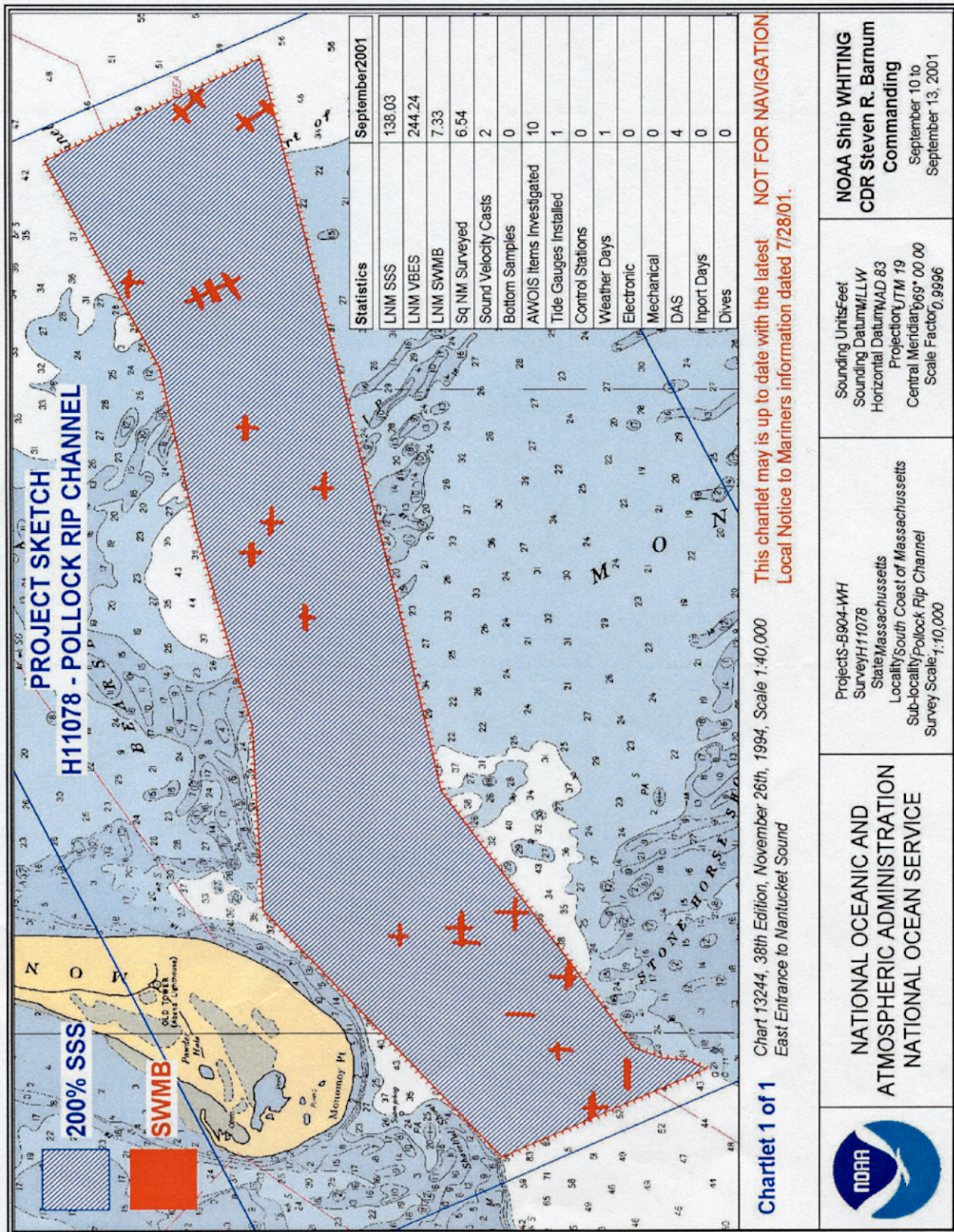
Geographic Names

NOAA Form 76-155 (11-72)								US DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION					SURVEY NUMBER H11078			
GEOGRAPHIC NAMES																
Name on Survey	Chart 13244	Chart 13237	Chart 12300	Chart 13003	Chart 13006	Chart 13009	Chart 13200	H	I	J	K					
Monomoy Island	X	X														
Monomoy Shoal	X	X														
Monomoy Point	X	X	X		X		X									
Butler Hole	X	X														
Shovelful Shoal	X															
Stonehorse Shoal	X	X														
Bearse Shoal	X	X														
Pollock Rip	X	X			X		X									
Broken Part of Poll Rip	X	X														
Pollock Rip Channel	X	X	X	X	X	X	X									

Appendix III

Progress Sketch

A



Request for Smooth Tides

September 24, 2001

MEMORANDUM FOR: Chief, Requirements and Development Division, N/OPS1

FROM: Commander Steven R. Barnum, NOAA
Commanding Officer

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Approved Tides/Water Levels
2. Approved Hourly Heights for Days of Hydrography
3. Hourly Heights on Digital Media

Transmit data to:

Atlantic Hydrographic Branch (N/CS33)
Norfolk, VA

These data are required for the processing of the following survey:

Project No.: S-OPR-B904-WH
Registry No.: H11078
Locality: Pollock Rip Channel
Sub-locality: South Coast of Massachusetts
State: Massachusetts

Attachments containing 1) the survey limits, 2) a chartlet of the survey area, and 3) an Abstract of Times of Hydrography are included.

Tide data are required within 45 days of this request. If this schedule cannot be met, please advise: Chief, Atlantic Hydrographic Branch, N/CS33, telephone number (757) 441-6746.

Attachments
cc: N/CS33

Attachment 2

SURVEY LIMITS		
Project No.: S-OPR-B904-WH		
Registry No.: H11078		
Locality: Pollock Rip Channel		
Area	Latitude	Longitude
Northwest	41°32'53.02" N	070°01'54.95" W
Southwest	41°29'10.54" N	069°59'33.17" W
Northeast	41°35'44.12" N	069°53'58.98" W
Southeast	41°32'01.31" N	069°51'36.88" W

Attachment 3**Abstract of Hydrography for Approved Tides**

Project: S-OPR-B904-WH

Registry No.: H11078

Field Unit: NOAA Ship WHITING

Inclusive Dates: September 10 and September 12-13, 2001

Times of hydrography are listed in UTC.

Abstract of Times of Hydrography

Day	Start Time	End Time	Year
253	13:46:00	20:47:00	2001
255	14:06:00	22:02:00	2001
256	12:42:00	22:42:00	2001

Appendix V

Supplemental Survey Records and Correspondences

There are no supplemental survey records or correspondences for this survey.

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU
BY (Check)

- ORDINARY MAIL
- REGISTERED MAIL
- GBL (Give number) _____
- AIR MAIL
- EXPRESS

DATE FORWARDED
09/13/2002

NUMBER OF PACKAGES
1

TO:

CHIEF, DATA CONTROL GROUP, N/CS3x1
 NOAA / NATIONAL OCEAN SERVICE
 STATION 6815, SSMC3
 1315 EAST-WEST HIGHWAY
 SILVER SPRING, MARYLAND 20910-3282

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

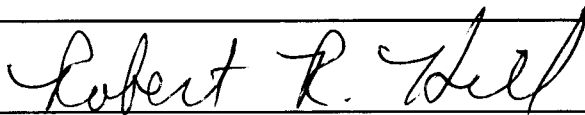
H11078

MASSACHUSETTES , SOUTH COAST OF MASSACHUSETTES, POLLOCK RIP CHANNEL

ONE TUBE CONTAINING THE FOLLOWING:

- 1 SMOOTH SHEET FOR SURVEY H11078 ON MYLAR
- 1 H-DRAWING FOR H11078 ON MYLAR FOR CHART 13244
- 1 DESCRIPTIVE REPORT FOR H11078

FROM: (Signature)



RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

NOAA \ NATIONAL OCEAN SERVICE
 ATLANTIC HYDROGRAPHIC BRANCH N/CS33
 439 WEST YORK STREET
 NORFOLK, VA. 23510-1114



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: May 6, 2002

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B904-WH-2001
HYDROGRAPHIC SHEET: H11078

LOCALITY: Pollock Rip Channel, MA
TIME PERIOD: September 10-13, 2001

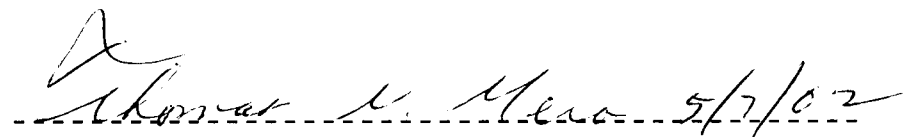
TIDE STATION USED: 844-9130 Nantucket Island, MA
Lat. 41° 17.1'N Lon. 70° 5.8'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.994 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: SCM173, NA266, NA267, NA268, NA269,
NA290, NA291, NA312

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units
(meters), relative to MLLW and on Greenwich Mean Time.



CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION



Printed on Recycled Paper



**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H11078 (2001)**

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

B. AUTOMATED DATA ACQUISITION AND PROCESSING

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

MicroStation/J, version 7.01
MapInfo, version 6.5
Caris HIPS/SIPS, version 5.2
NADCON, version 2.10
I/RAS B, version 5.01
Pydro version 1.12

The smooth sheet was plotted using a Hewlett Packard DesignJet 2500CP plotter.

Junctions

There are no junctional surveys. Present survey depths are in harmony with the charted hydrography to the east, west, north and south.

C. CONTROL STATIONS

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). The smooth sheet has been annotated with ticks showing the computed mean shift between the NAD 83 and the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27 datum, move the projection lines 0.416 seconds (12.823 meters or 1.28 mm at the scale of the survey) north in latitude and 1.950 seconds (45.21 meters or 4.52 mm at the scale of the survey) east in longitude.

D. COMPARISON WITH CHART 13244 (38th Edition, Nov 26/94)

Hydrography

The charted hydrography originates with prior surveys and requires no further consideration. The present survey is

adequate to supersede the charted hydrography in the common area. Attention is directed to the following:

Automated Wreck and Obstruction Information System (AWOIS) Item #11062, charted as dangerous sunken wrecks, PA, in Latitude 41°33'00.03"N, Longitude 69°57'45.99"W, originate with Local Notice To Mariners 3 of 1993 (LNM 3/93). This feature was not adequately investigated and is not considered disproved. It is recommended that this feature be retained as charted.

The present survey is adequate to supersede the charted hydrography in the common area, except as noted in this report.

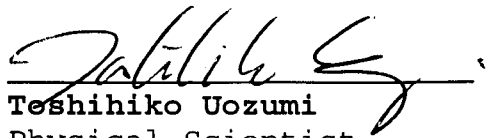
O. ADEQUACY OF SURVEY

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

R. MISCELLANEOUS

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

13244 (39th Edition, Mar 30/02)



Teshihiko Uozumi
Physical Scientist
Verification of Field Data
Evaluation and Analysis

APPROVAL SHEET
H11078

Initial Approvals:

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

Robert R. Hill Date: 6-11-02
Robert R. Hill
Cartographer
Atlantic Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Emily B. Christman Date: 6-24-02
Emily B. Christman
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Final Approval:

Approved: Samuel P. DeBow Date: September 30, 2002
Samuel P. DeBow
Captain, NOAA
Chief, Hydrographic Surveys Division

